5TH AfHEA BIENNIAL SCIENTIFIC CONFERENCE

Securing PHC for all: the foundation for making progress on UHC in Africa.

2019

MARCH 11-14

Kempinski Hotel
Gold Coast City

ACCRA-GHANA

CELEBRATING AfHEA's 10th ANNIVERSARY

[2019]

Securing PHC for all: the foundation for making progress on UHC in Africa

Kempinski Hotel Gold Coast City (Accra)

11th – 14th March 2019

5th AfHEA Conference – 2019

Programme and Abstract Book

The 5th AfHEA Scientific Conference is organized in partnerships with the Ministry of Health of the Republic of Ghana, the World Health Organization (WHO), the Ghana Health Service (GHS), the School of Public Health of the University of Ghana (SPH), and the Center for Health Systems and Policy Research (CHESPOR).

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Fifth Conference of the African Health Economics and Policy Association (AfHEA)

"Securing PHC for all: the foundation for making progress on UHC in Africa"

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African Health Economics and Policy Association
Association Africaine d'Economie et Politique de la Santé

Accra - Ghana 11th - 14th March 2019

5th AfHEA INTERNATIONAL CONFERENCE

The agenda at a glance

Sunday 10 March 2019

Pre-conference workshops

Bilingual	1 - Scientific Writing Workshop

Monday 11 March 2019

Pre-conference workshops

English only	2 - Skills building through peer learning – Implementing strategic purchasing to contribute to progress towards UHC in Africa
	3 - Applied health economics in Africa: Using examples from immunisation
	4- Tracking progress towards Universal Health Coverage: Methods and Applications using the World Bank's ADePT software, Stata and the World Bank's Health Equity and Financial Protection Indicator (HEFPI) database
	5 - The Power of Choice- Promoting Informed SRHR Choices among Young People to Advance the ICPD Agenda in Ghana

Official opening ceremony

17:00	Registration — Housekeeping announcements Participant seating — Reception of officials **Official opening ceremony by** **His Excellency Ajhaji Dr Mahamudu Bawumia, Vice President of the Republic of Ghana**
19:00	**WELCOME COCKTAIL**

Tuesday 12 March 2019

08:00 **08:30**	Registration — Housekeeping announcements Participant seating

Plenary 1

08:30 **10:30**	**Main conference hall: ADLON BALLROOM 1-2** **Technical Keynotes and Panel discussion -** Securing PHC For All: the Foundation for Making Progress on UHC in Africa
10:30 **11:00**	BREAK / GROUP PHOTO / POSTER PRESENTATIONS

Parallel sessions 1

	Room: ADLON BALLROOM 1	Room: ADLON BALLROOM 2	Room: ADLON 3	Room: PALM JUMERIAH	Room: CHEZ GEORGE	Room: EMIRATES PALACE	Room: CIRAGAN PALACE	Room: PEARL
11:00 **12:30**	Universal Health Coverage (UHC) - progress and challenges	Private sector, PPP and contracting out 1	Cost effectiveness: case studies	Access to HIV/AIDS services	Access to maternal health services	Economic evaluation of health programmes 1	Data for management and policy making	Institutionalization of Financial Protection Monitoring in Africa **(OS 1)**

Parallel sessions 2

	Room: ADLON BALLROOM 1	Room: ADLON BALLROOM 2	Room: ADLON 3	Room: PALM JUMERIAH	Room: CHEZ GEORGE	Room: EMIRATES PALACE	Room: CIRAGAN PALACE	Room: PEARL
12:30 **14:00**	Universal Health Coverage (UHC) - Monitoring and evaluation	Equity in Health	Community-based health insurance	Drugs / Medicines	Economics of Immunization, malaria, TB and HIV/AIDS	Economic evaluation of health programmes 2	Aid and International health financing	Toward Systematic Approaches for Addressing Ethics & Equity Considerations in Health Technology Assessment **(OS 2)**

14:00 **15:00**	LUNCH

Parallel sessions 3

	Room: ADLON BALLROOM 1	Room: ADLON BALLROOM 2	Room: ADLON 3	Room: PALM JUMERIAH	Room: CHEZ GEORGE	Room: EMIRATES PALACE	Room: CIRAGAN PALACE	Room: PEARL
15:00 **16:30**	Strengthening Capacity for Teaching and Learning of Health Policy and Systems Research (HPSR) and Health Economics in Africa: Practical Issues for Educators and Learners **(OS 3)**	Approaches for achieving Universal Health Care: Policy Perspectives from Africa and Asia **(OS 4)**	How can health systems be shaped to sustainably address the maternal health needs of the most vulnerable and under-served populations? **(OS 5)**	Strengthening health systems through the application of health financing progress matrices: country experience **(OS 6)**	Strategic purchasing for universal health coverage: the role of aligned mixed provider payment systems **(OS 7)**	Is a per capita payment system a viable strategic purchasing option for assuring universal access to Primary Health Care in Ghana: What have we learned over time and what is the way forward **(OS 8)**	The influence of Cultural Practices in the spread of Diseases: the case of far North of Cameroon **(OS 9)**	How agent-based modelling can help healthcare policy and planning **(OS 10)**

16:30 **17:00**	BREAK / POSTER PRESENTATIONS

Plenary 2

17:00 **18:30**	**Main conference hall: ADLON BALLROOM 1-2** **Plenary session 2:** Ghana's road to UHC: improving enrolment onto the NHIS to achieve universal health coverage
19:00	**Cocktail Dinner with World Bank**

Wednesday 13 March 2019

	Plenary 3							
08:30 10:00	**Main conference hall: ADLON BALLROOM 1-2** **Plenary session 3:** The cost-effectiveness and benefits of Sexual and Reproductive Health and Rights (SRH&R) packages within UHC related schemes							
10:00 10:30	BREAK / POSTER PRESENTATIONS							
	Parallel sessions 4							
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	Parallel sessions 5							
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13:30 14:30	LUNCH							
	Parallel sessions 6							
14:30 16:00	**Room: ADLON BALLROOM 1** Public financial management towards better PHC and health sector outputs: Building and disseminating knowledge for accelerated reforms in Africa **(OS 13)**	**Room: ADLON BALLROOM 2** An Activist Agenda for Health Policy and Systems (HPS) Research and Practise in Africa **(OS 14)**	**Room: ADLON 3** Implementing Bold Reforms towards Financing UHC in a Decentralized Economy **(OS 15)**	**Room: PALM JUMERIAH** Translating Evidence to Action: Participatory Approaches for Strengthening Maternal Health Interventions **(OS 16)**	**Room: CHEZ GEORGE** The effect of human resources management on performance in hospitals in Sub-Saharan Arica **(OS 17)**	**Room: EMIRATES PALACE** Promoting access to quality and responsive mental health care and services in Ghana **(OS 18)**	**Room: CIRAGAN PALACE** Securing PHC for all in a voluntary health insurance: lessons from the NHIA-KOFIH collaboration in Ghana **(OS 19)**	**Room: PEARL** Economics of Public Health: Implications for research practice in Africa **(OS 20)**
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16:30 18:00	**Main conference hall: ADLON BALLROOM 1-2** **Plenary session 4 -** Making health systems work for UHC in Africa: An Actions Framework **institutional meetings**							
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Thursday 14 March 2019

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12:00 13:30	**Room: ADLON BALLROOM 1** Resource allocation, efficiency and management 2	**Room: ADLON BALLROOM 2** Public health research issues	**Room: ADLON 3** Priority setting and economic evaluation	**Room: PALM JUMERIAH** Human Resources for Health: innovative approaches	**Room: CHEZ GEORGE** Access to health care services	**Room: EMIRATES PALACE** Hospital management and financing	**Room: CIRAGAN PALACE** National health insurance	**Room: PEARL** Private sector, PPP and contracting out 2
13:30 14:30	LUNCH							
	Plenary 6							
14:30 16:00	**Main conference hall: ADLON BALLROOM 1-2** **Plenary 6:** National health strategies for achieving PHC for all							
16:00 16:15	BREAK / POSTER PRESENTATIONS							
	Plenary 7							
16:15 18:00	**Main conference hall: ADLON BALLROOM 1-2** **Plenary session 7:** Panel discussion on key messages of the Conference							

Closing ceremony

Social programme (by the Event Organizer)

Oral presentations

Parallel Session 1 – Organized session

OS 01 – Institutionalization of Financial Protection Monitoring in Africa

Grace Kabaniha, Regional Office for World Health Organization in Africa

An estimated 800 million people suffer due to poor access to services and a further 11.4% of Africans or 14 million people impoverished due to catastrophic expenditure on health . These represent the challenge that countries in the region must surmount to achieve UHC by 2030.

For countries to effectively make progress in UHC, there is a need for countries to effectively monitor their progress. While much progress has been made in institutionalizing monitoring for service coverage and availability using health management information systems and the SARA (for example) respectively; there has been little progress in institutionalization of financial protection. Thus far monitoring of financial protection has been the preserve of academics or multilateral organizations. There is need to build capacity of local policy makers to generate and utilize evidence on financial protection in their countries.

WHO Regional office in Africa has over the past three years worked with fourteen countries to build institutional capacity and national teams for monitoring financial protection for UHC. Seven countries were trained and have used recent data to estimate up-to-date status on financial protection in their countries.

The purpose of this session is to share the experience of institutionalizing financial protection monitoring and share recent estimates for seven countries.

Session Flow:

Opening of the session: Dr: Grace Kabaniha

Presentations:

a) Regional synthesis on status of Financial protection and drivers of catastrophic expenditure in Africa: what are the policy implications? (10 mins)
b) Status of Financial Protection in Burkina Faso (10 mins)
c) Status of Financial Protection in Cote D'Ivoire (10 mins)
d) Case Study 4: Status of Financial Protection in Democratic Republic of Congo (10 mins)
e) Case Study 5: Status of Financial Protection in Mauritania (10 mins)
f) Case study 6: Status of Financial Protection and equity in financing in Mauritius (10 mins)

Country Panel Session: (15 mins)

Experience of institutionalization at the country level (enablers and challenges)

Question and Answer Session (15 mins)

Analysis of financial risk protection in health. Case of the Democratic Republic of Congo.

Authors: Prof Gérard ELOKO EYA MATANGELO1, Eddy MONGANI MPONTONGWE,[2] MINGIEDI MATONDO BOAZ,[3] Alain IYETI,[4] Jean Pierre LOKONGANZEYABE,[5] Justine HSU,[6] Amédée Prosper DJIGUIMDE[7]
1&2. DRC Ministry of Public Health/National Health Accounts Programme; 3. National Institute of Statistics/DRC; 4. Directorate for Studies and Planning in the MPH/ DRC; 5, 6 &7 World Health Organization

Background The Democratic Republic of Congo (DRC) has made progress over the past five years in terms of economic growth and macroeconomic stability. The country has experienced robust and sustainable economic growth at an average annual rate of 7% since 2009 (PER/World Bank 2014; IMF 2014). In 2013, the DRC was one of the countries that recorded the strongest economic growth in the region at 8.5% in real terms, relative to a regional (i.e. Africa) average of 5.2%. This performance notwithstanding, its annual GDP per capita is still one of the lowest in Sub-Saharan Africa, according to the Central Bank of Congo (US$ 426.1 per capita in 2016, in current dollars). The informal sector accounts for half of all economic activity nationwide.

In 2015, households financed health services and health care to the tune of US$ 603 767 736 out of the total US$ 1 505 130 858, representing 40.1% of annual current health spending. Out-of-pocket payments accounted for 93.3% while funding through prepayment mechanisms was a mere 6.69%**.** Consequently, the DRC Government has committed to action for achieving universal health coverage by 2030

Methods It is a descriptive crosscutting study that analyses the catastrophic health expenditure of households based on data from the 1-2-3 surveys (Household Consumption Phase) conducted in 2005 and 2012 by the National Institute of statistics. Two approaches were adopted, namely: the budget-share approach focused on the definition of catastrophic health expenditure according to the sustainable development goals (SDG 3.8.2) and based on two thresholds - 10% and 25% of the total household expenditure or income; and the capacity-to-pay approach favoured by WHO which considers a household's expenses to be catastrophic when its total health spending is equivalent to or above 40% of its capacity to pay. Logistic regression analysis was used to examine the key determinants of household health spending. The odds ratio (chance or risk) are interpreted only for variables at p-value < 0.05.

Results At the threshold of 10%, the proportion of households whose health expenditure represented a significant percentage of their total spending rose from 3.9% in 2005 to 4.8% in 2012, representing a 0.9-point increase. However, this percentage (catastrophic spending) was higher for urban households in 2005 and for rural households in 2012. Furthermore, a greater proportion of households in the poorest quintile engage in catastrophic health spending than households in other quintiles.

The study found that rural households are 0.9 times more likely to experience catastrophic spending than urban households. Households headed by persons with a higher level of education and richer households are less likely to engage in catastrophic spending than those headed by the uneducated and poorer ones. Lastly, households with members aged 60 and above are 0.45 times more likely to engage in catastrophic health spending.

Conclusion The study provided evidence of increasing incidence of catastrophic spending and impoverishment as well as the drivers of financial hardship. This evidence will be useful in guiding policy action for the reforms for UHC in the Democratic Republic of the Congo.

Keywords Health financing, out-of-pocket payments, catastrophic expenditure, impoverishment, odd-ratio

Analysis of health-related financial risk protection of household in Côte d'Ivoire from 2008 to 2015.

GbayoroKouamé Christelle[1], Christophe Aguia[1], Ligbet Magloire[2], Léonce Nessenou[2], Tania Bissouma-Ledjou[3]
1 : Ministry of Health and Public Hygiene - Côte d'Ivoire, 2 : National Institute of Statistics – Côte d'Ivoire, 3 : World Health Organization

Background: Côte d'Ivoire has experienced remarkable economic growth from 517 704 CFAF ($1035.41) in 2008 to 838 104.7 CFAF (1676.21)[1] in 2015.The poverty rate, which dropped from 48.9% (2008) to 46.3% (2015)[2], remains high. As of 2012 estimated 7.8% of the population benefits from having a health insurance mechanism[3]. Nevertheless, household out-of-pocket payments are the first source of health financing, accounting for 66.3% and 32.55% of total health expenditure (THE) in 2008 and 2015 respectively.. Since 2012, the proportion of the government budget allocated for the health sector has remained steady at an average of 5.58% annually, which is still below the 15% Abuja target.

This study sought to analyze the health-related financial risk protection of households by describing trends in key health-related financial protection indicators and reviewing their equitable distribution based on socioeconomic characteristics

Methods This study is a cross-sectional, analytical and descriptive using data from two Household Standard of Living Surveys (ENV) for 2008 and 2015 collected from representative samples of 12 600 and 12 899 households, respectively. Samples are constituted from a two-staged clustered polling to estimate incidence of catastrophic health expenditure and poverty using two standard methods: the WHO methodology (capcacity to pay) and Sustainable Development Goals (SDG) methodology..Following the WHO approach, a household incurs CHE if they use at least 40% of their capacity to pay to cover the out-of-pocket health spending. Following the SDG methodology, the CHE is defined by the proportion of the population which incurs substantial household health expenditure, relative to the total expenditure or household income between 10 % and 25 % threshold.

To assess impoverishing expenditure caused by out-of-pocket spending, reference is made of the ratio of poverty incidence at the poverty line. The international poverty line of 3.10 USD (reference)was taken into consideration because the assessed poverty threshold was close to the one defined at country level, which is $1.32 (661 CFAF) in 2008 (reference) and $1.48 (737 CFAF) (reference)in 2015.

Results At 10% threshold, it is observed that 12.4% of households experienced CHE in 2015 compared to 17.4% in 2008. At 25% threshold, 4% of households in 2008 compared to 3.8% in 2015 experienced CHE. This reducuction in incidence of CHE is in correlation with the reported drop in out-of-pocket health spending. The incidence was higeher for richer quintiles.

The incidence of poverty reportedly reduced from 54.9% in 2008 to 53.6% in 2015. However, in terms of absolute numbers, roughly 11 million people in 2018 were impoverished compared to about 12 million people in 2015 (an increase of 1 million). The impact of out-of-pocket spending due to service utilization has resulted in the proportion of households living below this threshold to be at 58.1% and 56.1% in 2008 and 2015. Households with elderly people, located in rural areas, less educated were consistently more prone to catastrophic spending in both years.

Conclusion The study provides some evidence of improving financial protection due to efforts to decrease out of pocket spending. Nevertheless the rising incidence of poverty is alarming. The

[1] National Development Plan 2016 - 2020
[2] Household Living Standards Survey 2015
[3] Monitoring Progress Towards UHC in Côte d'Ivoire: Baseline Situational Analysis – WHO. Côte d'Ivoire, 2015

evidence generated in this study can be used to guide policy design for health financing for UHC and for targeting financial subsidies for those at greatest risk of financial hardship.

Keywords Health financing, out-of-pocket payments, catastrophic expenditure, impoverishment, financial hardship

Trend of catastrophic health expenditure and their impact on the impoverishment of Mauritanian households between 2008 and 2014

MOHAMED MAHMOUD OULD KHATRY, ALIOUNE GUEYE, KELLY AMINATA SAKHO

Background Mauritania has expressed its commitment to achieving universal health coverage and the Sustainable Development Goals. Despite the stides made in improving the health status of the country, there is still room for improvement, as the gross mortality rate is still high at 10.9‰, compared to the birth rate of 32.3‰, and low life expectancy of 60.3 years. The health status of a country is key to monitoring progress towards universal health coverage (UHC) and the Sustainable Development Goals (SDGs), and improving financial protection. This study evaluates the status of financial protection in Mauritania.

Methods The data used are from Permanent Surveys on Household Living Conditions (EPCV) conducted in 2008 and 2014 to estimate incidence of catastrophic health expenditure and poverty using two standard methods: the WHO methodology (capcacity to pay) and Sustainable Development Goals (SDG) methodology..Following the WHO approach, a household incurs CHE if they use at least 40% of their capacity to pay to cover the out-of-pocket health spending. Following the SDG methodology, the CHE is defined by the proportion of the population which incurs substantial household health expenditure, relative to the total expenditure or household income between 10 % and 25 % threshold.

Results At 10% threshold, it is observed that 12.4% of households experienced CHE in 2015 compared to According to the SDG approach, in 2008 and 2014, 10.8% and 11.2% of households respectively, incurred catastrophic expenses at a threshold of 10%. At the 25% threshold, catastrophic expenditure increased, irrespective of the area of residence, with higher incidences in rural areas, from 1.1% in 2008 to 5.7% in 2014, and from 1.4% in 2008 to 3.8% in 2014 in urban areas.

According to the WHO approach, 4.9% of Mauritanian households incurred catastrophic expenditure in 2014, compared to 3.1% in 2008. Catastrophic expenditure incidence, from 2008 to 2014 follows the same trend as the results obtained with the SDG approach. Generally, the study findings show that irrespective of the poverty line, catastrophic expenditure increased the incidence and depth of poverty.

Conclusion At the end of this study, we are of the view that two main recommendations must be implemented without delay, in order to reduce the proportion of households facing catastrophic expenditure. In the short term, it is a question of putting in place a policy for controlling the costs of pharmaceutical products. In the medium term, the aim is to introduce health insurance coverage measures for the poor (16% of the population) and the informal sector.

Keywords Health financing, out-of-pocket payments, catastrophic expenditure, impoverishment, financial hardship

Dynamics of catastrophic and impoverishment expenditures in Burkina Faso: an analysis of determinants.

GUENE Hervé Jean-Louis, DOAMBA Odilon, NASSA Simon, ZAMPALIGRE Fatimata, COULIBALY Seydou O.

Background The government of Burkina Faso has embarked on a process leading to universal health coverage with the enactment of Law N° 060-2015/CNT on a universal health insurance scheme (RAMU) in 2015. Based on the defined timing, the year 2018 should be devoted to the operationalization of this key programme for the beneficiaries and stakeholders of health. Since the establishment of a health insurance is a highly complex process, it requires total control over all the issues before implementation. It is worth noting that households, the main beneficiaries, would not be necessarily affected in the same manner. While some are already covered, others are incurring catastrophic or impoverishment expenditures.

The aim of this study is to estimate the extent of catastrophic and impoverishment expenditures among the population and identify factors accounting for these expenditures over the 2009-2014 period.

Methods The study uses the data from the two most recent surveys on household living conditions (2009 and 2014). The descriptive statistics calculated for the relevant variables such as regions, residential setting and the quintile of household wealth, allowed for an assessment of households. An analysis of determinants of catastrophic health expenditures was carried out through a logistic regression on the data with endogenous variables such as the likelihood for the household to finance a catastrophic or impoverishment expense and, as exogenous variables, the gender of the head of household, household size, structure by age of the household, etc.

Results The proportion of households that incur catastrophic expenditures fell from 1.3% in 2009 to 0.8% in 2014, and that of households incurring impoverishment expenditure fell from 1.9% to 1.3% over the same period. Factors such as the fact that a household is situated in a rural area or that one of its members has been hospitalized, or that there are persons aged over 60 years or under 5 year are the main factors that account for the occurrence of catastrophic expenditure.

Conclusion The study provided a categorization of households based on their level of health expenditures. It shows that 1.3% of households, representing 206 217 persons became poor because of out-of-pocket payments. The study concludes that interventions of the health insurance scheme must give greater focus to hospitalizations, the elderly (60 years and over) and children (under 5 year-olds), who represent 26% of the total population.

Keywords Health financing, out-of-pocket payments, catastrophic expenditure, impoverishment, odd-ratio

Impact of Out of Pocket Payments on Financial Protection Indicators in a setting with no user fees: The case of Mauritius

Yusuf Thorabally [† 1], Ajoy Nundoochan [† 2] ✉, Sooneeraz Monohur [† 3] and Justine Hsu [4]

Objectives: Since 1968 Mauritius provides free health care in all state-owned health facilities. Nevertheless since 2007 Private Health Expenditure (PvtHE) has surpassed General Government Health Expenditure as a share of total health expenditure. PvtHE is predominately composed of Out

† Equal contributors
✉ Correspondence: nundoochana@who.int

of Pocket (OOP) with only 3.4% related to premiums for private insurance. OOP is known to be regressive and to impact negatively a household's living standards. This paper aims to understand trends in OOP and its impact on the population of Mauritius through an analysis of key indicators of financial protection (i.e. Catastrophic Health Expenditure (CHE) and impoverishment due to OOP health expenditure) and to identify the main drivers of CHEs.

Methods: The Household Budget Surveys (HBS) of 2001/2002, 2006/2007 and 2012 were the primary source data. Stata v11.2 was extensively used for data analysis. CHE and impoverishment were used to assess financial hardships resulting from OOP payments. Incidence of CHE was estimated using two standard approaches namely the capacity to pay and the budget share. Impoverishment due to OOP was measured by changes in the incidence of poverty and severity of poverty using the US$ 3.1 international poverty line. To identify determinants of CHE, we conducted a logistic regression analysis.

Findings: Household CHE increased across all the three thresholds (10%, 25% and 40%) from 2001 to 2012. Over this period, incidence of CHE was more significant in urban area compared to 0.58 percentage point in rural area. The highest levels of CHEs were experienced by heads of households who are retired (3.9%), widowed (2.8%) and homemakers (2.5%). The share of households pushed below the poverty line due to OOP dropped from 0.0848% in 2001/02 to 0.0445% in 2006/07 before rising to 0.054% in 2012. In 2012, only households classified under Quintile 1 (0.244%) and Quintile 2 (0.025%) were drifted under the poverty line due to OOP on health.

Conclusion: Despite CHE has been on the rise across most income groups over the three consecutive HBS period the impact on the level of impoverishment and poverty gap has not been significant.

Keywords: Catastrophic health expenditure, Impoverishment, Out-of-pocket payments

Parallel Session 1 - Oral presentations

Parallel session 1: Universal Health Coverage (UHC) – progress and challenges

Determining levels of satisfaction with roles of HMOs among beneficiaries of social health insurance scheme in Enugu, Southeast Nigeria

Eric Obikeze[1,2] Obinna Onwujekwe [1,2] Hesborn Wao[3]
1. Dept of Health Admin. & Mgt., College of Medicine, University of Nigeria, Enugu Campus; 2. Health Policy Research Group, College of Medicine, University of Nigeria, Enugu Campus; 3. African Health Population and Research Centre, Nairobi, Kenya

Background: Much as health insurance is being developed by countries at different levels, evidence shows that governments of low and middle income countries can hardly make progress without involving the private sector. This is a major reason why various forms of health care financing and enforcement mechanisms that are private sector oriented are being put in place. To aid that requires consideration of key issues in UHC - height of coverage, depth of coverage and breadth of coverage. In Nigeria, Health Maintenance Organizations (HMOs) are positioned to respond to the UHC considerations. However there appears to be some missing links in the roles of HMOs. Currently, satisfaction that is required from HMOs by beneficiaries in the social and voluntary private health insurance schemes is not glaring. This study therefore looks at the level of satisfaction with roles of HMOs amongst beneficiaries of beneficiaries of social and voluntary private health insurance schemes.

Aim: aim of the study is to determining levels of satisfaction with roles of HMOs among beneficiaries of social health insurance schemes in Enugu, Southeast Nigeria.

Objectives: The study objectives are to 1) determine the extent of HMOs involvement in implementation of social 2) determine levels of satisfaction on HMOs by beneficiaries of health insurance.

Methods: The study was a cross sectional descriptive design using quantitative method. The quantitative data was from purposively selected Federal government employees that are registered with the National Health Insurance Scheme (NHIS). Level of satisfaction was got using categorical variables in Likert format. Multinomial logistic regression model was used to determine level of satisfaction among respondents.

Findings: The respondents know the extent of involvement of HMOs in Social Health Insurance (60%). Many of the respondents in the social health insurance rated HMOs (31.30%). Those who rated them very low, was 25.60%, high was 23.0%; very high was 17.0% and highest was 3.10%. Level of satisfaction was statistically significant at 95% CI with Chi^2 221.51 and p-value 0.00. Overall multinomial logistic regression showed Chi^2, Prob >Chi^2 and pseudo R^2 values of 268.85, 0.000 and 0.16 respectively.

Conclusion: The study showed that respondents were not generally satisfied with the roles of HMOs in the social health insurance scheme in Enugu, Southeast Nigeria.

The challenges of achieving universal financial risk protection in Enugu State, South East Nigeria

Chikezie Nwankwor[1,2], Ifeyinwa Arize[1], Enyi Etiaba[1], Chijioke Okoli[1], Christian Okolo[1], Eric Obikeze[1] and Obinna Onwujekwe[1]
Department of Health Administration and Management, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria Nsukka, Enugu Campus.

Background: Out-of-pocket health spending continues to impoverish families amidst deteriorating health indices in Nigeria. In Enugu, southeast Nigeria, the worst affected are the rural dwellers and the poorest, thus creating both socioeconomic and geographic inequity in access and use of services. This scenario raises questions as to what political and economic capital are required to ensure the transition to universal health coverage (UHC).

Objective: The study's main objective was to determine political, economic and other facilitators and/or constraints to achieving universal financial risk protection (UFRP) in Enugu state, southeast Nigeria.

Methods: Study was conducted in two purposively chosen urban (Enugu-North) and rural (Enugu East) local government areas, utilizing a cross-sectional study design and qualitative approach using in-depth interviews (IDIs). Purposely selected key informants were healthcare administrators spread across all levels and tiers of government (Ministry of Health, State Health Board, State Primary Health Development Agency, cottage hospitals, PHC, House of Assembly Committee on Health and a National Health Insurance Scheme (NHIS) desk officer in a tertiary institution). 12 out of 17 key informants returned data that was analysed on enablers/constraints to achieving universal financial risk protection in the state.

Results: This report exhumes the challenges to achieving UHC in Enugu state. Major political constraining factors included lack of commitment and insincerity of purpose from government and political handlers, poor health prioritization in government agenda, distrust between government and labour unions, political instability, lack of constitutional and legal frameworks for citizens' enlistment in health insurance, non-clamour from the electorate for the entrenchment of their basic rights, top-down approach to advocacy and structuring of insurance programmes for states by the NHIS, and public corruption. Economic challenges adduced included thin fiscal space to expand healthcare programmes, and lack of demonstrable accountability mechanisms in the design and structuring of insurance programmes for states. Other challenges proposed included poor education of the masses on ways to access NHIS available routes to pre-payment programmes, and lack of human resources and manpower development for health systems.

Discussion & Conclusions: State governments including Enugu is yet to commit to providing UFRP for its residents because of identified political and economic hurdles. These portend a great obstacle to achieving UHC for inclusive and sustainable development in the state. This study suggests the encouragement of conscious policy dialogues among stakeholders, especially among government and citizen's representatives to entrench UHC in the shortest possible time.

Moving towards universal health coverage: The need for a strengthened planning process

Juliet Nabyonga-Orem, WHO, Harare Zimbabwe

As countries embrace the ambitious universal health coverage (UHC) agenda whose major tenents include reaching everyone with the needed good quality services, strengthening the planning process to work towards a common objective is paramount. Drawing from country experiences—Swaziland and Zanzibar, we reviewed strategic planning processes to assess the extent to which they impact on realising alignment towards a collective health sector objective.

Employing qualitative approaches, we reviewed strategic plans under implementation in the health sector and using an interview guide consisting of open-ended questions, interviewed key informants at the national and district level. Results showed that strategic plans are too many with majority of program strategies not well aligned to the health sector strategic plan, are not costed, and there overlaps in objectives among the several strategies addressing the same program. Weaknesses in the development process, perceived poor quality of the strategies, limited capacity, high staff turnover, and inadequate funding were the identified challenges that abate the utility of the strategic plans. Moving towards UHC starts with a robust planning process that rallies all actors and all available resources around a common objective. The planning process should be strengthened through ensuring participatory processes, evidence informed prioritisation, MoH institutional capacity to lead the process, and consideration for implementation feasibility. Flexibility to take into consideration emerging evidence and new developments in global health needs consideration.

Health Insurance for Informal Sector Workers in Côte d'Ivoire: Lessons Learned from the Implementation of the MCMA

**DOUA Ruphin, **BAMBA Lassiné and ***BEYERA Isabelle: *UFHB, **Fondation AVSI-Côte d'Ivoire, ***BEYERA Isabelle*

Background and rationale: The World Health Organization (WHO), in its report on global health 2010, highlighted the right of all to access quality health care. About 70 to 90% of workers in the informal sector are still out of reach of existing health coverage schemes in developing countries, particularly in Africa. In Côte d'Ivoire, this situation remains the main concern for workers in the craft sector, characterized by a high level of informality and precariousness of activities. Indeed, almost all craftsmen and their households do not benefit from any protection against the risk of illness and are exposed to the heavy financial consequences of direct payments; which increases their vulnerability to poverty. Faced with this situation, the AVSI-Côte d'Ivoire Foundation, in collaboration with the National Chamber of Trades of Côte d'Ivoire (CNMCI), initiated, as part of its Integrated Project to Support the Empowerment of Artisans of Ivory Coast (PIAAA-CI), a Disease Coverage Mechanism for Artisans (MCMA).

Objective and Methodology: This study assesses the extent to which MCMA has achieved its objectives. This study aims to capitalize on the lessons learned for scaling up under the CMU. The study is based on a particularly qualitative, comprehensively oriented evaluation approach focused on semi-structured interviews and focus groups.

Results and recommendations: The results show that, while the MCMA is a response to health care concerns, there are signs that could hinder its sustainability. These signs are the result of a number of factors that weaken the MCMA; and which account for the difficulties and constraints that actors have in terms of its appropriation. In addition to these signs, there is collaboration between the various institutional players that needs to be further energized to respond effectively to the difficulties and constraints faced by MCMA on the ground. We therefore recommend a strong commitment and involvement of all the institutional actors and the main beneficiaries. It is necessary for these key actors to learn from its implementation for scaling up under the UHC. It is on this condition that Côte d'Ivoire will be able to truly advance towards the universality of health coverage.

Revitalizing Primary Health Care to Achieve Universal Health Coverage in Mauritius

**Laurent MUSANGO, **DR. Maryam TIMOL, ***Premduth BURHOO: *Port Louis WHO, **Ministry of Health and Quality of Life, ***Mauritius Institute of Health*

In Mauritius, the strong primary health care system provides geographically accessible healthcare free at point of use to all citizens and this it is responding to both the population and individual needs with a range of services that cover all the elements of care namely health promotion, disease prevention, curative services, and rehabilitation. However, it was found that primary Health Care is not playing its gatekeeping role effectively, reason why an assessment on strengthening primary health care for better outcomes was initiated in Mauritius.

The country assessment starts with a thorough analysis of the situation of services delivery over the past 15 years. Challenges or present opportunities for improving services delivery were then carried out. A participatory and flexible approach was used for this assessment; a multidisciplinary team was set up to carry out the assessment. A Working Group (WG) of 6 members was constituted to review and to validate the report. The report identified keys opportunities that the country may continue to build on as well as challenges and possible solutions to address them through strengthening Primary Health Care to Achieve Universal Health Coverage in Mauritius.

The assessment shows that, in many cases, the gatekeeper role of primary health care providers is bypassed. Many patients attend the hospitals directly particularly outside opening hours of PHCs. Even during working hours patients often attend secondary or tertiary care institutions for non-complicated cases as prior referral is not a requirement. Patients have an over-reliance on hospitals and prefer to receive follow-up care at the hospitals with the specialists. Currently, there is no health information system in place in the PHCs to assist in their role as a hub. The absence of a unique patient identifier number results in duplication of care at PHCs and inability to track/ trace patients in the public health system was also noted. Continuity of treatment and rapport building with a particular health worker is difficult with the present service model. Moreover, choice of health care provider is not possible in the present health system.

The assessment recommended furthering consolidating the role of Primary Health Care as the centre of health care by reducing duplication of services at PHC and hospital levels, strengthen the role of PHC in improving coordination between primary, secondary and tertiary care levels, having a more systematic screening and management of chronic conditions in PHC as well as scale up primary health care services to respond to the ageing population and increasing rates of multi-morbidity. The road map for the implementation of the recommendations was also approved by the Ministry of health and stakeholders.

Crunch Time: the transformational Universal Health Coverage agenda for Zambia

Mpuma Kamanga, Lusaka, Ministry of Health

There is a realisation worldwide that health expenditure can be catastrophic, exacerbate inequalities between poor and rich households, and drive people into poverty. As such, a number of countries seek to provide Universal Health Coverage (UHC) to all its citizens in order for everyone to access quality health care without financial adversity. However, attaining UHC is difficult. It has also been recognised that there is no universal formula for attaining UHC, and that each country must carve its own. This paper describes Zambia's trajectory to achieving UHC from the 1990s to date. The paper highlights some of the past institutional and financing reforms, achievements made; and gaps and challenges that the government is determined to address through an explicit transformational agenda that is currently being implemented. This agenda is being pursued with renewed vigour given that Zambia's economy and population are growing rapidly, the time to transition from external support is fast approaching, and the disease profile is changing.

Politicking with Health Care and Its Implication for The Attainment of Universal Health Coverage

Aloysius Odii, Obinna Onwujekwe, Ada Ogbozor, Tochukwu Orjiakor, Prince Agwu, Eleanor Hutchinson, Dina Babalanova, and Martin Mckee

Background: A high priority health policy goal in Nigeria is the achievement of the health-related Sustainable Development Goals (SDGs), especially Universal Health Coverage (UHC) that would ensure citizens access health services without experiencing financial difficulties by 2030. In Nigeria, the Primary Healthcare system is recognised as the epi-centre of the efforts to achieve UHC. However, the nature of politics that reportedly exists at the PHC, especially within health centres may constrain the achievement of UHC. However, there is paucity of knowledge of the effects of politics at the PHC level on the achievement of UHC.

Objectives: The study examined the effects of how playing politics with the health centre creates structural and institutional barriers that prevents PHCs from contributing to the achievement of health goals such as UHC.

Methodology: The study was carried out in eight PHC facilities that were purposively selected from four local governments in Enugu State, southeast Nigeria. Data was collected using in-depth interviews (IDIs) from twenty participants that included frontline health workers, services users, head of department of health, supervisors for health and the chairmen of the community health committees. Four (4) Focus group discussions (FGD) were held with male and female consumers.

Findings: It was found that politics (because the interest of powerful members of the community are considered) influences the siting of PHC facilities and some are sited in geographic locations that constrain optimal access to health services. Also, the recruitment of health workers is in most cases not based on merit but on the principle of *who-you-know* and in such cases, incompetent hands could be employed leading to poor health care delivery. Moreover, some health workers can afford to be absent from duty without sanctions because most times, they are protected by influential persons.

Conclusions/Recommendations: Politicking with health care leads to poor running of PHCs and it makes users access health services in far and costly places thereby making the goal of realizing UHC doubtful. To achieve UHC, governments at all levels should develop mechanisms that will lead to decrease in the corruptive and disruptive influences of politics at the PHC level. There should be a deliberate emphasis on meritocracy in the recruitment and siting of PHCs. In addition, the government should develop reporting platforms that allows community health committees go above health workers and their managers that are corrupt and disrupting the PHC system. **Acknowledgement: ACE consortium**

Achieving universal health coverage in nigeria through health financing

Aniefiok Udo Department of Economics, University of Calabar; Iboro Nelson Department of Economics, University of Uyo; Jeremiah Olu Department of Economics, Kogi State University

INTRODUCTION UHC entails that citizens have access to the health care services needed without undue financial hardship. This consist of three interrelated components: the population covered, the range of services made available; and the extent of financial protection from the costs of health services. Health is a priority for the state and a social obligation for all citizens but Nigerian health care funding is grossly inadequate with budgetary provision to health barely exceeding 3% of the country's total budget. Also, there is lack of

incentives for health providers to set up facilities in rural areas (inequity of access). Public health expenditures in Nigeria account for only 20-30% of total health expenditures, while private expenditures accounts for the remaining 70-80%. Again, there is lack of provision for the potential exclusion of those unable to pay from the national health insurance scheme (NHIS) or setting premiums for poorer people (inequity in finance). Nigeria is still ranks low among the World Health Organisation (WHO) member nations. The dominant private expenditure is through out-of-pocket, and this accounts for more than 90% of private health expenditures. This study seeks to examine the nexus between public health care financing and achieving UHC in Nigeria.

METHOD The study utilizes multivariate logistic model as empirical technique in analyzing primary data collected through personal interview from randomly selected sample size of 720 households. 20 each from six villages of the two local government area chosen from the three senatorial districts in Akwa Ibom state.

RESULT/CONCLUSION The result shows that 64.3 percent had only accessed the health facilities less than 4 times within the month for childhood related treatment, while 35.7 had accessed the health facility more than five times within the month. Also the findings reveals that the high levels of infant mortality rate was associated with the high incidence of out-of-pocket payment, and the wide disparity and inequality in income distribution. The study further observed an inequality in the distribution of health facilities, more in urban while less in rural areas. The study therefore recommended among other things that increase in public health spending is required to reduce the burden of cost of health services in the rural areas.

Parallel Session 1-2 Private sector, PPP and contracting out

Governing Public Private Partnerships to advance UHC objectives: Experiences from Government- Private Not-for-Profit contractual relationships in Uganda

Aloysius Ssennyonjo, Justine Namakula and Freddie Ssengooba , Makerere University School of Public Health Uganda

Background: Government – Private not for Profit (PNFP) relations are vital to advance Universal Health coverage (UHC) in developing countries but face major capacity challenges such as “buy or make” decisions and capacity for relational governance systems to support mutual objectives. This study examines how Government-PNFP contractual relationships can be governed to advance UHC objectives.

Methods: This study was part of Multi-country studies commissioned by Alliance for Health Policy and Systems Research /WHO. The Case study about Uganda Catholic Medical Bureau-Government relationship to support health sector development/investment plans over time. Methods included; document review, secondary data extraction and 39 key informant interviews with actors at, district, facility and national level. The study utilized Principal-agency theory, New institutional economics and path dependence to explore evolutions and dynamics in the contractual relationships between government and PNFP over time.

Key findings: The relationship between government and PNFPs was built on pro-poor commitment of the PNFP sub-sector especially evidenced by PNFP presence in rural facilities. This led to privileged position of PNFPs in health governance structures and processes providing opportunities for PNFPs to contribute directly to policy development and implementation

processes. The dilemma of performance specification and monitoring and the conflict between PNFP autonomy and co-option by Government are key issues in principal-agency relationship. Mistrust over subsidies and costs were prevalent: Government officials questioned why government should subsidize the PNFP sub-sector yet it continues to charge fees for their services, yet they receive government subsidies and substantial financial and material support from charitable organizations and external aid agencies. The basis for the actual cost of services in PNFP was not transparently determined. Weak financial management systems among PNFP facilities were considered a major challenge in the past but have now improved. The PNFPs made internal efforts to improve capacity including training the teams and streamline internal expectations of employees. The Ministry was also perceived to have weak capacity to meet its obligations in the partnership.

Conclusions: Government of Public Private Partnerships (PPPs) has political economy issues which can be complicated by information inadequacy. Trust and suspicions need to be managed by closer engagement of parties involved in the partnership. Clarification of expectations of partners as has been practiced under Results-based financing (RBF) schemes piloted across the country can enable improvement of the principal-agency relationship.

Trust me if you can! Realist insights on how mistrust undermines effective Public Private Engagement and strategies to address it in West-Africa

Jean-Paul Dossou, Bruno Marchal**, Sosthène Adisso**
**Centre de Recherche en Reproduction Humaine et en Démographie, Cotonou*
***Institut de Médecine Tropicale, Anvers*

Barriers to effective Public-Private Engagement for health in West-Africa include ideological rifts, conflicting interests and limited governance capabilities. Little is known on how these elements jointly cause engagement failures. We used the implementation of the fee exemption for caesarean section policy introduced in Benin in 2009 to investigate how the engagement of private providers is organised and regulated. We adopted a Realist Evaluation approach (Pawson & Tilley, 1997) and used an embedded case study design, using qualitative and quantitative data.

The fee exemption policy only considers public and not-for-profit private actors, on the grounds that the non-profit private sector shares the value of public oriented services and can be trusted to implement the policy. However, we found that, analysing the fees at 44 health facilities, 14 private not-for-profit facilities kept charging the patients substantial additional fees on top of the €153 per caesarean section reimbursed by the government. Our analysis shows how implementation of this policy by private not-for-profit facilities depends on how top-down and bottom-up trust is facilitated.

In a context where the public administration is seen as too bureaucratic, slow and unreliable in its financial procedures, hospital managers perceive the fee exemption policy as a threat, especially if out-of pocket payment is their main funding source. In such cases, hospital managers who have the decision space to do so are more likely to charge extra fees and prevent users to receive the full benefit from the fee exemption policy.

We found that trust between state and private-not-profit providers is more likely to be facilitated by (1) removing the risk for private actors of losing resources, for instance by setting up simple, reliable and transparent administrative procedures; (2) taking into account the actual cost for facilities of implementing the policy; (3) compensating short-term financial loss in case of delayed reimbursements; (4) using evidence to make explicit the challenges of each sub-sector (public or public not for profit) in implementing the policy to facilitate a richer and more inclusive

policy debate; (5) making each sub-sector accountable for its commitments toward the successful implementation of the policy.

In conclusion, we found a dynamic interplay between financial interests, decision space, power and trust at the interface between the public and private-not-profit health sector in Benin. Since UHC requires a mobilisation of all actors, promoting trust between public and private actors will be essential to achieve universal health coverage in West-Africa.

The Nigerian PBF Approach to Contracting Using State Actors

Hyeladzira David Garnvwa, Project Implementation Unit, Nigeria State Health Investment Project (NSHIP), National Primary Health Care Development Agency (NPHCDA)

Background In 2011, the Federal Government of Nigeria (FGN) through a credit from the World Bank launched a Results-based financing (RBF) program in health under the Nigeria State Health Investment Project (NSHIP) piloted in three States of the Federation. The RBF approach was adopted based on global best practices and experiences from other sub-Saharan countries such as Rwanda and Burundi, as an output-based system of health financing.

Introducing RBF approaches into a country is not always easy and needs to follow basic principles which are relevant for designing country models, however, each country has to design or adapt its RBF model based on its realities.

In Nigeria, consultations between FGN and the World Bank was key to identifying and considering country level nuances required for the introduction of RBF. This includes aligning with the Africa Strategy (2011) – Africa's Future and the World Bank's Support to it which focuses on the foundation of strengthening governance and building public sector capacity through institutional strengthening and enhancing incentives in the civil service.

Objectives This research aims to assess the degree to which the design of NSHIP adheres to the conceptual design and framework of RBF programs based on its eleven best practices.

Methodology To meet the objective of this research, we measure its fidelity against the distinct roles that various actors play in an ideal RBF setting. Literature review of RBF in developing countries, PBF toolkit and guidelines and the NSHIP project documents was done to collect data. The case is defined as the Nigerian NSHIP RBF model from late 2011 to 2017 and analysis is made based on the modified implementation fidelity framework of Carroll et al. (2007).

Key findings The study found the majority of the intervention components were implemented with fidelity (80%, 4/5), whiles 20% (1/5) underwent modifications due to contextual circumstances. Empirical data showed that the institutional arrangement based on separation of functions were implemented with slight adaptations made on country level nuances.

Conclusion Experience from the NSHIP model suggests that integrating RBF approaches into the health system first requires a design mechanism that includes adequate space for dialogue and debate to ensure understanding and ownership among key stakeholders. Secondly, alignment with and adaptation to, the specific, local institutional context is critical.

So far, the Nigerian RBF approach to contracting is unique as it shows that the capacity of State actors can be built to take on new roles in RBF design and implementation.

Faith based health providers are less affordable to access for PLHIV, a comparative study from North Tanzania

Carl Mhina, Cente Medical Chrétien du Kilimandjaro

Background: The third sustainable development goal emphasizes on improving individual's access to needed health services and protecting them from financial catastrophes and impoverishing health care costs. While access to HIV care is a complex concepts that interact with different socio-economic factors, little is known on how these may differ between different health providers. Faith based health providers(FBHP) represent an important source of care for all socio-economic groups especially for those in the rural areas due to their affordability, availability and acceptability. This study investigated the relationship between health facility ownership and access to HIV care in Northern Tanzania.

Methods: We conducted a patient-cost study in two purposively selected HIV/AIDS care and treatment centers, a faith-based and a state-owned. A total of 618 clinic exit interviews were conducted; 336 from the faith-based health facility and a total of 282 from the public hospitals. Three dimensions of access (affordability, acceptability and acceptability) were evaluated using patient exit interviews. We then compared the three access dimensions according to the health provider using the Pearson x^2 , Fischer exact and Mann-Whitney U tests were appropriate.

Results: Only 22% of the participants had any form of health insurance cover with a larger proportion in the FBHP (109 [32.4%] vs 27 [9.6%], P = 0.000). The total direct costs paid to the hospital per visit was high in the FBHP ($ 1.6[SD 1.4] vs $ 0.1[SD 0.8], P = 0.000) with a slightly larger proportion of participants from the FBHP suffering catastrophic health expenditures from direct costs paid out of pocket compared to those from PH at a 10% threshold (115 [34.2] vs 86 [31%] P= 0.324).60% (97/336) of the participants with chronic illness in the FBHP received care from the same clinic compared to 37% (43/282) from the public hospital. Most of the participants 546 [82.4%] had never experienced negative judgement from the health workers and there was no difference between the providers (282 [83.9%] vs 227 [80.5%] P= 0.136).

Conclusion: FBHPS are generally less affordable compared to public providers with high costs of services and access, although this is more complex when assessed closely. Services for chronic diseases other than HIV/AIDS were readily available in the FBHP.Contrary to previous notions, both providers have high level of acceptability. Interventions and policies addressing access barriers need to concentrate on health provider's models of access that protect patients from high out-of-pockets and catastrophic health expenditures.

Mobilizing resources from the private sector for targeted health investments using evidence from costing assessments

Sylvester Akande, Palladium International _ Nigeria, Abuja
Betta Edu, Cross River State Primary Health Care Development Agency

Background: Governments in Nigeria are striving to inject capital into the healthcare sector but the challenges of low revenue generation, tax receipts, and inefficiencies in health expenditure complicate these efforts. It is for this reason that health policymakers now look to innovative public-private partnerships as a way of expanding the fiscal space for Health. In 2017, the Federal Government flagged off a scheme to revitalize 10,000 primary health care centers (PHCs) across Nigeria as part of advancing progress towards Universal Health Coverage (UHC). This revitalization initiative seeks a fully functional PHC in every administrative ward of the country. The Government of Cross River State (CRS) has adopted the initiative and has committed to revitalizing a total of 196 PHCs across 196 political wards.

Methodology: With technical support from USAID, the CRS Government conducted an RMNCH Service Availability and Readiness Assessment (SARA) to identify critical service input gaps at 750 health facilities. Data were aggregated and presented by facility type along the lines of Human resources for Health, Infrastructure, Commodities and Supplies, and Equipment. Furthermore,

the infrastructure gaps were costed using the Bills of Quantity (BoQ) methodology to ascertain the financial needs required to close identified gaps through targeted investment. Indices assessed include power supply, water supply, roofing/building/floor/window/door conditions, toilet facilities, and waste management facilities.

Key Findings: Infrastructure in the state's public health facilities is generally poor. Approximately, half of all facilities visited had a leaking roof, no access to water, electricity or a functional toilet. In 2018, the CRS Primary Health Care Development Agency leadership launched the "Adopt a Health Facility" initiative using evidence from the BoQ assessment to engage the private sector with a view to having them contribute to the renovation of the 196 main PHCs per ward. To date, 40 facilities have had their infrastructures upgraded and an additional 7 PHCs have received basic equipment from well-meaning individuals. This is separate from the PHCs that shall be fully revitalized using public funds through evidence-based priority needs budgeting.
Main Conclusion: In many LMICs, mobilizing resources from Government alone to bridge the huge critical service input gaps for quality RMNCAH + NM services is a big challenge. Financial and non-financial resources from the private sector can significantly contribute to the Government's efforts by complementing, strengthening, and extending existing resources. However, to engage the private sector effectively; generating evidence of need, establishing robust accountability mechanisms and efficiency improvements will be critical in translating the potential of mobilizing additional resources from this sector into reality.

Parallel Session 1-3 (Cost effectiveness: case studies)

Costs and sustainability of a novel Community Health Workers programme in improving Mother and Child Health in Nigeria

Obinna Onwujekwe; Health Policy Research Group, Université du Nigéria Nsukka
Tim Ensor, Benjamin Uzochukwu, Uche Ezenwaka, Adaobi Ogbozor, Chinyere Okeke, Enyi Etiaba, reinhard Huss, Bassey Ebenso and Tolib Mirzoev

Background: A recent health intervention that was undertaken in Nigeria was the Subsidy Reinvestment and Empowerment Program/ Maternal and Child Health (SURE-P/MCH) programme, which had both supply and demand components. The funding for the programme ended in 2015, but there is the need to provide evidence on its performance. Hence, this study provides evidence on the costs and cost-effectiveness of the intervention, which has direct bearing on its sustainability and scaling up of community health worker programmes for MCH interventions.

Methods: The study was undertaken in Anambra state, southeast Nigeria. Cost and outcomes data were collected from three clusters; (1) With the SURE-P MCH intervention; (2) With the SURE-P MCH intervention + CCT and; (3) Without the SURE-P MCH intervention. Costs were for the year 2014. Information was collected from relevant key informants and from the records in health facilities, local government councils, and the state ministry of health. The costs were categorized into: personnel, infrastructural (capital), drugs and consumables, overhead and CCT costs. Data on the outcomes of the intervention are being collected using a community survey in the three clusters and the results will be available in July 2018.

Key Findings: The highest total annual cost was incurred in the SURE-P +CCT facilities (93,643,613 Naira: US$307,028) and the least cost was incurred by the control facilities

(52,717,114 Naira US$172,843). The cluster with just the SURE-P MCH incurred a total annual cost of 79,343,727 Naira (US$260,143). The highest contributors to costs in the SURE-P facilities were from personnel costs and drugs and consumable. The cost on infrastructure was almost uniform across the three sites. The effectiveness of the interventions increased moving from the SURE-P CCT cluster to the SURE-P non-CCT cluster to the control cluster, for ANC and delivery, but not for PNC.

Main Conclusion: There is a wide variation in the annual cost on MCH services across the three clusters. The finding of overall positive incremental cost analyses from the CCT cluster to the non-CCT SURE-P cluster to the control cluster were expectedly because of the higher level of activities in the SURE-P CCT and non-CCT clusters compared to the control cluster. The costs and consequences show that there are efficiency gaps but although the programme can be used to improve access to MCH services, the relatively most costly CCT cluster calls to question the sustainability of the CCT component, especially if run as routine programme.

Examining the affordability of hypertension care in Kenyan hospitals: a cost analysis from the patient's perspective

Robinson Oyando[1], Edwine Barasa[1], Martin Njoroge[1], Peter Nguhiu[1], Fredrick Kirui[3], Jane Mbui[3], Antipa Sigilai[1], Esther Muthumbi[1], Sailoki Kapesa[1], Joseph Mwatha[4], Vincent Okungu[1], Lawrence Muthami[5], Zipporah Bukania[5], Judy Mwai[6], Margaret Wambua[7], Andrew Obala[8], Kenneth Munge[1], Kimani Gachuhi[2], Anthony Etyang[1].

[1] KEMRI Centre for Geographic Medicine Research, Coast, Kilifi, Kenya; [2] KEMRI Centre for Biotechnology Research and Development, Nairobi; [3] KEMRI Centre for Clinical Research, Nairobi, Kenya; [4] KEMRI Centre for Microbiological Research, Nairobi, Kenya; [5] KEMRI Centre for Public Health Research, Nairobi, Kenya; [6] KEMRI-ESACIPAC, Grantsmanship, Nairobi, Kenya; [7]KEMRI-Centre for Respiratory Diseases Research, Nairobi; [8] Moi University/Webuye Health and Demographic Surveillance System

Objective: The burden of non-communicable diseases is significant in Kenya and other low and middle-income countries (LMIC). However, little is known about the associated costs that may be incurred by hypertensive patients. We conducted this study to examine the costs of obtaining medical care for hypertension in seeking primary care in Kenyan hospitals (direct medical and non-medical costs), the costs associated with being unable to work (indirect costs) and the magnitude of these costs in relation to household income.

Methods: Responses gathered from hypertensive patients above 18 years of age attending a specialised outpatient clinic at a primary care hospital with at least six months of treatment and signed informed consent form were double entered and analysed. Patients were asked to report care seeking behaviour and expenditure related to accessing hypertension care. Family socio-economic status was assessed through reported household incomes.

Results: A total of 212 patients were interviewed. Eighty eight percent of patients reported incurring costs to access care for any hypertension service or intervention. The mean annual direct cost was US$ 304.8(95% CI, 235.7–374.0) while the mean annual indirect cost was US$ 267.7(95%CI,238.6-296.8). The three highest direct cost categories were medicines (annual mean, US$ 168.9; 95%CI, 132.5–205.4), transport (US$ 126.7; 95% CI, 77.6–175.9) and user charges (US$ 57.7; 95% CI, 43.7–71.6) making up 42%, 38% and 17% of total direct costs, respectively. Costs of hypertension care were greater than 10% of annual household income for 59% (95%CI,52.1.6-65.4) of patients interviewed. A greater cost burden was experienced by households with lower socio-economic status with a concentration index of -0.51 ($p < 0.001$).

Conclusions: Our findings show that patients seeking hypertension care incur substantial direct and indirect costs. The out-of-pocket costs associated with obtaining care for hypertension

impose significant barriers to access, particularly for patients in the lowest wealth quintile. This illustrates the urgency of improving financial risk protection for these patients and strengthening primary care for non-communicable diseases to prevent and manage hypertension illness.

Analysis of the costs of care for premature new-borns in Senegal

Ange Kouassi, Dakar IntraHealth

In the context of my study on the analysis of the costs of treating premature babies in Senegal, my choice was mainly made in the case of the hospital ''Hôpital principal de Dakar''.

This hospital applies a uniform rate (50,000 CFA francs) per day of hospitalization to all types of children received in the Neonatology department. To make my contribution, I opted for the calculation of the costs, by the ABC method, for different types of premature babies, namely very premature, and very premature and less premature.

A two-pronged methodology was used to achieve my goals. The first one concerns data collection and the second explains the ABC approach adopted. As specific data related to the types of children received in hospital are not available, I have adopted a data collection methodology. Data collection took place over two months and covered the population of all children received into Neonatology in 2017. 832 cases were analysed, including 292 premature cases divided into 34 very large, 95 large and 163 medium premature cases. The interview with the Neonatology Department, the questionnaire addressed to doctors, the care supervisor and nurses, were developed. I have also read the documents available in the hospital and on the Internet relating to the care of premature babies.

The second methodology related to the ABC method consisted firstly to identify the processes for managing premature babies and to develop the dictionary of induced activities. The resources committed, and the different inductor of resources and activities were also identified. Finally, the calculation of costs and their assignment to cost objects followed the explained methodology. The results reach out 277,961 CFA francs for very large patients, and 245,509 CFA francs for large patients, and 202,495 CFA francs for premature patients per day of hospitalization. Several authors have found similar results.

Based on the analysis of realities and costs found, some recommendations were made for possible reflections on pricing, guidance for grant applications, advocacy and hospital reporting.

Costs of adding rapid syphilis test to existing antenatal services at the primary healthcare level in Burkina Faso: a micro costing approach for prenatal diagnosis

Fadima YAYA BOCOUM, Institut de Recherche en Sciences de la Santé, Ouagadougou

Objective: To estimate the additional cost of an antenatal syphilis screening intervention implemented in rural and semi urban health facilities in Burkina Faso.

Design: A micro costing study in the frame of a pre post implementation intervention group with no comparison group was conducted.

Setting: Antenatal services in 4 primary health centers in health district in Burkina Faso

Population: Pregnant women attended to first antenatal care at the selected health facility before and after the intervention.

Methods: Costs data were collected before and after implementation of the antenatal syphilis screening in 4 selected health facilities in the healthcare perspective. Observations were conducted the day of antenatal care in the antenatal care room consultation with all consenting pregnant women.

Main outcome measures: Costs for antenatal care with and without rapid syphilis test were estimated. Cost for woman screened and treated for maternal syphilis was also estimated. Results: The average cost for unscreened pregnant woman was $3.11 (±0.14) and the average cost for screened pregnant woman was $5.06 (±0.16). Cost difference between unscreened and screened woman was $1.95. The main cost driver in screening was material costs. Syphilis material costs accounted on average for 16% to 39%.

The average cost for screened and treated pregnant woman was $6.28 with benzathine benzyl penicillin (BBP) only and $9.41 for alternative treatment with erythromycin. Costs varied also between health facility location and profile of health worker.

Conclusion Integrating point of care test for syphilis in ANC services is feasible at a modest incremental cost in comparison with HIV tests.

Economic burden of type 2 diabetes mellitus complications among patients in the eastern region of Ghana: A descriptive cross-sectional cost-of illness study

Amon S. & Aikins M., Ecole de Santé Publique, Collège de Sciences de la Santé, Université du Ghana

Objective: To assess the economic burden associated with the management of type 2 diabetes with complications from patients of the Eastern Regional Hospital's Diabetic Clinic of the Eastern Region of Ghana.

Methods: The study is a descriptive cross sectional cost-of illness study which was carried out in May, 2016 among 258 diabetes patients. Participants were selected by systematic random sampling and informed consent was signed. A pretested structured questionnaire was used for data collection. The data were entered into Epi-Info version 7 and analyzed using Microsoft Excel version 13 and STATA version 13. Kruskal-Wallis and Wilcoxon Rank Sum tests were used to determine statistical significance in cost difference. Total healthcare management cost was estimated and average cost determined. Intangible cost burden was analyzed using the 5-dimension Likert scale and the tertile descriptive statistics. Sensitivity analyses was conducted to test robustness of the cost estimates.

Results: About 68% (n=175) of type 2 diabetes patients with complications were above 55 years. The estimated total healthcare management cost was US$9,980.62, with direct healthcare management cost constituting about 94%. The average healthcare management cost was US$38.68 (95% CI: 5.53-71.84). Patients on treatment for 5 years and above incurred significantly higher direct cost compared to those below 5 years, US$40.03 ± 40.71 ($p<0.05$). Patients incur moderate intangible cost burden. There was no statistically significant relationship between intangible cost burden and all the socio-demographic characteristics of patients.

Conclusion: The findings suggest considerable economic burden associated with healthcare management of type 2 diabetes with complications, particularly in the elderly. The longer a patient stays with the disease, the significantly higher average direct cost incurred per month. Diabetes prevention strategies and, patient's regular physical activities and proper dietary plan are highly recommended.

Costing analysis of salt iodine fortification in Ethiopia: preliminary results

MINIMOD & EPHI Economics Team:
Elias Asfaw, Justin Kagin, Stephen A. Vosti, Muluken Moges, Zekariyas Getu

Background: Starting in the 1980s, different political, economic, and social factors have contributed to the current state of the salt market in Ethiopia as well the current consumption of iodized salt within households.

Rationale for the Study: To understand the structure of the salt industry in Ethiopia and the costs of fortifying salt with Iodine; including studying salt prices, the quota system, market share of salt manufacturers, as well as the costs of fortification programs. It is also useful in assessing the extent to which salt may be a cost effective delivery mechanism in the future for other micronutrients besides Iodine.

Methodology: Micro-costing expenditures and a top-down costing method were employed at the different levels in the salt market as well as analyzing the salt iodization program activities and different contributions by the various stakeholders. The costing model was developed depending on the salt market structure and a series of activities such as: a baseline survey, revision of salt standards, human resources, equipment and machinery, monitoring and evaluation by different partners at different levels along the implementation of the salt iodine fortification program.

Results: The salt industry is in great flux and subject to tensions and government interventions (fixed prices). The fixed price ranges from Ethiopian birr/ETB 7.32 (United States Dollar/USD 0.44) to ETB 8.71 (USD 0.52) depending on the sources of raw salt and transportation. The quota system was established by the Afar Salt Producers Mutual Support Association (ASPMSA) to better coordinate salt production and supply. The Afar Salt Manufacturing SC continues to lead the salt production and distribution (almost 65% of the total cost) followed by the SVS salt manufacturer. The ten years total, 2011 to 2020, inflation deflated cost of salt iodine fortification is ETB 81,302,875 (USD 4,858,920). Of these, the cost incurred at the salt factory (33%) and monitoring and evaluation (32%) accounted for the largest share (> 60%) of the total cost.

Conclusions and policy implications: Iodine premix/potassium iodate and monitoring and evaluation are the major cost drivers in the salt iodine fortification. Efficiency could be improved through changing the M&E practices as well as possible change in the salt market structure and policy instruments. Multiple-fortified salt could also be cost-effective for conveying other micronutrients such as zinc, iron, folic acid and vitamin B12.

Assessing the Determinants of Cost Efficiency of Primary Health Care Facilities in Ghana: A Latent Class Stochastic Frontier Analysis

Kwadwo Arhin ; Ghana Institute of Management and Public Administration (GIMPA)

Background: Improving Universal Health Coverage (UHC) to accelerate the march towards the attainment of Goal 3 of the Sustainable Development Goals (SDGs) very much depends on enhancing the cost efficiency of primary healthcare (PHC) delivery in all developing countries including Ghana. Estimating the cost efficiency as well as analyzing the determinants of cost efficiency of PHC facilities is important in the management of PHC facilities.

Objective: The aim of this study is to estimate the cost efficiency of Ghanaian PHC facilities as well as to analyze the major drivers of cost efficiency.

Methods: The study was conducted using a panel data stochastic cost frontier with latent classes which allows the data to construct different frontiers for each group and evaluation of cost

efficiency levels is carried out with respect to each group's own frontier. The Cobb-Douglas cost function model was employed. The latent class membership analysis is based on the hypothesis that unobservable technological heterogeneity exists among Ghanaian PHC facilities.

Results: The study results reveal that there are three statistically significant classes in the sample and that the effects of the major determinants of cost efficiency of a PHC facility are influenced by the class structure of that facility.

Conclusion: PHC facilities could improve their efficiency levels substantially and that health policies fashioned to bring about improvement in efficiency must be guided by different classes identified to ensure more accurate and cost-effective management of resources.

Keywords: Primary Healthcare (PHC), stochastic frontier analysis, latent class, cost efficiency, Ghana.

An extended cost-effectiveness analysis of the AIDS Trust Fund in Uganda

Charles Birungi, MSc[1,2], Timothy Colbourn, PhD[1], Marcos Vera-Hernández, PhD[1,3]*
[1]The UCL Centre for Global Health Economics, University College London, UK;[2]UNAIDS, Botswana, [3]Institute for Fiscal Studies, UK

Background: HIV is a disease of inequality. This necessitates "leaving no one behind" if the 2030 *Agenda for Sustainable Development*'s goal to end the AIDS epidemic as a global health threat is to be realised. Current global policy discourses on universal health coverage (UHC) have focused attention on the need for increased government funding for health care in many low and middle-income countries. To this end, recognising that fast- tracking HIV/AIDS responses is key to progress towards universal health coverage – owing to its significance in terms of fiscal and burden of disease terms – Uganda has, since 2014, approved the establishment of an AIDS Trust Fund. The growing commitment to UHC notwithstanding, there is paucity of empirical evidence on how disease-specific funding can be leveraged to progress towards UHC. The objective of this paper is to empirically analyse how the AIDS Trust Funds can be leveraged for financing UHC through the National Health Insurance Scheme, including an explicit quantification of the ensuing health and poverty alleviation benefits and distributional consequences of this health financing policy.

Methods: To integrate equity and financial protection considerations into traditional cost-effectiveness analysis (CEA), this paper uses state of the art "extended cost-effectiveness analysis" (ECEA). This provides a methodological framework of economic evaluation to determine the distributional and financial risk protection consequences of UHC financing policy in Uganda. Specifically, the benefits explored span over four dimensions: health benefits, direct costs, financial risk protection and, distributional consequence over income quintiles. Additionally, the basic principles that any decision rules should embody are articulated. The incidence, health service utilisation and expenditure related to UHC per national income quintiles was obtained from multiple data sources.

Results: The ensuing health benefits of the AIDS Trust Fund in financing priority health programs towards UHC and reducing out-of-pocket (OOP) expenditure are distributed fairly evenly across quintiles. This, in turn, could bring substantial health gains and financial risk protection benefits. However, poverty alleviation benefits are concentrated among the poorest populations groups. Finally, the AIDS Trust Fund, as a revenue stream – in the absence of integration into health financing systems – may result in inefficient spending allocations.

Conclusions: This paper calls for an overhaul of the health economist's methodological toolbox owing to two distinct features of the AIDS epidemic and response that make application of

standard economic evaluations methods altogether unsatisfactory. ECEA builds on standard cost-effectiveness analysis (CEA) in three dimensions, all of which enhance the ability of stakeholders to evaluate health financing policy. The methods we developed and employed in this study can therefore be a useful application in further analyzing public policy across a wide range of health financing policy instruments and places. Also, this paper discusses the role of trust funds of financing priority health programs in the practice of and the policy discourse on the sustainable financing of UHC, and also draws lessons from the non-health-specific literature on earmarked taxes and extrabudgetary funds.

Parallel session 1-4 Access to HIV-AIDS services

Discontinuation of anti-retroviral treatment: an empirical analysis of the determinants

KOUASSI Kouassi Jean Hugues, Alassane Ouattara University, Bouaké, Ivory Coast

HIV/AIDS is a deadly pandemic that has claimed the lives of several million people worldwide, in Africa and in Ivory Coast. The socio-economic impact of AIDS and its consequences on individuals, families and communities is extraordinary. Notwithstanding the considerable progress made in the fight against this disease, there is no vaccine or drug to prevent HIV or to cure AIDS.

The only medically available way to treat HIV/AIDS is using antiretroviral therapies. These drugs, although having important side effects, produce conclusive results in reducing viral load to an undetectable threshold and in strengthening the immune system. These ARVs thus improve the quality of life of patients, strengthen their health, prolong their lives and reduce AIDS-related mortality.

In order to make these drugs available to all social strata, many incentive policies have been put in place on a global scale. Thus, ARVs have been available free of charge since the beginning of the decade 2000. In economic theory, incentives are intended to stimulate actors to a targeted behaviour. However, since the logic is the correct follow-up of ARV treatment in order to improve health status, it has been observed that many people living with HIV worldwide, especially in Ivory Coast, are abandoning their anti-retroviral treatments. These people are, from a medical point of view, called "lost to follow-up". In 2011, Ivory Coast had 35% of those lost to follow-up in its HIV programmes. The dropping of ARVs dangerously compromises therapeutic success, a low compliance rate conditions treatment failure; it creates resistance and promotes viral replication. In addition, these people who abandon care run the risk of transmitting a "new" virus that is more resistant to ARVs and therefore more difficult to control (Kouassi et al., 2014).

This situation is a concern for health care providers and is generating interest in research in several disciplines, including economics, to explore the reasons why people abandon their treatment. Why do people living with HIV who have been prescribed antiretroviral treatment drop out of treatment? This question aims to contribute to the understanding of the phenomenon of abandonment of care in the care of PLWHA. We conducted a descriptive statistical methodology and a simple econometric logistic regression analysis on data collected on two hundred and seventy-seven (277) PLWHA patient files at the Bethesda Medical and Social Centre, an HIV care centre in Yopougon, Abidjan (Ivory Coast).

The results of our analyses reveal a statistical link between the discontinuation of ARVs and socio-demographic factors such as gender when the individual is male, single status, education, duration of treatment, square of treatment duration, non-participation in HIV status with a relative and use of drugs offered by traditional medicine practitioners. Thus, it is noted that men are at a higher risk of abandoning care than women. There is a convex relationship (U-shaped relationship) between the time taken to treat and the discontinuation of ARVs. The probability of discontinuing ARVs decreases with the duration of treatment up to the fifth year of treatment. From the fifth year of treatment, individuals on ARVs become weary of the heaviness and infinite number of drugs to take and can misinterpret their health status, all other things being equal, and the probability of leaving care increases. The educational level of patients is also significantly related to the notion of POS. The most educated patients tend to seek referral health centres to invalidate or confirm their HIV status and therefore abandon the HIV services of the Bethesda Medical and Social Centre. Regarding marital status, it is noted that single patients are more likely to abandon care than patients in a conjugal relationship. As a result, patients who have the courage to share their status with a loved one have a greater chance of remaining in the antiretroviral care program than those who do not. Finally, the results indicate that the use of traditional drugs has a negative effect on the retention of PLWHA in antiretroviral care.

Thus, two (2) basic hypotheses of this study are confirmed. The use of traditional medical practices has a negative impact on the maintenance of ARV care. Also, non-shared HIV status with a relative is positively correlated with discontinuation of antiretroviral treatment. However, the first hypothesis is rather invalidated. Contrary to what we thought, the most educated PLWHAs have a higher probability of leaving care and we think they would be self-transferred.

In view of the above, we suggest measures such as: identification of the traditional medicine practitioners proposing remedies for HIV, analysis of the efficacy and renal toxicity and hepatitis of these drugs and the integration of those recognized as effective in the fight against HIV. However, it will be a fierce fight against advertising and other misleading communications that divert patients from conventional HIV care. It is also necessary to dematerialize patient records by adopting digital registries and to centralize them in order to better control patient movements throughout the national territory. This will make it possible to avoid errors in figures related to patients who have been self-transferred but have been declared out of sight because they have not been seen again in health centres. In addition, there is also a need for a new approach to HIV awareness. It will be a communication aimed at populations and especially PLWHA with the objective of informing them about the advantages of using ARVs and their effectiveness in treating HIV. Indeed, in the face of the many perverse effects and slow action of ARVs, some patients find refuge among traditional medical practitioners who promote their products; this fact keeps them away from ARVs. Finally, patients should be encouraged to share their serostatus; this will allow them to benefit from family support and thus to bear the psychological load of the disease; support that is important in maintaining care.

Effective HIV Care and Support Interventions in Nigeria: A rights-based approach

Ifeanyi Nsofor, Adaobi Ezeokoli*, Nanlop Ogbureke***
**EpiAFRIC, Nigeria, **Christian Aid*

Background HIV-related stigma and discrimination have far-reaching consequences. People living with HIV and AIDS are denied their rights, disowned by their families and experience violence as a result. Access to health, economic and educational opportunities is compromised. All these in turn limit HIV prevention, treatment and care.

Aims and Objectives To strengthen, develop and expand effective community-based approaches to ensure that: HIV-related stigma, discrimination and denial is challenged, people living with HIV (PLHIV) and their families have sustainable access to quality care and support services: quality of life of PLHIV is improved and their rights promoted.

Methods Quantitative and qualitative data collection methods which included desk-reviews, Focus Group Discussions, questionnaire administrations and Key Informants Interviews

Key Findings Increased access to quality care and support through the Home-Based Care (HBC) services (45% at midterm evaluation to 81% at end-line). Savings and Loans Association (SLA) Welfare fund was established for sustained home and hospital-based care, support and access to treatment. Improved sustainable livelihoods and nutritional status; SLA membership increased from 57% at midterm to 88.5% at end line. A steady decline in the level of stigma, discrimination and denial was reported (increasing from 32% to 86%). PLHIV collectively pushed for the signing of the national anti-discrimination act.

Main Conclusions PLHIV become increasingly resilient, thereby reducing the barriers to HIV care and support and increasing access to quality HIV treatment options when sustainable rights-based approaches are used.

Determinants of regular demand for antiretroviral therapy in Togo

Bagnan Bato, University of Lome (PhD student in health economics)

Background: Irregular demand for antiretroviral (ARV) therapy is one of the reasons for the failure of people living with HIV (PLHIV). This leads to the transition to the higher lines of ARVs which are more expensive and therefore cause additional costs of the subsidy treatment due to free since 2008 in Togo. The number of unobservers increased from 397 in 2014 to 1333 in 2015 with over 2045 lost to Togo; despite the free treatment. This paper aims to determine the factors of regular demand for ARV treatment from the analysis of the utility function of the patient.

Methodology: This study used patient monitoring data from the National AIDS Control Program. The study involved 2497 patients who initiated treatment between 1 January and 31 December 2017 in 42 treatment centers in Togo. From the microeconomic analysis of consumer care behavior, we used the Logit model to analyze the non-monetary determinants of regularity at ARV treatment.

Results and Discussion: The majority of PHAs have a primary education level (47%) or no level (25%). 46% of them are at stage 1 of the World Health Organization (WHO) against 5% at stage 4 of disease. The majority are traders (35%) or unemployed (18%). Of 2497 patients, 32% are irregular at monthly treatment appointments. The age and professional status of the patient are factors that have high probabilities of negatively influencing adherence to treatment appointments. Patients who have unstable professional status give less usefulness to treatment because they are more concerned about the search for economic stability since they do not yet manifest the disease. On the other hand, the increasing stage of WHO is a factor which positively influences the regularity at the appointments of renewal of treatment. Patients in this case are more helpful in treatment when they begin to develop opportunistic infections.

Conclusion: Despite the fact that ARV treatment is completely free, our results suggest the implementation of close monitoring strategies targeting the socio-occupational categories of patients and age. It is also important to work to reduce the number of tablets per dose and the side effects of treatment. Please improve the socioeconomic conditions of patients.

Factors associated with low uptake of HIV early infant diagnosis among the HIV exposed infant: Towards 90-90-90 target of 2020 in Harare City, Zimbabwe.

Masimba Chikowore, Chadambuka Elizabeth, Chikaka Elliot: Africa University

Background: HIV Early Infant Diagnosis (EID) done through DNA Polymerase Chain Reaction constitutes an essential part of PMTCT for the exposed infants. The World Health Organization in 2014 set the 90-90-90 target of the year 2020 recommending that at least 90% of the HIV exposed should know their status, at least 90% to have therapy and at least 90% to have viral suppression. Harare City had 78%, 66% and 0% respectively of these targets in 2016. I investigated factors leading to low uptake of EID in HIV exposed infants.

Objectives: were 1. To determine the predisposing factors (knowledge, attitudes and perceptions about EID and Pediatric ART) that are associated with low uptake of EID and Therapy 2. To establish the reinforcing factors (social support) that are associated with low uptake of EID and Therapy in HIV exposed infants in Harare City.3. To determine the enabling (Health services related) factors that are associated with low uptake of EID and Therapy in HIV exposed infants in Harare City.

Methodology: An unmatched 1:1 case control study was used. Study participants were recruited using systematic random sampling. Interviewer administered questionnaires were used to collect data. Epi Info version 7 was used to analyze data for Univariate and Multivariate.

Findings: Knowledge on the available EID services[OR=0.478,95%CI=(0.17;1.29),P-value0.141,married mothers OR=0.75,95%CI=(0.1904;2.9706), P- value 0.7393],, and secondary education [OR=0.19,95% CI=(0.0599;0.5792),P-value 0.0034 were statistically significant with mothers likely to take up early infant diagnosis hence protective. Factors associated with low uptake of early infant diagnosis uptake were prohibitive religion [OR=14.47,95% CI (5.3739;39.0012)P-value <0.0001, lack of money for transport and failure to access health services. OR=13.096,95% CI(4.214;40.695)P-value <0.0001 Implications of the results were indicated and recommendations were made.

Conclusion: Improvement in EID uptake will help improve life in exposed infants. Further studies should be on the 1. (KAP) knowledge, attitudes and perceptions in regard to EID, 2.There is need for a study on the role of culture, religion, culture and social leaders in EID services. for Harare City to meet the 2020 target.

To What Extent Can Task Shifting Reduce The HIV Prevalence in the MSM Population, Malawi

Joanne Martin, University of Aberdeen Scotland - Aberdeen

Introduction: MSM in Malawi have a HIV prevalence (around 20%) that is twice that of the general population (9.2%). Despite research identifying MSM as one of the 'high-risk' HIV groups in Malawi, work and research in this area has largely focused of heterosexual and mother-to-child transmission. Task shifting is a process used to expand health care services by moving tasks from highly trained and skilled health personnel to those who are less trained (e.g. community health workers). This has been used in Malawi to expand HIV testing, counselling and treatment however, it had not been targeted at the MSM population thus far.

Methods: A literature search was carried out using Medline, EMBASE and PubMed. Key search terms were used. The search topics included: the strengths of task shifting and the sexual

behaviours, attitudes and challenges faced by MSM in Malawi. Limitation criteria was set to ensure the most appropriate and recent research was reviewed and included in this review.

Results: The results obtained suggest that task shifting may be used to overcome some of the barriers faced by MSM but it is not clear if task shifting could overcome all of them. Key themes were identified and conclusions were drawn from these themes.

Conclusion: The results indicate that there may be a role for Task Shifting in reducing the prevalence of HIV in this high-risk group. However, from the results it is unclear to what extent task shifting can do this as the challenges faced are complex.

Antiretroviral dispensing groups as a measure to improve adherence: cost-effectiveness analysis in Zambia

James Simukoko, Catholic Relief Services, Lusaka

Background: Zambia is one of the countries in sub-Saharan Africa with high HIV/AIDS prevalence at 13.34%. This has led to an increase in the number of people accessing antiretroviral therapy. Despite this, there is no corresponding increase in infrastructure and number of healthcare workers. As a result, patients must walk long distance and spend long waiting times at health centers, often causing some to miss their pharmacy appointments. Concerns about incomplete adherence among patients are an important consideration in expanding the access to antiretroviral therapy in sub-Saharan Africa.There is evidence that differentiated service delivery models, such as patient adherence groups, improve adherence to treatment and are cost effective.

Objectives: The study investigated the cost effectiveness of community adherence groups on adherence when compared to standard of care.

Methods: The study is a cost-effectiveness analysis from the patient's perspective. The study was a cost-effectiveness analysis from the patient's perspective.

I.) Cost: The cost of transport was a bus round trip. Labour cost were based on an average time of (6hrs).

ii.) Mean days for late pharmacy refill information was retrieved retrospectively. incremental cost-effectiveness ratios were obtained. Two-way sensitivity analyses were conducted on costs and adherence. The study was conducted at Mahatma Gandhi and Kasanda Clinics in central Zambia.

Results The total number of clients was 378. 201 on the standard of care and 177 on adherence groups. The average costs per clinic visit was US$4.02 on the standard of caret compared to only US$ 0.7 for clients on intervention. The average days late for pharmacy refill for the standard of care was 4.18 days while those on the intervention where late for only 0.19. The Incremental Cost Effectiveness Ratio was US$ -0.8 per one day improvement in adherence. One was Sensitivity analysis showed robustness in incremental cost effectiveness ratio.

Conclusion: It was ten times costlier for patients on standard of care to visit the clinic. They were also more likely to be late for refills, compared to those on the adherence groups. Belonging the adherence groups was more effective in reducing the number of days late for pharmacy pick-ups.

Parallel session 1-5 Access to maternal health services

Factors associated with late use of postnatal first assistance in a health facility after home delivery in Ivory Coast

TETCHI O[1,2], YAPI A[1], Coulibaly A[2], Kpebo D[1,2], Sablé SP[1,2], Ekou FK[1,2]
[1] : National Institute of Public Health, Abidjan
[2] : Medical Sciences TRU, Abidjan

Postnatal first aid is recommended for all women within two days of delivery to reduce the risk of maternal and new-born death. This study analyses the factors associated with the late use of postnatal care after home delivery in Ivory Coast.

The data from the 2011-2012 Ivory Coast Demographic and Health Survey (DHS-CI) were used as the basis for this analysis. The studied population was all live births at home recorded in the last five years preceding the survey. The dependent variable was the time elapsed between birth and postnatal first assistance. A duration longer than 48 hours is considered as a delay. The independent variables are selected from socio-demographic data and pregnancy history. A bivariate and multivariate analysis using the binary logistic regression method identified risk factors for delay in early postnatal care after a home birth at the 5% alpha threshold.

Out of wholly 3,462 home births, 1,490 mothers were received for postnatal care. The mothers had an average age of 29 years old. About three out of four mothers and their spouses (65.5% of cases) were out of school. They lived in 83% of cases in rural areas and belonged to the poor or very poor category of the wealth index. About prenatal consultations, 12.4% of births had no ANC. Most births were attended by traditional birth attendants or community health agents. About 50% of mothers were received after 48 hours after delivery. Factors associated with delay were socio-economic level, decision-making power in the household, religion and the category of workers who attended the birth.

The development of a strategy to improve access to postnatal care should consider these factors.

Assessing the cost of maternal postpartum services, before and after interventions in Burkina Faso

*Danielle Yugbaré Belemsaga [a,b *], Research Institute of Health Sciences,*
***Co-authors** Anne Goujon [b], Olivier Degomme [c], Tchichihouenichidah Nassa [d], Els Duysburgh [c], Seni Kouanda [a,e], Marleen Temmerman [c,f]*
[a] Biomedical and Public Health Department, Institut de Recherche en Sciences de la Santé, Ouagadougou;
[b] Wittgenstein Centre for Demography and Global Human Capital (IIASA, VID/OAW, WU), Vienna, Austria;
[c] International Centre for Reproductive Health, Faculty of Medicine and Health Sciences, Department of Public Health and Primary Care, Ghent University, Ghent, Belgium;
[d] Direction générale des études et des statistiques sectorielles (DGESS), Ministère de la santé, Ouagadougou, Burkina Faso;
[e] African Institute of Public Health, Ouagadougou, Burkina Faso;
[f] Centre of Excellence in Women and Child Health, Aga Khan University, Nairobi, Kenya

Introduction: The *Missed opportunities for maternal and infant health (MOMI)* project has implemented a package of interventions at community and facility levels to uptake maternal and infant postpartum care (PPC). One of these interventions is the integration of maternal PPC in child clinics and infant immunization services based on the rationale that a majority of women bring their infant to health services for immunization but few get checked. Maternal PPC entails

monitoring the wellbeing, early detection and management of complications, preventive measures and counselling.

Aim: This paper assesses the economic cost of maternal PPC services, for health services and households, before and after the implementation of interventions in Kaya health district (Burkina Faso).

Methods: We used Burkina Faso National Health Accounts to evaluate the cost of reproductive health services, in particular PPC in 2013, 2014 and 2015. Based on two household surveys collected before (N = 757) and after one year intervention (N=754) among mothers within one year PP, we also estimate the household costs of maternal PPC visits by infant date of birth before and after the interventions implementation. We compare the PPC costs for households and health services with or without integration in infant immunization services. We focus on the costs of the intervention at days 6-10 that was most successful.

Results: Reproductive health expenditures from all funding sources in Burkina Faso grew steadily since 2011 due to the implementation of the Millennium Development Goals and an increase in the subsidies for family planning. The average unit cost of health services for days 6-10 maternal PPC decreased from 4.6 USD before the intervention in 2013 (Jan-June) to 3.5 USD after the intervention implementation in 2014. Maternal PPC utilization increased with the implementation of the interventions but so did days 6-10 household mean costs. The costs increased with the integration of maternal PPC with BCG immunization.

Conclusion: The uptake of maternal PPC led to a cost reduction, as shown for days 6-10, at health services level. Further research should determine whether the increase in costs for households will be deterrent to the use of integrated maternal and infant PPC.

Key words: postpartum; maternal and infant health; health service costs; household costs; integration of services; Burkina Faso.

Availability of emergency obstetric and neonatal care in West Africa: the case of Ivory Coast

**Simone Pierre Djah, **Dr Pauline ABOU, *M. Seka ATSE*
**Ministry of Health, Abidjan, **UNFPA- CIV*

Objective: The study aims to provide to the policy makers and planners some up-to-date information on health facilities offering EmONCs in order to carry out effective actions for mothers and new-borns.

Methodology: This is a rapid assessment of the availability of EmONCs needs. Data were collected from November to December 2017 in the country's 20 health regions from referral facilities and urban health centres. These were reconciled before the analysis tables were produced.

Results of the study: The profile of the health personnel is marked by a high availability of midwives present in 99% of the structures visited, State Registered Nurses (97%) and General Practitioners (96%). On the other hand, the specialities are poorly represented in this case gynaecologists present in 22% of health establishments, surgeons and paediatricians (with 13% respectively) and FDI midwives (0.5%).

Of the 100 reference structures visited, 66 have at least one operating room, or 66%. 47% of health centres have a room reserved for women in labour, more than 80% of health facilities have a delivery room and 42% of health facilities have a laboratory.

The level of availability of ECCRS services remains low. Indeed, out of 60 expected actual EONUC health establishments, 11 structures offer the 9 signalling functions. In addition, 18 establishments are SONUB employees out of an expected 254. Gaps are therefore observed in 49 EONUC and 236 SONUB establishments respectively.

Two main signal functions explain this insufficiency, namely suction cup assisted childbirth (14%) and neonatal revival (39%). In contrast, parenteral antibiotic administration and parenteral uterotonic administration are the most commonly used EmONCs functions, with 91% and 87% respectively.

The low availability of effective full-service EmONCs facilities leads to low utilization of EmONCs services. For example, the rate of deliveries in EONUC facilities is 3.5%, the caesarean section rate is estimated at 0.61% and the rate of satisfaction of EmONC needs is 6.9%. There is also a lack of quality of care provided through the early intrapartum and neonatal death rate of 1.5%, the lethality rate of direct obstetric complications of 1.49%, the proportion of deaths due to indirect obstetric causes of 33.8%.

Social and economic determinants of under-five mortality in sub-Saharan Africa: the case of Senegal.

NDIAYE Oumy, Economiste de santé/ Assistante de recherche au CREA (Dakar/Sénégal)

Child mortality is a key indicator of child well-being and health. At the global level, reports from international agencies indicate a rather alarming situation despite the remarkable progress noted in the aftermath of the Second World War, with under-five child mortality estimated at 5.9 million children worldwide (SDGs Sustainable Development Goals,2016). Notwithstanding the efforts made, sub-Saharan Africa and South Asia remain the most affected regions respectively. Sub-Saharan Africa alone accounts for 38% of global neonatal deaths in 2014.

In Senegal the situation is more worrying, particularly in the southern regions, which have the highest mortality rates according to the Demographic and Health Survey (DHS, 2016). However, over the past 15 years, the level of child mortality in the country has declined, with the infant and child mortality rate falling from 91 ‰ to 51 ‰. The decline in the neonatal mortality rate has been even slower, with 45% of deaths among children under five occurring during this period. The World Health Organization (WHO) recognizes that these deaths are preventable.

Based on data from the DHS (2016), this research is part of this perspective and aims to determine the social and economic factors that explain under-five child mortality in sub-Saharan Africa, taking the case of Senegal as an example.

The results from the logistic regression estimation allowed us to discover that the economic status of the mother as well as her empowerment in terms of overall household spending are determinants of child health. Also, we see that the positive impact of maternal education on child mortality increases as the level of education increases. Finally, child-specific characteristics such as gender and nutrition are also determinants of under-five mortality.

In this context, the role of the authorities is twofold: to adopt policies and actions aimed at both more accessible and continuous schooling, especially for young girls, and to promote the economic and financial empowerment of women in order to facilitate access to health inputs for mothers and children.

Reaching Rural Reproductive Women in Kintampo, Ghana with Family Planning: Evidence from the EquityTool

Kwame Adjei, Irene Azindow, Andrea Sprockett, Felix Oppong, Yeetey Enuameh, Kwaku Poku Asante, Nirali Chakraborty, Seth Owusu-Agyei
Kintampo Health Research Centre, Metrics for Management

Introduction Family Planning (FP) is an important investment to achieve the Sustainable Development Goals. It is also a recommended priority area for most sub-Saharan countries in their quest to achieve Universal Health Coverage (UHC). In Ghana, use of FP remains low (22%) as reported in the most recent (2014) Ghana Demographic Health Survey (GDHS).

In Kintampo North and South districts, use of FP as last reported in 2013 was 25.3%. Recent efforts to improve this in these districts was facilitated through an implementation research known as the Continuum of Care (CoC) Card for Family Planning (2017). The main intervention was the CoC card. Women (15-49) who came for services on time were encouraged using gold stars.

The EquityTool for Ghana was used to measure socio-economic status (SES) of CoC FP participants at project endline. The EquityTool is an easy to use set of questions and analysis guidance that simplifies the DHS wealth index questions by collecting a reduced number of highly significant country-specific questions. The tool benchmarks results to national or urban wealth distribution. Quintile 1 is the lowest (poorest) and quintile 5 the highest (wealthiest).

Objectives

- To identify SES of participants so as to understand equity in FP use
- To determine the relationship between wealth quintile and FP use amongst participants (15-49)

Methods We conducted a cross sectional survey carried out from February to March 2018 using Research Electronic Data Capture (REDCap) with the EquityTool questions incorporated. Women of reproductive age (15-49) were sampled using the Kintampo Health Demographic Surveillance System, which covers predominantly rural communities in Kintampo North and South districts where the CoC study was implemented. The relationship between FP use and wealth quintile was assessed with a logistic regression model controlling for the effect of other explanatory variables.

Results A total of 949 women participated in the survey. Their mean age was 29 years (SD = 9.97). Use of FP amongst women was 30.7%. When benchmarked to the national distribution, study participants were predominantly in quintile 3 (33.0%) and quintile 2 (26.5%). From the univariate analysis, FP use was associated with an increase in wealth quintile. There was, however, no significant relationship between FP use and wealth quintile after controlling for other explanatory variables such as age and marital status.

Conclusion FP use amongst participants was not dependent on SES. To better achieve UHC in Ghana, factors like age must also be considered in FP programs targeted at predominantly rural communities

Socioeconomic inequalities in maternal health in Zimbabwe: the case of skilled birth attendance and antenatal coverage

AT Lukwa[1], JE.Ataguba[1]
[1] Health Economics Unit, School of Public Health and Family Medicine, Faculty of Health Sciences, University of Cape Town, Anzio Road,Observatory,7925

Introduction Achieving equity in access to antenatal care (ANC) and skilled birth delivery are recognised as an essential aspects of primary health care (PHC). This is also aligned with global universal health coverage (UHC) aspirations, which entails access to quality and affordable health services for all. One of the targets of the Ministry of Health and Child Care, Zimbabwe is to have an organized health systems and an improved PHC system in a bid to better the chances of attaining UHC. Zimbabwe is currently establishing national health insurance as a funding pool for UHC. Although antenatal care and skilled birth attendance are essential for UHC and in reducing maternal mortality, disparities in maternal mortality between poor and rich in the world are striking.

Objective To assess socio-economic inequalities in maternal health services in Zimbabwe between 2010-11 and 2015

Research methods This study uses data from Zimbabwe Demographic and Health Survey of 2010-11 and 2015 with respective samples size of 4,395 and 4,833 women aged 15-49 years and had a live birth 5 years prior the surveys were used for this study. Maternal health services were assessed using skilled birth attendance and ANC coverage. Skilled birth attendance was being assisted by a doctor, mid-wife or nurse. ANC coverage was defined with having at least 4 ANC visits. Wealth was assessed using asset/wealth indices. The concentration index was used to assess socio-economic inequalities.

Findings In 2010-11 (and 2015), about 91% (94%) had a skilled birth delivery and 66% (76%) had at least 4 ANC visits. Between 2010-11 and 2015 socio-economic gap widened in maternal health services. In 2010-11 (and 2015) the poorest quintile decreased by 3.37% and increased in the richest quintile by 5.15% for the ANC coverage while skilled birth attendance also decreased in the poorest quintile by 4.27% and increased in the richest quintile by 5.22%. The concentration indices for skilled birth attendance for 2010-11 and 2015 were 0.009 ($p<0.05$) and 0.013 ($p<0.05$), respectively. Concentration indices for antenatal care coverage for 2010-11 (and 2015) were 0.033 ($p<0.05$) and 0.027 ($p<0.05$), respectively.

Conclusion Socio-economic gaps in the use of maternal health services widened between the poor and the rich. Results show that skilled birth attendance and ANC coverage were pro-rich (i.e. favouring the wealthy or people belonging to higher socio-economic classes). There is a need for policy to increase skilled birth attendance and ANC coverage among the poor in Zimbabwe.

Access to maternal health services under the free maternal health policy in the Kassena-Nankana municipality of Ghana

Philip Ayizem Dalinjong, Faculty of Health, University of Technology Sydney, Australia
***Co-authors**: Alex Y Wang and Caroline SE Homer*

Background Ghana implemented the National Health Insurance Scheme (NHIS) in 2005 to assist improve access to health services and achieve universal health coverage (UHC). A free maternal health policy was implemented under the NHIS to enhance access for pregnant women. It is unclear if the policy has reduced access barriers.

Objective The study explored factors affecting access in terms of affordability, availability, acceptability and quality of care.

Methods A study was conducted in the Kassena-Nankana municipality of Ghana. It was a parallel mixed methods; collected and combined quantitative and qualitative data. Questionnaire were administered to women (n=406) who gave birth in facilities and at home. In-depth interviews (IDIs) were carried out with providers (n=25) and insurance managers (n=3), while focus group

discussions (FGDs were held with women (n=10). Descriptive statistics were used for the quantitative data. The qualitative data were analysed thematically.

Key findings *Affordability* Women made out-of-pocket (OOP) payments, averaging GH¢17.50 (US$8.90) and GH¢33.50 (US$17) at pregnancy and childbirth, respectively. About 36% (n=145/406) of women incurred what was classified as 'catastrophic' OOP payments, given a 10% threshold.
Availability Distance and time were a barrier to care seeking. Infrastructure, laboratory services, equipment and basic drugs were limited. The community-based health planning and services compounds were particularly challenged. Of the 14 study facilities, only two (14%) had a source of clean water, and five (36%) had a regular power supply. Emergency transport for referral was also unavailable.

Acceptability Women perceived facilities to be clean despite the limitations in infrastructure. Providers were perceived to be respectful and friendly. Sixty-six percent (n=234/353) of women revealed lack of privacy, which was confirmed in IDIs.

Quality of care Overall, 74% (n=300/406) and 77% (n=272/353) of women were very satisfied or satisfied with quality of care during pregnancy and at childbirth respectively, which was supported in FGDs. Providers reported being dissatisfied, due to the challenges associated with service provision.

Main conclusions Despite the policy, OOP payments still existed and one-third of women were significantly disadvantaged by these payments. Most women were satisfied with care, although this could be because they were unaware of what quality of care might include. Providers were aware of the limitations of care provision and many reported being dissatisfied. The government of Ghana, the NHIS and other stakeholders should embark on resourcing facilities as well as infrastructural improvements. These would improve access to services and staff satisfaction, for achieving UHC.

Parallel Session 1-6 Economic evaluation of health programmes

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Economic evaluation of the Family Health Team at the Primary Health Care Unit health facilities in Addis Ababa: Costing and Cost Effectiveness Analysis

Elias Asfaw[1], Feven Girma[2], Meseret Molla[2], Genet Mulugeta[2]
[1] University of California Davis (MINIMOD Project) and The Children Investment Fund Foundation (SURE Program), Addis Ababa, Ethiopia - [2] Federal Ministry of Health, Health Economics and Financing Analysis Team, Addis Ababa, Ethiopia

Background: The community Health Extension program packages were developed with the central philosophy of considering the community as the final end owners, producer and multiplier of health. To improve health service access for the urban poor living in cities/towns, family health team (FHT) was implemented to reach for the urban poor and economically disadvantageous groups.

Objective: The study aims to assess the cost and cost effectiveness of implementing FHT service delivery approach from the providers' perspective.

Methods: Cost and effectiveness data were collected from five piloted health facilities (Gerji health center/HC, Selam HC, Entoto 2 HC, Woreda 06 HC and Woreda 12 HC) in Addis Ababa from the healthcare providers' perspective. Cost data consisted of labor, medical supplies and medicines, equipment, trainings, preparation and program management resources. Four alternative service delivery strategies were identified for the analysis: households/community, school, youth center and workplaces. Micro costing ingredient approach was employed to compute the actual cost of FHT at the health facilities setting. Cost per household and per capita per year was the final costing summary while incremental cost effectiveness ratio (ICER) was computed as net cost per household reached.

Findings: The cost of FHT per household is 8,726 Ethiopian birr (ETB)/391 United States Dollar (USD) which ranges from 448.66 ETB (20.13 USD) to 41,019.06 ETB (1,840.24 USD). Per capita per year was from 72.70 ETB (3.26 USD) to 2,474.40 ETB (111.01 USD) across the piloted health facilities. The major cost drivers were consumables and labor cost (accounting for 87% of the total cost) while the lowest cost was for the program management and capital resources. In the base case analysis, implementing FHT was cost effective at the ICER of USD 28.45. The computed ICER for youth center, school and household were USD 4,622.28, USD 50,082.08 and cost saving respectively.

Conclusions: Implementing FHT is a cost effective strategy in terms of reaching more household at the low cost. Delivering the FHT service for the household is a cost saving strategy as compared to the other alternative modalities (providing FHT for the youth centers, schools and workplaces). Scaling up the FHT in urban based health facilities is the most economical and feasible intervention to reach more urban poor and economically disadvantaged groups.

Cost Effectiveness and Budget Impact of Fondaparinux for the treatment of Acute Coronary Syndrome (ACS) in Non-ST and ST Elevation Myocardial Infarction patients in the South African public health system

**Tommy Wilkinson, **Alex Winch, ***Kim MacQuilkan*
**University of Cape Town, **Imperial College London, ***Independent Public Health Consultant*

Introduction The burden of Acute Coronary Syndromes (ACS) in developing countries is growing . ACS causes nearly half of all deaths due to cardiovascular disease and significantly contributes to the economic burden on healthcare systems . ACS comprises of Unstable Angina (UA), non ST-segment elevation myocardial infarction (NSTEMI), and ST-segment elevation myocardial infarction (STEMI).

Aim To assess the cost-effectiveness and budget impact of fondaparinux compared to enoxaparin and UFH in the treatment of NSTEMI and STEMI patients, and in addition to streptokinase for STEMI patients treated within 6 hours of admission to inform inclusion in the South African Standard Treatment Guidelines and Essential Medicine List .

Methods The assessment involved a cost-effectiveness analysis (CEA) and a budget impact analysis (BIA). A Markov cohort model was developed that estimated the likely clinical outcomes and costs associated with using fondaparinux compared to either enoxaparin or UFH in the treatment of NSTEMI patients. In STEMI patients, fondaparinux with streptokinase compared to streptokinase monotherapy if admitted within 6 hours, and as an alternative to enoxaparin and UFH if admitted over 6 hours.

Results Cost/QALY and budget impact estimates were generated to provide an indication of the cost effectiveness and affordability of fondaparinux for the management of ACS patients.

The results are interpreted in the context key assumptions used in the analysis relating to the contract price that can be achieved for fondaparinux, and extent to which clinical practice and outcomes for ACS reflect pivotal clinical trial outcomes.

Conclusion The use of CEA and BIA allows critical medicine utilisation decisions to incorporate cost and affordability considerations in addition to burden of disease, clinical effectiveness and safety profile.

Economic burden of glaucoma on patients attending two health facilities in Tema Metropolis, Ghana

Matilda Madiwe Adda[1], Justice Nonvignon[2], Moses Aikins[2], Samuel Amon[2], Genevieve C. Aryeetey[2]
1. Achimota Hospital, Ophthalmology Department, Accra Ghana
2. University of Ghana, College of Health Sciences, School of Public Health. Legon Ghana

Introduction: Glaucoma is the leading cause of irreversible blindness worldwide. Ghana ranks second in the prevalence of glaucoma globally. Glaucoma poses a considerable economic burden on its patients since victims have to be on treatment for the rest of their lives. The cost of managing glaucoma increases as the disease progresses. The evidence on the cost and burden of the disease on patients is limited. This study therefore aims to determine the economic burden of glaucoma on patients.

Methods: A cross-sectional Cost of Illness (COI) study from the perspective of the patient was used. The study sample (n=180 participants) was drawn using proportional sampling technique to select participants from a public and private eye care facilities in the Tema Metropolis. A simple random sampling method was then used to select glaucoma patients from the two facilities. Three main costs were estimated over a one month period. Direct cost, was the sum of medical and non-medical costs related to the treatment of glaucoma. Indirect cost was estimated using the human capital approach to determine patients and caregivers productive time lost due to seeking glaucoma care. Sensitivity analysis was performed to determine changes in total cost by varying variables that were uncertain. Intangible cost was determined using tertile statistic approach to assess fear, emotional pain, social isolation and depression.

Results: The total cost of seeking glaucoma care from the perspective of the patient for both facilities was GHS45, 889.28 (USD10, 525.06) with an average cost of GHS254.94 (USD 58.47) per patient per month. The average direct medical cost for the private and public facilities were GHS192.60 (USD 44.2) and GHS221.10 (USD 50.7) representing 78.8% and 82.7% of total cost respectively. Direct non-medical cost were GHS 36.34(USD 8.33) and GHS 29.41(USD 6.65) for private and public facilities per patient per month respectively. Indirect cost (all facilities) was GHS 16.18(USD 3.71) per patient per month. Direct cost constituted about 93.7% of overall cost and indirect cost 6.3% of total cost. The cost estimates were sensitive to changes in wage and cost of medicines. Patients also expressed low to moderate intangible burden of glaucoma.

Conclusion: Glaucoma poses a significant economic burden on patients. The direct costs of glaucoma are high and constitute more than two-thirds of the total cost of glaucoma with the main cost driver being medicines.

Economic implications of delayed review of reimbursement prices of tracer essential medicines on accredited health facilities in ejisu-juaben municipality, Ghana

Peter Agyei-Baffour (PhD) Kwame Nkrumah University of Science and Technology, Kumasi, Ghana;
Peter Darkwa Gyasi National Health Insurance Secretariat Ghana Health Service Headquarters, Accra

In most developing countries where the menace of poverty places majority of the population beyond the reach of quality healthcare, governments have resorted to the use of social health insurance schemes in addressing financial gaps in accessing care. Fortunately, Ghana introduced National Health Insurance in 2004 to step up efforts at achieving universal health coverage and addressing gaps in health outcomes. However, infrequent reviews of the medicines reimbursement prices to contain the fluctuating economic trends renders National Health Insurance Authority's (NHIA) reimbursement prices obsolete as quickly as they are set. This impedes quality healthcare delivery. This study evaluates the economic implications of delayed review of NHIA reimbursement prices for tracer essential medicines on NHIA accredited facilities in Ejisu-Juaben Municipality, Ghana. A cross-sectional study involving review of inventory records and invoices of purchases of thirty-four tracer medicines allowable at all levels of healthcare was done retrospectively from March 2016-December 2016. A multi-stage cluster sampling was deployed to initially form clusters of health facilities based on ownership types of public, private and mission facilities. Consequently, fifteen facilities were selected through simple random sampling from a sub-cluster of facilities formed within the main clusters based on level of care of the facilities. Quantitative method was used to assess per capita loss on medicines dispensed while the qualitative method explored providers' perceptions on economic implications of price difference on pharmaceutical care. Data were analysed using Stata software version 12 and Microsoft Excel Version 2013. Sensitivity analysis was done to assess the robustness of the estimates over time. While Providers asserted that price difference in pharmaceuticals leads to loss of clientele, the study established a net per capita loss on the medicines surveyed in majority (8 in 10) of public and private facilities. Majority (6 in 10) of the mission-owned facilities have a net per capita gain on the dispensing of same medicines. Generally, the mean per capita loss is not statistically significant among the various facility ownership type (F {2, 12} =2.710 p-value=0.107).

Therefore, National Health Insurance Authority's reimbursement prices for tracer essential medicines leads to net per capita loss on revenue generation and De-capitalization of the revolving drug fund in private and public health facilities. Frequent reviews or indexation of reimbursement may be helpful.

Parallel session 1-7 Data for management and policy making

What do we need to know? Data sources to support evidence-based decisions using health technology assessment in Ghana

Dr Samantha Hollingworth , School of Pharmacy, University of Queensland, Brisbane,
Hollingworth S, Odame E, Downey L, Ruiz F & Chalkidou K)
Emmanuel Odame, Ministry of Health, Ghana
Laura Downey, Francis Ruiz, Kalipso Chalkidou, iDSI, Imperial College London

Background Health technology assessment (HTA) provides a framework to integrate multiple source of information including clinical and economic evidence, and social value judgements, to support healthcare priority setting. Ghana is moving towards universal health coverage (UHC) and a National Health Insurance Scheme (NHIS) was created in 2004. The major challenge facing the scheme is the financial sustainability if its operations. HTA is seen as an important mechanism to support UHC objectives and the NHIS, and the Government of Ghana is committed

to institutionalising HTA. An important aspect of the effectiveness of HTA is the identification and use of locally relevant and high quality data to support context-specific decision making.

Aim To identify and describe the sources and quality of accessible data to support HTA in Ghana.

Methods We used an existing framework to describe data sources in Ghana encompassing six domains: clinical efficacy; costs; epidemiology; quality of life; service use and consumption; and equity. We identified and described data sources using existing knowledge, views of stakeholders, and searches of the literature and internet.

Key findings The data sources for each of the six domains varies in extent and quality. Ghana has several large data sources to support HTA (e.g. Demographic Health Surveys, Burden of Disease study etc.) which have rigorous quality assurance processes. There were few accessible data sources for costs, and resource utilisation. The NHIS is a potentially rich source of data on resource use and costs but has access limitations. There are almost no data for the domains of health-related quality of life and equity. We noted data gaps and suggest ways HTA proponents may overcome data limitations in availability and quality.

Conclusions We have identified a number of key HTA-related data gaps to support decision making in the Ghanaian context. Although more data are being made available for monitoring (e.g. data for Sustainable Development Goals), these may not be adequate to inform HTA nor available in disaggregated form to enable specific analyses. We support recent initiatives for the routine collection of comprehensive and reliable data that is easily accessible (e.g. in electronic format) for HTA users. A commitment to HTA will require concerted efforts to leverage existing data sources, for example from the NHIS, and develop and maintain new data (e.g. local health utility estimates).

Measuring wellbeing using the Women's Capabilities Index amongst women involved in high-risk sexual behaviour in Kampala, Uganda,

Giulia Greco, Kenneth Roger Katumba, Janet Seeley

There is a growing debate on the inadequacy of standard outcome measures for evaluating the broad impacts of health promotion interventions on people's lives.

This study is part of a project that aims at adapting the Women's Capabilities Index to a different context (Uganda), in order to produce a multidimensional capabilities measure for use in low- and middle-income countries. The process of adaptation of the measure includes an explorative phase for assessing the extent to which the list of capabilities generated for the Women's Capabilities Index is valid in a different low-income setting (Uganda) and therefore with the scope to be more widely applicable. The list of capabilities in the WCI includes: physical strength, inner wellbeing, household wellbeing, community relations, and economic security. Given the similarities with other lists of dimensions, it is expected that the list of capabilities for women in Uganda will have a significant degree of overlap with the list generated for women in Malawi. What is likely to change is the identification of the indicators for measuring the capabilities. The specific objective of this study is to develop a list of capabilities for the female population suitable for use in a low-income setting, using a participatory approach.

To be consistent with Sen's theory, the selection of capabilities was conducted in a participatory manner using focus group discussions. The focus group discussions have two objectives: a) to explore locally relevant concepts of quality of life, dimensions of wellbeing, valuable beings and doings; and b) to explore the value and rank of the different concepts. We ran 10 focus groups, with 10 – 12 participants each. The participants are women attending the MRC Good Health for Women clinic in Mengo, Kampala. Women minor of age were excluded. Two-stage randomised

cluster sampling was used to select participants. Data collection took place from October to December 2017.

Analysis is currently under way and will be completed by December 2018. Findings will be elicited based on manual framework analysis. Framework analysis uses a thematic approach, but allows themes to develop both from the research questions and from the narratives of the discussions. There is still a lot of work that needs to be done in order to use wellbeing measures in policy analysis. Some advances are taking place in the UK, but very little in low-income countries, where there is a great need for using comprehensive measure of progress, since development interventions in particular are likely to affect several aspects of people's lives. The wellbeing measure developed and tested in Uganda will be ready to be used alongside trials for the evaluation of public interventions. This measure will be able to provide a broader picture of the effects of complex interventions such as mental health programmes, which are not easily captured with standard evaluation techniques. While the measure is intended to support evaluators in low-income countries, the methodology developed in this study will also be of interest for researchers and policy makers in middle and high-income countries since it will contribute to the global debate on how to measure progress in society.

Key terms: Capabilities, Multidimensional, Index, qualitative methods, focus group discussion, participatory method, women, Uganda, low-income

Collecting health facility and patient medicine information through telephone interviews in Kenya: A validation study

Ashigbie Paul G., Rockers Peter C., Laing Richard, Wirtz Veronika J.*
Department of Global Health, Boston University School of Public Health

Background: High cell phone ownership in low- and middle-income countries presents an opportunity for efficient data collection through telephone interviews both for surveys and regular surveillance.

Objective: This study aims to validate a method for collecting information on health facility and patient medicines through telephone interviews. We also explore perceptions of data collectors and respondents on the method.

Methods: Data on the availability and prices of medicines at 137 health facilities and 639 patients with non-communicable diseases were collected in September 2016 via in-person interviews during which respondent's telephone numbers were also collected. Medicine price and availability data was collected monthly through structured telephone interviews with 122 health facilities and 130 patients between December 2016 and December 2017. An unannounced in-person interview was conducted with respondents to validate the telephone interview within 24 hours of the phone-based interview. A bottom up itemization costing approach was used to estimate costs from the perspective of researchers. In-depth interviews were conducted with data collectors and a 15% subsample of telephone surveillance respondents. Agreement between data collected over the phone and data collected in-person was estimated. Qualitative data was analyzed thematically using NVivo 11 QSR.

Findings: The mean response rate for telephone interviews with health facilities was 88.2%. For households the mean response rate was 94.5%. Telephone interviews with facilities and households took 30.3 minutes and 12.8 minutes, respectively, compared to 14.1 minutes and 8.5 minutes for in-person interviews, respectively. Medicines availability data showed a statistically significant agreement between data collected through telephone and in-person interviews at health facilities (kappa=0.9019; CI 0.8848 - 0.9189) and households (kappa=0.4931, CI: 0.3877 -

0.5984). The correlation of price of medicines from telephone and in-person interviews was statistically significant at health facilities (r=0.9; p<0.0001) and households (r=0.52, p<0.0001). The cost per phone interview at health facilities and households were $19.28 and $16.86 respectively, compared to $186.20 for baseline in-person interview. Participants identified the ability to physically confirm responses for in-person data collection to be an advantage and poor road networks and the high level of effort involved in travel as disadvantages. Telephone interviews were regarded as taking less resources including cost and time.

Conclusion: This study demonstrated high response rates and high validity for telephone data collection. In countries with high cell phone penetration the many advantages of telephone data collection should be considered in designing studies on medicine price and availability and other health system performance indicators.

The role of Information Technology in maximizing PHC HRH Governance in Kaduna State, Nigeria.

Agbonkhese Oaiya, Dr. Ummulkhulthum Bajoga, Dr. Rotimi Oduloju, Dr. Layi Olatawura: Health Strategy & Delivery Foundation

Background: The Nigerian Government plans to achieve Universal Health Coverage by revitalizing Primary Health Care (PHC). One of the main challenges facing the PHC sector is inadequate and inequitably distributed workforce. PHC is the first level of care, but it is fragmented under different Government Agencies. The Primary Health Care Under One Roof (PHCUOR) policy focuses on centralizing human resources for health (HRH) governance, management, and planning under one authority; the Primary Health Care Development Agency (PHCDA), however, implementing this policy has been sub-optimal due to the absence of timely and accurate HRH information. Using Kaduna state as a case study, a thought-out process to strengthen HRH governance and stimulate evidence-driven decision making in the PHCDA, was to onboard all PHC workforce in a State-driven financial management system.

Aims and objectives of the research: To achieve this, we conducted this research to help the Agency govern, manage and plan better for its workforce by developing an HRH Information System.

Methods used: We conducted desk reviews of the all relevant policy documents to obtain information on the HRH landscape in the State. Then, we engaged various stakeholders in the State to develop a roadmap to bridge the gaps identified by the desk review. A data collection tool was developed and data on the sociodemographic, educational background and employment history were extracted from the physical files. Data were analyzed with Microsoft Excel and presented as charts and tables.

Key findings A total of 6,110 PHC staff were transferred to the PHCDA, of which 53% were female. Of the total workforce, 70% were between 31 – 50 years; 31 – 40 years 33% and 41 – 50 years 37%. The PHC workforce is predominantly Community Health Workers with 39%; CHEW 22%, Health Assistant/Attendant 29%, JCHEW 11% are the leading professions. By the year 2020, an estimated 5% should be exiting the PHC workforce.

Main conclusions Findings from the research highlight the current distribution and skill-mix of the PHC workforce transferred from the LGA, in accordance with the PHCUOR mandate. However, further staff verification is required to sanitize the PHC workforce. The findings informed the State PHCDA to prioritize recruiting and distributing skilled officers to improve the availability and quality of healthcare services in underserved locations.

Parallel Session 2

Organized session

OS 02 – Toward Systematic Approaches for Addressing Ethics & Equity Considerations in Health Technology Assessment

Organizer: *International Decision Support Initiative (iDSI)*
Mohamed Gad, Global Health and Development Group, School of Public Health, Imperial College London
Speaker: *Carleigh Krubiner, Center for Global Development,*

Universal Health Coverage (UHC) — ensuring the availability of quality, affordable health services for all without financial hardship — is a key policy objective for most countries, with renewed global commitment to UHC in low- and middle-income countries (LMICs). However, as countries worldwide explore health system reforms to progress toward UHC, policymakers face challenging, morally complex decisions about what and whom to cover with their limited health budgets. Because priority-setting is inherently driven by values, and decisions about whether or not to cover a health intervention have ethically important consequences for those in need of services, an ethics framework for priority-setting can be a critical tool to inform better decision making for health on the path to UHC. Attention to clearly defined ethics commitments can improve the design and delivery of a health benefits package across the entire policy cycle, including: setting strategic goals for UHC reforms, selecting the set of health services to cover, and measuring impacts on ethically important indicators — such as equity.

This presentation will provide an overview of the Ethics & Equity chapter in "*What's In, What's Out: Designing Benefits for Universal Health Coverage*." The chapter offers a how-to guide for countries to develop ethics frameworks for priority-setting tailored to their specific contexts and policy objectives. The session will cover a range of ethics commitments that countries may want to adopt as they pursue UHC goals. These may include: addressing various types of inequities, optimizing value-for-money through efficient health spending, enhancing evidence-based decision-making, and assessing to how coverage decisions may affect other important aspects of wellbeing not directly related to health — such as social relationships, respect, and financial protection. The session will also cover the kinds of evidence needed to conduct ethics analyses, and how monitoring, evaluation, and learning activities for UHC policies and programs can be designed to enhance the evidence base and track progress on important ethics dimensions.

Speaker: *Mohamed Gad, Global Health and Development Group, School of Public Health, Imperial College London*

Over the past two decades, there has been a steady increase in applying health technology assessment (HTA) to support health decision-making. Although ethics has been articulated as a

core component of HTA from the start, and many ethics frameworks exist in the academic literature, there are still few examples of practical and systematic inclusion of ethics analysis throughout the HTA process.

This presentation will serve as an introductory piece, laying ground for deeper dives on ethics framework available in international literature, as well as, the nature and extent of ethical considerations inherently captured in fundamental principles of welfarist and extra-welfarist approaches, underpinning the practice of economic evaluation frequently used in the HTA process. We aim to emphasise the specific impact on equity among other ethical considerations.

Furthermore, we provide examples of various applications for systemic incorporation of ethics analysis in the HTA process. This includes extensions to current decision analysis tools such as: Extended Cost Effectiveness Analysis (ECEA), Distributional Cost-Effectiveness Analysis (DCEA), as means to break down and assess the social distribution of costs and benefits of healthcare interventions on the target population. We finally provide a quick look at Multi-criteria Decision Analysis (MCDA) and its uses in decision analysis.

Speaker: *Rob Baltussen, Radboud University medical center*

Priority setting in health care has been long recognized as an intrinsically complex and value-laden process. Yet, health technology assessment agencies (HTAs) presently employ value assessment frameworks that are ill fitted to capture the range and diversity of stakeholder values and thereby risk compromising the legitimacy of their recommendations. We propose "evidence-informed deliberative processes" (EDPs) as an alternative framework with the aim to enhance this legitimacy. This framework integrates two increasingly popular and complementary frameworks for priority setting: multicriteria decision analysis and accountability for reasonableness. Evidence-informed deliberative processes are, on one hand, based on early, continued stakeholder deliberation to learn about the importance of relevant social values. On the other hand, they are based on rational decision-making through evidence-informed evaluation of the identified values.

EDPs distinguish five key steps in HTA: stakeholder involvement, scoping, assessment, appraisal, and communication & appeal. Based on experiences of HTA agencies around the world, the framework provides best practices on each of these staps. EDPs should not be considered a blueprint for HTA agencies but rather an aspirational goal—agencies can take incremental steps toward achieving this goal. The session presents the recently published manual on EDPs, and several country case-studies where EDPs are implemented.

Susan Goldstein, PRICELESS-SA, Wits University School of Public Health

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Background: South Africa has taken steps to develop and implement National Health Insurance (NHI), with expressed commitments to developing a Health Technology Assessment (HTA) process. Although ethics has long been stated as a core component of HTA, and many ethics frameworks exist in the academic literature, there are still few examples of practical, systematic inclusion of ethics analysis in HTA processes. Furthermore, many existing frameworks were not developed with low- and middle-income country contexts in mind – and may not be suited to the specific context and challenges of priority-setting in South Africa.

Aim: The South African Values and Ethics for UHC (SAVE-UHC) project is supporting the development of an engagement-driven, context-specified ethics framework for NHI priority-setting.

Methods: The approach to develop the ethics framework includes: (1) policy document analysis, including legislative materials and constitutional court decisions; (2) literature review of existing ethics frameworks for priority setting and HTA; and (3) three in-person consultation meetings with the Working Group involving facilitated discussions and case studies.

Findings: The preliminary framework emerging from this process includes attention to various dimensions of equity, cost-effectiveness, respect, ease of suffering, impacts on social relationships, financial protection, and social solidarity & cohesion. Phase II of the project will assess the framework, applying it to health interventions being considered for coverage.

Dr. Sripen Tantivess, Senior Researcher, Health Intervention and Technology Assessment Program (HITAP)

Thailand achieved universal health coverage (UHC) in 2002 when it introduced the Universal Coverage Scheme (UCS). Since 2007, health technology assessment (HTA) mechanisms have been developed to define the benefits package for the UCS.

The objective of this presentation is to show how equity concerns have been addressed in Thailand as it sought to extend health coverage to its entire population. This will be shown through a series of real-world examples of decisions made over the last decade.

The principal mode of incorporating equity is through a participatory technology appraisal process, whereby different stakeholders are involved in setting the policy agenda, as well as adoption and implementation of the UCS coverage policy. Explicit criteria are used to select topics for assessment for the benefits package, one of which is the impact of the intervention on equity. Furthermore, the country's process guidelines for HTA enshrine the principles for stakeholder engagement, namely, transparency, accountability and participation.

A review of stakeholders' proposals on inclusion of technologies in the benefits package over the years suggests that civil society organizations, patient groups and lay people requested the UCS manager to subsidize new technologies and also address the issue of inaccessibility to existing services among vulnerable populations. It is also found that while the outcome measures of cost-effectiveness and budget impact analyses have been critical inputs in the decision-making process, in some instances, the final decision has been made based on social value judgements. For example, renal dialysis, a cost-ineffective intervention, was introduced into the benefits package taking into account the high economic burden of the treatment on households. Another example is that of the life-saving treatment of Gaucher's disease, a rare genetic disorder, for whose treatment the drug imiglucerace was not cost-effective. However, because of the low prevalence and the high cost to households, it was decided that the drug be covered by the UCS. In both cases, additional measures were implemented such as offering incentives to providers for switching to the preferred intervention in the case of renal dialysis and setting up special arrangements with the manufacturer of imiglucerace in order to manage the budget impact on the exchequer.

The Thai experience of incorporating equity in HTA thus underscores the importance of stakeholder engagement during the policy process in a systematic manner.

Parallel Session 2

Oral presentations

Parallel Session 2-1 Universal Health Coverage UHC Monitoring and evaluation

Supply side readiness for Universal Health Coverage: Assessing the service availability and depth of services in remote and fragile district of India.

Veenapani Rajeev Verma & Professor Umakant Dash: Indian Institute of Technology Madras

Background: UHC is conceptually straightforward; translating it to a feasible metric is quite intractable. Generalizable metric such as service readiness index is paramount as it can indicate the capacity of facilities to provide essential care and furthermore, estimation of metric at sub national is imperative for effective evidence based policy.

Study Area: Case study is conducted in remotest district of Jammu and Kashmir state in India. It is fragile area with heavy military deployment as it is bounded by Line of Control with Pakistan and is embroiled in militancy and cease fire violations. Also, it is bearing brunt of double whammy of geographical inaccessibility due to mountainous topography and backwardness in terms of Human Development Indicators.

Objective: The objective of the study is to evaluate the service availability and readiness of health facilities and ascertain the supply side barriers in service provisioning

Methodology: Mixed method design via concurrent triangulation is employed. Facility survey encompassing 138 facilities at various hierarchies conducted to ascertain supply side readiness. Compendium of checklist designed in tandem with WHO's SARA methodology conjunction with IPHS standards. Information elicited by canvassing questionnaire and scorecard generated for each facility. Health service readiness index calculated via amalgamation of average scores across six dimensions. Further, multidimensional statistical data reduction technique of principal component analysis employed for parsimonious composite indices. Stakeholder analysis conducted for nuanced qualitative information. Myriad techniques like key informant interviews, discussions and FGD's conducted with various players such as leaders, adopters and laggards.

Result: Basic amenities, infrastructure, medicine availability were suboptimal in health facilities. Readiness score of health facilities was 0.47 and 0.50 for medicine and basic amenities respectively. Scores for availability of equipment and diagnostic capacity were low 0.57 and 0.53 respectively. Service provisioning (adolescent health, delivery, neonatal and child health, non-communicable etc.) ranged from 0.47 for newtype Primary health centers with rudimentary infrastructure to 0.71 for district hospital. First two component amongst secondary care facilities explained 38% common variance characterized by service provisioning. For primary health centers, single principal component explained 24% common variance characterized by newborn care. Lack of incentives for retention in remote and shelling prone areas for staff members,

unavailability of staff quarters, inaccessibility of roads, political interferences and prevalence of internal adjustments in the form of transfer/attachment of health workers, inhibitions of skilled staff in serving militancy prone areas, nonchalant attitude of policymakers identified as major barriers for service provisioning based on stakeholder analysis.

Does affordability matter? Examining the trends and patterns in healthcare expenditure in India

Rinshu Dwivedi BHUBANESWAR: Regional Medical Research Centre, ICMR
Jalandhar Pradhan: National Institute of Technology, Rourkela, Odisha India

Rationale: Universal health coverage is among one of the major targets of Sustainable Development Goals, which stresses upon the availability, accessibility, and affordability of healthcare services without any financial risk to the households. Absence of better financing mechanism results into Out of pocket expenditure and catastrophe, leading to impoverishment and poverty. This paper tries to investigate the trends and patterns in OOPE in India from 1994-2012 by applying the Andersen's behavioural model of healthcare utilization.

Methods: Data has been used from the three rounds of nationally representative consumer expenditure surveys i.e. 1993-94, 2004–05 and 2011–12 conducted by the Ministry of statistics and planning implementation, Government of India. We employed multiple generalized linear regression model to explore the relative effect of various socio-economic covariates on the level of OOPE.

Result: Results indicate that there has been a consistent increase in inpatient (4.53%), outpatient (1.2%) and total OOPE (1.4%) between 1994-2012. The gap between richer and poorer segment has further widened along with noticeable regional disparities across the Indian regions. The share of medicines in over-all OOPE was highest followed by other components, though there has been decline in the percentage share of OOPE on medicines (83% to 67%) between 1994-2012. OOPE among the elderly, urban and richer segment of the population was higher as compared to their counterparts.

Conclusion: Our results highlight the need to explore the reasons underlying the lack of effectiveness of existing health financing mechanism and health services in reaching to the less-advantaged section of the population. Special attention is required to cater the health financing needs of the elderly, rural and poorer segment of the population and reducing the unjust burden of higher OOPE in India. There is need to strengthen the affordability for health payments among Indian households.

Key words: Universal health coverage, OOPE, affordability, GLM, India.

The Global Financing Facility Investment Case - a PHC approach contributing to Madagascar's UHC initiative.

Elise Lang, Eli Ramamonjisoa and Christine Ortiz : Health Policy Plus, Palladium,

Background: Madagascar's progress on health indicators has stagnated or declined in recent years. Neonatal mortality increased from 24 ‰ in 2008 to 26 ‰ in 2013 (DHS data). The primary healthcare (PHC) system struggles with a low government budget allocation, lack of qualified medical professionals, insufficient supply of drugs/consumables and weak data information systems. In 2017, the Global Financing Facility (GFF), a catalytic funding mechanism, selected

Madagascar as one of their third round of countries. The Ministry of Public Health (MSANP) convened stakeholders to develop a reproductive, maternal, neonatal, child and adolescent health and nutrition investment case - a prioritized plan for addressing RMNCAH-N challenges in the country to inform the use of the catalytic funding. In Madagascar, this plan supports strengthening of the PHC system and the recently launched new government health financing mechanism and UHC.

Objectives: Maximize resources available for health, and mobilize domestic resources, by prioritizing specific RMNCAH-N interventions in line with the country's vision for achieving UHC.

Methodology: HP+ supported the MSANP to convene a technical working group including government, donor, and civil society representatives. Participants used the EQUIST tool, mortality data and coverage rates per region and unit costs to prioritize feasible, highly effective and efficient interventions. Subsequently HP+ used the OneHealth Tool to budget chosen interventions in 12 prioritized regions. The cost will be compared to the results from a resource mapping exercise to determine funding gaps and provide a base for determining roles and responsibilities for implementing the investment case.

Findings: The scenario ultimately chosen for Madagascar focuses on the PHC level with emphasis on strengthening human resource availability, particularly community health workers, and their performance using performance-based financing. The investment case focuses on strengthening high-impact maternal, neonatal and nutrition interventions and increasing financial access to PHC by strengthening the nascent voluntary contribution health financing mechanism and use of vouchers for vulnerable populations. Initial results show that 17 732 644 people in 12 regions will benefit from this approach.

Conclusions: Developing an investment case allows the government, development partners, civil society and private sector partners to align funding priorities for RMNCAH-N and improve the efficiency of limited resources available in Madagascar by targeting vulnerable regions and populations to improve the health of mothers and children.

Assessing the weakness of an existing diseases programme should be a good way for strengthening the health systems toward Universal Health Coverage: case of Mauritius.

DR. Laurent MUSANGO[1]; Mr. Premduth BURHOO[2]; Dr. Faisal SHAIKH[1]; DR. Maryam TIMOL[3]
[1] World Health Organisation, Country Office of Mauritius.
[2] Mauritius Health Institute (MIH)
[3] Ministry of Health and Quality of Life (MOHQL)

Introduction Non-Communicable diseases (NCDs) are the leading cause of death, disease and disability in Mauritius. The four major NCDs (cardiovascular disease, cancer, chronic obstructive pulmonary diseases and diabetes), account for nearly 81% of all deaths and 85% of the disease burden. The WHO Regional Office for Europe initiated a three-year work programme on health systems strengthening to accelerate improvements in NCD outcomes. As Mauritius shares a similar epidemiological profile as many countries in the Europe, it was suggested to use the same tool used in Europe for a similar assessment in Mauritius.

Methodology The country assessment starts with a thorough analysis of the main NCD outcome indicators together with an overview of the time trends noted over the past 15 years. An analysis of fifteen health system features that may represent a challenge or present an opportunity for improved delivery of core NCD interventions and services were then carried out. A participatory and flexible approach was used for this assessment; a multidisciplinary team was set up to carry out the assessment. Five Working Groups (WGs) of 5-6 members each were constituted to

review the 15 health system features and two workshops were organized one to present preliminary findings and conclusions to other WGs and stakeholders and another one to validate the report. The report identified keys opportunities that the country may continue to build on as well as challenges and possible solutions to address them through strengthening health systems toward UHC and services for NCDs outcomes.

Results Political commitment to strengthen Health systems for NCDs outcomes, explicit priority-setting approaches, interagency cooperation, coordination across providers, effective model of service delivery with effective management, integration of evidence into practice, incentive systems of human resources for health, and free healthcare services including medicines and laboratory tests to users were identified as opportunities that need to continue to be strengthen and to build PHC on them. However, the following challenges that need to be mitigate were also identified: the population which is not adequately empowered to change behavior, inefficiency role that the Primary Health Care in the country and weaknesses in the diagnostic and preventive services, power exploration of data generated by the health system and unavailability of modern information solutions.

Conclusion and recommendations Based on the assessment of features as well as the challenges identified and the discussions with key stakeholders, policy recommendations such as foster a culture of continuous improvement of quality of care at all levels, restore confidence in public health services and balance private sector development, reengineer health services organisation to put PHC at the centre of UHC, empower communities for healthier environment and lifestyles and reach the unreached population especially the poor were suggested for improvement of health systems toward UHC. The road map for the implementation of the recommendations was also approved by the Ministry of health and stakeholders.

Monitoring progress towards attainment of financial risk protection in Uganda

Brendan Kwesiga[1], Tom Aliti[2], Pamela Nabukhonzo[3], Susan Najuko[2], Peter Byawaka[3], Hsu Justine[4] Grace Kabaniha[5]

World Health Organization, Uganda; Ministry of Health, Kampala, Uganda; Uganda Bureau of Statistics, Kampala, Uganda; World Health Organization, Geneva, Switzerland; World Health Organization, Brazzaville, Congo

Background: Monitoring progress towards attainment of Universal Health Coverage (UHC) is focused assessing attainment of the goals on coverage of health services and protection of households from the impact of direct out-of-pocket payments. Although Uganda has expressed aspirations for attaining UHC, out-of-pocket payments remain a major contributor to total health expenditure. The aim of this study is to monitor progress on the financial risk protection dimension for households in Uganda.

Methods: This study uses data from the Uganda National Household Surveys for 2005/06. 2009/10, 2012/13 and 2016/17. Financial risk protection is measured using catastrophic health payments and impoverishment indicators. Health payments are defined as catastrophic if they exceed a set threshold of the budget share of total household consumption expenditure based on thresholds of 10% and 25%. Health payments are impoverishing if they push the households below the poverty line (defined using the US$1.91/day and Uganda's national poverty line). Logistic regression model is used to assess factors associated with household financial risk.

Results: The results show that although progress has been made in reducing financial risk protection, this progress remains minimal and there is still a risk of reversal of this trend. We find that although catastrophic health payments at 10% threshold decreased from 22.4% in 2005/06

to 13.78% in 2012/13, we observe an increase to 14.22%. The percentage of Ugandans pushed below the poverty line (US$1.91/day) has also decreased from 5.2% in 2005/06 to 2.71% in 2016/17. We show that the distribution of this risk varies across socio-economic status, location and residence. We also show that some household characteristics are more associated with the household incurring financial risk.

Conclusion: To address the burden of financial risk protection, there is need for interventions aimed at reducing out-of-pocket payments especially among those most affected. In short term, ensuring that the population accesses publically financed services through insuring availability of key inputs required at these facilities is critical.

Parallel Session 2-2 Equity in Health

Correlates of `Public Awareness of Patient Rights and Responsibilities in Healthcare Delivery in the Sagnarigu District, Ghana

Gilbert Abotisem Abiiro, Department of Planning, Faculty of Planning and Land Management, University for Development Studies, Wa,
Co-authors: *Gilbert Abotisem Abiiro, Roger Ayimbila Atinga, Bernard Afik Akanpabadai Akanbang*

Background: Severe human rights violations in health settings has led to the enactment of various health-related human rights legislations, treaties, policies and charters to protect the basic rights of patients. However, patients still face various challenges in accessing these rights, due to poor awareness of the specific patient rights and responsibilities enshrined in the various patient charters.

Objectives: This study assessed public awareness of patients' rights and responsibilities as enshrined in the Ghana patient charter and the factors that are associated with awareness of patients' rights and responsibilities in the Sagnarigu district of the Northern Region of Ghana.

Methods: The study employed a purely quantitative cross-sectional design. A household survey was administered to 400 residents of the district, selected through multi-stage random sampling. Using STATA 12 software, descriptive statistics on the levels of awareness of each patient right and each patient responsibility were generated. Series of binary logistic regression models were also run to determine the socio-demographic correlates of awareness of each patient rights and each patient responsibility.

Key findings: The results revealed a range of 35.5% - 74.25 % level of awareness on individual patient rights and 46.5%-71.3% awareness on individual patient responsibilities. Per-urban residency, tertiary education, good self-related health status and health insurance membership were statistically associated with significantly ($p<0.05$) higher levels of awareness on individual patients' rights and responsibilities. Islamic religion was statistically associated with significantly ($p<0.05$) lower levels of awareness.

Main conclusion: We conclude that public education on the existence of the Ghana patient charter and the various patient rights and responsibilities enshrined in the charter, especially within rural and Muslim dominated communities, should be intensified

Including the Excluded: Stakeholders Strategies to Improve Access to Health For The Socially Excluded In Nigeria

Chinyere. C. Okeke Département de médecine communautaire, Université du Nigeria, Enugu Campus. Benjamin .S.C. Uzochukwu , Ghazala Mir.

Background Public sectors in any country has the responsibility of providing equal access and include all groups. Nigeria has numerous development-oriented public policies, but little has been achieved in the area of social inclusion which seeks to provide a conducive environment to all.

Social exclusion is one of the social determinants of health. Actions to alleviate this state are seen as crucial in addressing the health needs of all, and the health needs of marginalised groups in particular. It is closely linked with the ethos of the United Nations Sustainable Development Goals which suggests that improving the health status of such socially excluded groups may improve the health of the population as a whole. Thus several strategies to improve access to health have been developed.

Aims and objectives of the research To identify strategies that exist and to highlight key influences on implementation of strategies to improve access to health for the socially excluded.

Methods Co-production method was used. We conducted a systematic scoping review of 37 published evidence selected from 257 identified abstracts. We also obtained feedback on strategies from over 60 expert participants who took part in 3 national workshops. In-depth interviews with structured interview guides were conducted on policy makers and implementers and heads of civil society activist while focused group discussion was conducted amongst groups at the rural areas and members of Internally Displaced People camps. Data was analysed manually using themes from the study contextual framework.

Findings Strategies identified at the macro level include: "Saving One Million Lives Programme for Results" (SOML-PforR), conceived by the Federal Ministry of Health to save the lives of mothers and children by increasing access and utilisation of evidence-based, cost-effective and high impact maternal, child and nutrition interventions in Nigeria. Free MCH program established to provide free health care services for the pregnant women and children under five years.

Meso level: Principles for “Bringing PHC under One Roof” and the establishment of Health Management Committee.

Key influences on implementation of strategies include implementation challenges; corruption and lack of accountability of public funds mapped for various projects as well as intricacies of policy making at the national Assembly. Multisectorial collaboration opportunities exist.

Conclusion Social exclusion is underpinned by combination of different drivers, and in-depth understanding of effective strategies for social inclusion is required. Future policies and practices should take account of the reported effective strategies and improve on them.

Assessing socioeconomic inequalities in maternal healthcare over time; evidence from four African countries

Doreen Anyamesem Odame, Dr. Ama Pokua Fenny, Mr. Derek Asuman
University of Ghana, Legon - Institute of Statistical, Social and Economic Research

Abstract Though most African countries saw some improvements in maternal health outcomes, most of these countries did not meet the MDG 5 target of 190 deaths per 100,000 live births. Ensuring universal access to health care is very instrumental in improving health outcomes. To

be able to meet the SDG target of 70 deaths per 100,000 live births by 2030, there must be equity and equality is access to and utilisation of maternal health care services. This can be possible by eliminating socioeconomic differences in access to maternal health care. This paper seeks to document the degree, extent and evolution of socioeconomic inequalities in maternal health outcomes in 5 African countries; Kenya, Ethiopia, Rwanda, Uganda and Tanzania. The paper examines 3 maternal health outcomes – timing of first antenatal visit, number of antenatal visit and delivery by skilled attendant. The paper has 2 main objectives; (i) estimate the degree and trend of socioeconomic related inequalities in access and use of maternal health care and (ii) asses the correlates of the socioeconomic related inequalities in maternal health services and their contribution to the level of observed inequalities. The study adopted the Wagstaff and Errygers measures to measure the bivariate rank indices. These indices do not explain the contribution of socioeconomic characteristics in the observed differences. A generalised regression decomposition technique is therefore adopted to assess the sources of socioeconomic inequalities in health. The paper uses different rounds of Demographic and Health Surveys in the various countries. These surveys provide extensive information on access and use of various maternal healthcare services from nationally representative sample of women of reproductive ages (15 – 49)

Horizontal inequity and inequality in healthcare utilisation in South Africa: A longitudinal analysis using the National Income Dynamic Survey (NIDS)

Tanja Naledi Gordon, Human Science Research Council, Pretoria
Prof Frederik Booysen, School of Economics and Business Sciences, University of Witwatersrand (Wits)
Prof Josue Mbonigaba, Department of Economics, University of KwaZulu-Natal (UKZN)

Background: The distribution of healthcare based on need rather than socioeconomic status has become an inherent object for health systems in both developed and developing countries. Sustainable Development Goal (SDG) three urges the achievement of equitable, quality, affordable healthcare coverage for all. Therefore, this paper examines the degree of horizontal inequity in healthcare utilisation in South Africa and the major drivers of inequality.

Data: The National Income Dynamic Survey (NIDS) is the first of its kind in South Africa. The biennial study is a nationally representative panel survey intended to track the same individuals over time. To date four waves are available in the public domain. The survey intended to follow trends and patterns in health, economic, institutional and social characteristics of the population.

Method: Concentration indices for absolute healthcare use and utilisation given need, while controlling for non-need and socioeconomic factors were calculated to measure horizontal inequity (HI) using a probit regression model. In addition, absolute concentration indices were decomposed to determine the major contributors to inequality in healthcare utilisation.

Findings: There was a significant increase in pro-rich horizontal inequity (HI = 0.064, p0.001) between wave 1 (2008) and wave 4 (2014) (HI = 0.083, p0.001) for consultations in the past 12 months. Distinct horizontal inequity patterns were found for private and public consultations over time. Horizontal inequity to the advantage of the wealthy for private consultations and the poor for public consultations. From the decomposition analysis, non-need and socioeconomic factors such as medical aid, wealth, education and employments were the major drivers of inequality.

Conclusion: Sufficient evidence was found for the existence of horizontal inequity, increasing over time for overall utilisation and persistent for private/public consultations. Furthermore, in order for South Africa to keep in line with international policy goals and objectives, underlying

influential factors such as the mechanisms of healthcare financing have to be addressed in order to narrow the degree of horizontal inequity within the health system.

Socioeconomic inequalities in the multiple dimensions of access: The case of South Africa

Tanja Naledi Gordon, Human Science Research Council, Pretoria
Prof Frederik Booysen, School of Economics and Business Sciences, University of Witwatersrand (Wits)
Prof Josue Mbonigaba, Department of Economics, University of KwaZulu-Natal (UKZN)

Background: The National Development Plan (NDP) strives that South Africa, by 2030, in pursuit of Universal Health Coverage (UHC) achieve a significant shift in equity, efficiency and quality of health services provision. This paper, with a view to informing this policy endeavour and the associated achievement of the Sustainable Development Goals (SDGs), assesses the extent of socio-economic inequalities in health and healthcare across various dimensions of access to healthcare using an integrated conceptual framework.

Data: The 2012 South African National Health and Nutrition Examination Survey (SANHANES-1) collected data on a variety of questions related to health and healthcare utilisation and satisfaction, with a household module collecting information on housing infrastructure and asset ownership.

Method: A wealth index was constructed using Multiple Correspondence Analysis (MCA) and a range of concentration indices were calculated using Stata's conindex command.

Findings: In terms of healthcare needs, good and ill health are concentrated in the non-poor (CI +0.077, p0.001) and poor (CI -0.043, p0.001), respectively. The non-poor perceives a greater desire for care than the poor (CI +0.064, p=0.013). However, unmet need is concentrated in the poor (CI -0.031, p0.001). The socio-economic divide in the utilisation of public (CI -0.241, p0.001) and private (CI +0.253, p0.001) healthcare services remains stark. The poor are less satisfied with healthcare services (CI -0.042, p=0.026) and healthcare provision (CI -0.041, p=0.030).

Conclusion: The broader health system remains characterised by deep inequalities across the different dimensions of access to healthcare. The poor are discriminated against across the continuum of access to healthcare. National Health Insurance (NHI), when implemented effectively, promises to play an important role in bringing quality healthcare services to the economically disadvantaged.

Keywords: access, health inequality, healthcare, concentration index, South Africa

Leaving no one behind: Assessing socioeconomic inequalities in the pursuit of Universal Health Coverage in Ghana

Jacob Novignon, Kwame Nkrumah University of Science and Technology, Kumasi-Ghana

In the bid to achieve universal health coverage (UHC), Ghana rolled out the National Health Insurance Scheme (NHIS). This is considered the largest health financing reform in the history of the country. The primary objective of the scheme is to remove financial barriers to health care access in Ghana. While various studies have evaluated the impact of the scheme on health care access and utilization, no study has analyzed its role in bridging the inequality gap in health care access. We test this hypothesis in the current study. We sought to find out if the introduction of the NHIS has helped reduce socioeconomic related inequalities in health care access.

We used data from three rounds of the Ghana Demographic and Health Surveys (2003, 2008 and 2014). Using three health care utilization measures - Antenatal care (ANC), Delivery by trained attendants (DTA) and care for fever among children under five - we analyzed data in three steps. First we constructed concentration curves to examine the trend in inequality before and after 2004 when the scheme was established. In the second step, concentration indices (CIs) were computed for each outcome variable across the years. Finally, the concentration indices were decomposed to estimate the impact of NHIS on inequality in health care access.

The concentration curves show that utilization of ANC, fever care and DTA were concentrated among the privileged. However, the trends show the levels of inequality has declined after the introduction of the NHIS. The CIs confirm this with inequality in ANC service utilization declining from 0.302 in 2003 to 0.177 in 2014. Similarly, inequality in DTA declined from 0.597 to 0.423 over the same period. The decomposition results show that access to NHIS was an important contributor to inequality in health care access. For instance, in 2014, access to NHIS explained about 3.17% of socioeconomic related inequality in ANC service utilization. This was statistically significant at 5% level.

The findings suggest that the pursuit of UHC in Ghana has been beneficial for the poor. It has helped in bridging the health care access gap between the rich and the poor. There is, therefore, the need to scale-up the NHIS in Ghana to achieve full universal health coverage. In countries where such schemes do not exist, there is need to direct efforts to encourage its establishment.

Keywords: Health insurance, inequality, universal health coverage, Ghana

Health inequality assessment: reproductive, maternal and child health in Uganda

Ms. Geraldine Agiraembabazi, Makerere University School of Public Health, Kampala, Uganda

Background: Health inequalities continue to persist around the world in general, and particularly in low- and middle income countries. Inequalities in health are evident in the unequal way that health services are accessed by people of different income levels/economic status, gender, social classes and ethnic groups. They also manifest in variations in health outcomes according to education level, and in the tendency for health systems to better meet the needs of populations in certain geographical areas1. Now is especially a time to confront health inequalities since social determinants of health and progress towards universal health coverage have emerged as priorities for global health. Identifying where inequalities exist and monitoring how they change over time is essential to creating an equity-oriented health sector and provides a basis for incorporating equity into evidence-based health planning.

Objective: To assess health equity reproductive, maternal, newborn and child health interventions by analyzing survey data for levels, trends and disparities.

Methods: Two most recent available data from the Uganda Demographic Health surveys (2006, 2011) was analyzed looking at six coverage indicators and two equity stratifiers: wealth and region. Inequalities were assessed with two summary indices for absolute inequality and two for relative inequality.

Results: By economic status, the least equitable interventions were coverage of skilled birth attendant and modern contraceptive use. In terms of absolute inequality, SBA is the least equitable (diff: 44.7 vs 26.4; SII: 48% vs 31%) but in terms of relative inequality, Modern

[1] WHO 2013 Handbook on health inequality monitoring: with a special focus on low- and middle-income countries

contraceptive use is the least equitable (ratio: 3.1 vs 2; CIX: 19% vs 13%). The most equitable coverage indicator was DPT vaccine. By region, attendance of 4+ antenatal care visits was highest in Kampala, followed by Karamoja and the eastern region had the lowest coverage in both years. Coverage increased over time nationally and this was primarily due to government scale up of care by introduction of health sub-districts and abolition of user fees at public health facilities. The inequalities in health have remained largely unchanged over time due to worsening poverty levels and increased fertility especially among poorest populations.

Conclusion: Health inequality monitoring should be given more emphasis as an important part of overall health sector planning and ensure that data get used for effective action. The most inequitable interventions should receive attention to ensure that all social groups are reached.

Parallel Session 2-3 Community based health insurance

A Review of Community-based Health Insurance Schemes (CBHIS): Lessons from Nigeria and Ghana

**Ifeanyi Nsofor, **Nanlop Ogbureke, **Charles Usie*
**EpiAFRIC_ABUJA Nigeria, **Christian Aid*

Background Poverty can predispose a household to health risks, which can further aggravate their socio-economic status through decreased productivity and high out-of-pocket healthcare. Universal Health Coverage ensures people do not suffer catastrophic health expenditure by improving access, affordability and quality of healthcare.

Aims and Objectives The objective of the study was to explore perceptions, barriers and opportunities for establishing a CBHIS.

Methods A qualitative study with in-depth interviews and Focus Group Discussions with stakeholders of both existing and proposed CBHIS including representatives of primary health centres, HMOs, National Health Insurance Scheme (NHIS) at state and national level, community members.

Key Findings The role of NHIS in CBHIS for Nigeria is one of both a regulator and an implementer with significant gaps in both roles. These gaps which include use of tax-funded models with co-payments, was found to be an inefficient and impractical way of funding healthcare in Nigeria. The situation is worsened by the fragmented federal structure and lack of delineation of responsibilities across the different tiers of government. Although there have been a few successful schemes, funding CBHIS remains a challenge because of the high level of subsidization by government and donors. In depth community engagement with beneficiaries is critical for enrolment, so also is the size of the risk pool to the scheme's success. A detailed benefit package, quality of healthcare provided, administrative, monitoring and evaluation costs and the relationship of the scheme sponsor with HMOs are important to recruit and keep enrollees. Overall, political will and trust is critical to the success of a scheme.

Main Conclusions Strong government partnership is imperative for establishing CBHIS. This is especially important considering the high odds that the primary point of service for most schemes will be a government owned and run PHC facility. The government's role will differ by community.

Gaining the trust of members is as essential as government support. The need for actuarial, health and demographic studies cannot be overlooked.

Can Community Based Saving Groups (CBSGs) usher in Community Health Insurance (CHI) in rural areas? A case study of three districts in Eastern Uganda.

MUTEBI ALOYSIUS & Dr. Elisabeth Ekirapa Kiracho Makerere University School of Public Health

Background A savings group is a group you can form with your neighbours and friends to solve financial problems by saving small sums of money together. While formation of Savings Groups (SGs) has been identified as one of the ways to help households and individuals save at community level, saving groups do provide access to financial services in especially rural areas with limited options when it comes to saving for health care and investment of money. It has been observed that joining savings groups can change the financial lives especially of women and their families by expanding their financial choices and opening up new social and economic opportunities.

Methods The study used community development officers and village health team members to mobilise community members into joining or forming saving groups. While in these groups members were trained to save for wealth creation and health. The health account was separate from the general savings of the group and was only used on health related matters of respective families.

Results It was noted in the intervention arms that the number of saving groups more than doubled from 431 to 915 between September 2013 and December 2016 due to successful mobilization and sensitisation. It was also noted that some parishes which hardly had any saving group at the beginning of the study by the end of 2016 had at least a saving group in every local council 1 with membership of not less than 15 people. Out of 915 saving groups, 22% had at least a member saving for MNH in the group while the rest still saved as individuals or families.

Discussion The effort to start a health account in every saving group has shown very positive response given that it has only lasted for one year. With continued sensitisation and supervision of saving groups by community development officers, there is strong hope that this can serve as a form of health insurance in rural areas where there is no formal type of health insurance.

Conclusions These findings are testimony that rural communities can adapt saving groups as a form of health insurance that does not require them to undergo all sort of bureaucracies of paper work and travel to and from towns. It can be managed locally with little supervision. With more training of group leaders in management and leadership skills, the groups can manage the savings very well.

Assessment of the feasibility of community=based health insurance (CBHI) scheme for financial risk protection in three african countries: a systematic review

Ochoma, Ogbonnia Godfrey : *Department of Health Administration & Management, Faculty of Health Sciences and Technology, College of Medicine, Enugu Campus, University of Nigeria, Nsukka.*

Background, Aim and Objective: Of all the risks facing poor households, health risks pose the greatest threat to their lives and livelihoods. One of the ways that poor communities manage health risks, in combination with publicly financed health care services, is community-based health insurance scheme (CBHI). Health care financing through CBHI is a growing concept in the sub-Saharan Africa, and this study has the objective of assessing the effectiveness of three of these schemes to see if they improved access to health care and reduced financial burden for their members in the case of illness and if they stabilized members incomes and helped to preserve assets when they fall sick.

Methods: To enable this systematic review, studies of primary data with proven concerns for methodology and design were selected which included enrolment in the community-based health insurance scheme and how much they performed in providing financial risk protection to members in times of need in Africa. **Data identification:** The following databases were searched: Google Scholar, Pub-Med, and Embase/Medline. **Selection criteria:** The inclusion criteria for studies for review include: 1) clear reasons for the establishment of the CBHI; 2) the effectiveness of the programme as a financial risk protector in times of need among others. **Extraction of Data for Analysis:** Using a data extraction form adapted from Greenhalgh *et al* (2005), the selected studies were summarized based on their study design, the research questions, and the research context on coverage, findings and validity of their conclusions. The electronic search yielded 521 references. Papers merited their full scrutiny after the consideration of their title and abstract. Of the articles identified as potentially relevant to the research questions, 41 were reviewed which consequently produced 3 papers *from the countries of Senegal, Rwanda and Nigeria* that met all the inclusion criteria.

Results: The results of the review were mixed. Results seem to confirm the researchers' hypothesis that community-financing through pre-payment and risk-sharing reduces financial barriers to health care. The ''upper income'' strata tend to participate more than the average group, for inability to afford the required insurance premium. Limited coverage offered by the schemes constitutes a threat of catastrophic illness, which is enough to drive individuals and families into poverty.Improving on the acceptability of community-based health insurance (CBHI) which expands enrolment and broader risk pools must be considerate factors to enable implementation and sustainability.

Mutual health insurance and financing of health expenses among families in Gouro country in Ivory Coast

Baudelaire Ange BATE, Master's student - health option in Sociology
University of Félix Houphouet Boigny, Abidjan Côte d'Ivoire

Background: Public health policies implemented in Ivory Coast for many years have failed to achieve the health-related Millennium Development Goals. At a time when the Sustainable Development Goals (SDOs) are being met, most of the population is still struggling to access health care. Disparities in access to health care are still significant. Mutual health insurance companies, beyond their impact on improving the health system, are bringing about transformations in health management at the family level. According to the work of Doumbouya (2008), the three obstacles to access to healthcare for populations (geographical, financial and socio-cultural) are still persistent. Indeed, the high cost of access to modern health care combined with household poverty is a major factor in access to care.

Objective: Our research analyses the role of mutual health insurance in promoting social equity among families in the West Central of Ivory Coast among the Gouro people. The general problem of this article is relevant to the analysis of the financing of health expenditures within families. In a context of insufficiency of resources, monetarization of access to care and women's empowerment to take charge of health care, mutual are transforming and challenging the social roles assigned to each sex.

Method: This research adopts a qualitative methodological approach that combines information gathering, documentary review, life stories, direct observation and in-depth individual interviews.

Outcome: The triangulation of the empirical corpus in the theoretical perspective of the social construction of gender roles by Vidal (2008) reveals that the operationalization of mutual

societies in Gouro country has contributed to a redefinition of gender roles in family health care management. With the advent of mutual health insurance, the roles in family health previously assigned exclusively to Gouro women are changing and are now shared between men and women within the couple.

Conclusion: Mutual health insurance companies are entering the private sphere and transforming gender relations around health, where men are increasingly taking a leading role in family health care.

Effect of Community-Based Health Insurance on Utilisation of Preventive Health Services in rural Uganda.

Emmanuel Nshakira Rukundo [1, 2], Essa Chanie Mussa [1], Nathan Nshakira [3], Nicolas Gerber[1] Joachim von Braun[1]*
[1]Center for Development Research (ZEF) University of Bonn. Genscherallee 3, 53117 Bonn
[2]Institute for Food and Resource Economics, University of Bonn. Nussallee 19, 53115 Bonn
[3]Kabale University, P o Box 317 Kabale, Uganda

Background: Community-based health insurance (CBHI) schemes have emerged as strong pathways to universal health coverage in developing countries. The focus of their examination has emphasised their impact on financial protection and on the utilisation of curative health services. However, very little is known about their possible effect on utilisation of preventive health services and strategies and yet developing countries continue to carry a burden of easily preventable illnesses.

Methods: To understand if this effect exists, we carry out a cross sectional survey on 464 households from communities served by a large CBHI scheme in rural south-western Uganda. We apply inverse probability weighting of the propensity score to estimate quasi-experimental effects.

Findings: We find that for household participating in CBHI, the probabilities for using long-lasting mosquito nets, treating drinking water, vitamin A iron supplementation and child deworming increased by 27.8, 24.9, 20.7 and 28 percentage points respectively. Moreover, the average treatment effect on the treated was also significant for long lasting mosquito nets, vitamin A supplementation, and iron supplementation and deworming. We postulate that this effect is partly due to information diffusion and social learning within CBHI-participating burial groups.

Conclusions: This work gives insight into the broader effects of CBHI in developing countries, beyond financial protection and utilisation of hospital-based services. Policy makers in Uganda and other developing countries should consider scaling up insurance programmes not only for resource mobilisation for health but also possible effects on incentivising uptake of preventive health services.

Parallel Session 2-4 Drugs & Medicines

The effects of medicines availability and stock-outs on household's utilization of health care services across six district councils in Dodoma region, Tanzania

Emmanuel Nshakira Rukundo [1, 2], Essa Chanie Mussa [1], Nathan Nshakira [3], Nicolas Gerber[1] Joachim von Braun[1]*
[1]Center for Development Research (ZEF) University of Bonn. Genscherallee 3, 53117 Bonn

[2]Institute for Food and Resource Economics, University of Bonn. Nussallee 19, 53115 Bonn
[3]Kabale University, P o Box 317 Kabale, Uganda

Background Availability of quality medicines in the provision of health care service is an integral part of universal health coverage (UHC). Countries have been undertaking various health financing reforms among else to address shortage of medicines at points of health service delivery, including scaling up of community health insurance and public-private partnerships to improve availability and access to quality medicines and pharmaceutical services in underserved areas. This study assesses the effects of medicines availability and stock-outs on health care utilization across six district councils in Dodoma region, Tanzania.

Methods A cross sectional study was carried out across district councils of Dodoma region in May 2017, including a household survey and a health care facility survey. A total of 109 public primary health facilities (11 health centres and 98 dispensaries) were surveyed and 1469 households within the health facility catchment areas were interviewed. Household data was merged with health facilities details using global positioning system (GPS) coordinate with the aid of STATA software version 13.0 to create a geo-dataset. We generated an index for medicines availability as mean scores across eighteen tracer medicines for each health care facility surveyed. Descriptive analysis and multivariate logistic regressions models were used to assess the effects of medicines availability and stock-outs on utilization patterns.

Results Availability of medicines over three months February – April 2017 was above 70% across districts for most of the medicines assessed with few like ferrous salt and folic acid which availability was below 55%. We found evidence suggesting positive association between household health care utilization and medicine availability index. Regression analysis on the health care utilization showed the following positive associations: medicine availability index (odds ratio – OR, 2.818; 95% CI: 1.09-7.25; $p < 0.05$), households residing less than five kilometres from the health facility (OR, 1.594; 95% CI: 1.06-2.39; $p < 0.05$), those receiving health care education (OR, 2.667; CI: 1.39-5.10; $p < 0.05$) and patients reporting less than sixty minutes waiting time (OR, 1.703; 95% CI: 1.11-2.60; $p < 0.05$).

Conclusion This study has shown that availability of most tracer medicines is relatively good, with frequent stock-outs of a few medicines and variation across level of care as well as across district councils. This highlights the need to improve medicine supply management along the supply chain from facility to national level. This includes quantification and timely ordering at health facility and performance of the MSD in fulfilling orders.

Keywords: medicines availability, health care utilization, Dodoma, Tanzania

Consumption and expenditure on anti-diabetic drugs from 2016 to 2017 by beneficiaries of a health insurance mutual in Ivory Coast

Agbaya OGA, KOUAME Jérôme, KOFFI Kouamé, University of Felix Houphouet-Boigny – Abidjan

Introduction According to the World Bank, there is a need to invest in Universal Health Coverage in Africa where maternal and child mortality remains high, as well as nutritional deficiencies, while many health systems cannot cope with epidemics and the growing load of chronic diseases such as diabetes. The objective of this study was to describe the distribution of the consumption of antidiabetic drugs and the expenses associated with it by the General Mutual of Officials and Agents of the State of Ivory Coast.

Methodologies This is a retrospective analysis of payment data for diabetes drugs by the Mutual. The study took in consideration members and beneficiaries who purchased at least one

antidiabetic drug in 2016 or 2017 whose pharmaceutical voucher was treated at the Mutual. Consumption was expressed in defined daily doses (DDJ)/patient/quarter. Average monthly expenditures were estimated based on the public prices of each drug sold in private pharmacies in Ivory Coast. The data were acquired from Excel spreadsheets and analysed by using R studio software.

Results Antidiabetic drugs have been found for 10038 mutualists aged 21 to 86 years with an average age of 54.65 ± 10.39 years. There was a male predominance with a sex ratio of 1.29. Over the study period, 102,792 lines of antidiabetic agents were treated, 81.77% of which were oral antidiabetic agents.

Of these drugs, gliclazide was the most commonly used molecule, followed by glimepiride, metformin and insulin. Gliclazide consumption increased by 2.96% (from 171.38 to 176.46 DDD/patient/quarter) with a peak (176.46 DDD/patient/quarter) in the third quarter of 2017. Consumption of glimepiride, metformin and insulin decreased by 20.38% (from 154.63 to 124.12 DDD/patient/quarter), 7.18% (from 117.09 to 108.01 DDD/patient/quarter) and 7.75% (136.58 to 126.77 DDD/patient/quarter) respectively.

The average monthly expenses for these treatments varied only slightly over time. They were higher for sitagliptin (34435 F/month), insulin (24985.0069 F/month) and vildagliptin (22058.2821 F/month).

Conclusion The consumption of antidiabetic drugs in this cross sector of beneficiaries of a mutual health insurance mutual for access to medicines appears to be close to the consumption observed in countries with extended health insurance systems.

Keywords Diabetes mellitus, drug use, defined daily dose, Ivory Coast

Assessing the Rational use of Medicines (RUM) in community pharmacies in Ghana

Brenda Yayra Opong[1], Justice Nonvignon[2], Moses Aikins[2], Genevieve C. Aryeetey[2]
Pharmacy Council, P.O. Box, AN 10344, Accra North
University of Ghana, College of Health Sciences, School of Public Health. P. O. Box LG 13, Legon Ghana

Introduction: Rational use of medicines (RUM) for all medical conditions is an essential element in achieving quality of health and medical care for patients. Yet more than 50% of all medicines worldwide are prescribed, dispensed or sold inappropriately. Ensuring the availability, affordability and rational use of quality medicines is an issue of concern in developing countries. Irrational drug use affects quality of health care and has implications on efficacy of medicines. Community Pharmacies serve as a vital source of information on drug use to members of the community and should promote the safe use of drugs.

Objectives: The study sought to assess rational use of quality and accessible medicines in community pharmacies in the Ledzokuku-Krowor Municipality in Accra. , using the WHO level II facility core based indicators.

Methods: A descriptive cross-sectional design employing the quantitative method was employed to take prospective data from 6 community pharmacies and 180 clients. The study adopted the WHO level II facility core based indicators for measuring rational use of medicines mainly access to medicines, availability of medicines, medicine pricing, affordability and patient care. Various scores were generated for each of the five domains as stipulated in the guidelines.

Results: Majority (53.3%) of the patients for whom medicines were intended for were females whilst those aged 30- 59 years were in the majority (46.7%). About 98.8 % of clients travelled to the community pharmacy in < 1hour and at a cost 0.42 times the daily wage of the lowest paid

salaried government worker. Availability of key essential medicines was high (92.2%) and no expired medicine was found in any of the dispensaries. These medicines were conserved under conditions that scored 80%. The Median Price Ratio (MPR) of all the surveyed medicines ranged from 0.13 to 26.11 implying that medicines were being sold at a range 0.13 times lower and 26.11 times higher than the international reference price. As much as 60.83% of prescription medicines were bought without prescriptions. Labelling of medicines in the municipality was low -58.9% although 88.2% of them had adequate knowledge on how to take their medicines. The average cost of medicines bought was 0.73 times the daily wage of the lowest paid salaried government worker.

Conclusion: The level of the rational use of medicines in community pharmacies was found to be good, although there were some major sub optimal performance regarding some patient care practices.

Key words: Rational use of medicines, community pharmacies, access, availability, medicine price, affordability, patient care

Training Anambra State primary health workers on medicine management and provision of management tools: steps towards health systems strengthening for delivering primary health care

Chinyere .C. Okeke Health Policy Research Group, Department of Pharmacology and Therapeutics, College of Medicine, University of Nigeria Enugu-Campus, Enugu, Nigeria1. Department of Community Medicine, College of Medicine, University of Nigeria Enugu-Campus, Enugu, Nigeria2.

Background Medicines are key determinants of population health and of society's trust in the quality and viability of health systems. It's availability is a measure of the performance of the health facilities and this is facilitated by the presence of essential stock management tools at the primary health care (PHC) level which is the first port of call for majority of the populace. Most of the PHCs are located in the rural areas which have been neglected over the years despite harboring a greater percentage of the State's population.

Medicine management is the set of practices aimed at ensuring the timely availability and appropriate use of safe, effective, quality medicines and related products and services in any health-care setting. It involves selection, quantification, procurement, storage and distribution. It's use requires proper prescribing, packaging, dispensing and counselling and these tasks require qualified health workers or other relevant personnel with appropriate skills.

Aims and Objectives This study aimed to assess the effect of training primary health care workers and provision of medicine stock management tools for effective medicine management practices in the primary health centers in Anambra state.

Methods The study was undertaken in 132 PHCs in Anambra State, Southeast Nigeria. The intervention included provision of medicine stock cards and training on essential medicine management. Data was collected using an observational check list, a pretested questionnaire administered to health workers in-charge of the facilities before the intervention and 6 months after the intervention and in-depth interviews. Data was analysed using SPSS and manual content analysis.

Key Findings Six months after intervention, of the 132 facilities, knowledge score improved from 31 (23.5%) to 97(73.5%), while practice score improved from 40 (30.3%) to 81(61.4%) and both were statistically significant (P =0.000..). Mean scores and standard deviation before and after for knowledge (6.10±2.48 and 8.78±2.24) and practice (6.06±3.32 and 8.49±3.37) of medicine management was found to be statistically significant too.

Reasons for the current practices were found from in-depth interviews to be lack of training and supportive supervision and also lack of regular supply and harmonization of drug stock tools in the State.

Conclusion The training led to reduced medicine stock-outs, improved availability and use of medicine stock management tools and proper storage and prescription of medicines. It is therefore recommended that such trainings and interventions should be scaled up in all the PHCs to ensure availability of quality medicines in the PHCs.

Medicines Availability and Accessibility under Performance-Based Financing (PBF): Lessons from Three Nigeria State Health Investment Project (NSHIP) Implementing States

Muhammed Abubakar, Binta A. Ismail, Federal Capital Territory (FCT) –National Primary Health Care Development Agency (NPHCDA), Abuja

Introduction Medicines occupy strategic role in a health system. In economic perspective, medicines are derived demands: consumed for maintaining health, preventing ill-health, treating diseases and managing chronic complications that could lead to more suffering, morbidity and mortality. Hence, it is one of the indicators used to assess a health systems efficiency and effectiveness. As such, timely use of medicines is imperative in any given health care delivery systems. This explains the rapid increase in the essential medicines list from 204 molecules when it was developed by World Health Organization (WHO) in 1977 to about 374 molecules as at 2013. Evidences have shown that medicines availability have reverted epidemic of 'killer diseases' (HIV/AIDS, Malaria, respiratory diseases, cardiovascular diseases, childhood diseases, diarrhea diseases). Achieving essential medicines requirement could enhance country's chances in reaching Universal Health Coverage (UHC). However, desirable progress has not been made in low and middle income countries (LMICs) including Nigeria despite of several interventions and hence reaching UHC may become wishful thinking. Hence, the government of Nigeria has commenced the pilot of Performance-Based Financing (PBF) under the Nigeria State Health Investment Project (NSHIP) in the selected three States and this has introduced measures to ensure continuous availability of essential medicines in the project implementing States. This paper therefore assesses the effect of PBF in ensuring efficient essential medicines management (EMM).

Material and Methods The WHO's equitable access to essential medicines framework was adapted and used to assess the medicines access in the PBF implementing States in Nigeria. All the health facilities in the pre-pilot LGAs are sampled from the three project States. Information regarding drug funding under PBF, drug expiration, indigent patients' (vulnerable or poorest of the poor) drug consumption and tracer drugs list were collected for the assessment. Simple descriptive statistics (mean/average, percentage, graphical representations) were used for data analysis.

Results The study found that: more than 95% of the sampled PBF health facilities have efficient essential medicines management: tools, financing, autonomy and supervision; identified and confirmed indigent patients have 100% access to all medicines at zero cost; non-existence of medicines expiration and informed community. The study concluded that the PBF under the NSHIP has made significant impact on essential medicines subcomponent of the health systems over previous interventions such as drug revolving fund (DRF) scheme and this may trigger roadmap to UHC. The study recommended that PBF approach should be adopted for essential medicines management in Nigeria.

Panafrican Regulation of the Pharmaceutical Industry via the Medicines Agency

Guy NJAMBONG, Sorbonne Business School - University Paris 1

My topic is of societal importance, because on the one hand, research on transcontinental pharmaceutical regulation is almost non-existent, on the other hand, to support the development of I.P. at the African scale for the manufacture / importation then the dispensing of quality drugs, according to standards common to the entire continent, goes in the direction of extending the life expectancy of Africans.

I wish to analyze the advent of WADA, to understand the history of the construction of the European Medicines Agency (EMA), the United States Drug Administration (USFDA) and China (CFDA), and then benchmark. This will allow me to draw lessons and propose recommendations for the advancement of the construction of the AMA, considering the economic and managerial theories. Also, understanding the organizational and budgetary strategies, the philosophy and modality of regulation of the agencies, could reinforce my vision.

Moreover, this work has the ambition to approach the precepts of market regulation according to a heterodox positioning as well as the theories of the Agency, according to a neo-institutionalist approach. But again, this work will be in the Afro-optimistic and pan-Africanist lineage.

I am already asking many questions: a) think and formalize recommendations for the creation of this AMA, already on the launching pad, is it too late? b) If this is not the case, could it be the result of the introduction of this SA at the societal level, if my recommendations were taken into account, before, during or after? (c) What is the strategy for WADA to prioritize the African continental free trade process?

My subject in its integral dimensioning is so far the following: "Why and how, at the pan-African scale, regulate I.P. and how to establish an African Medicines Agency, after the signing of the continental free trade treaty, can it contribute to its autonomous development, perennial and centered patient?»

To this, my central question is how should the African Medicines Agency be different from the EMEA and the USFDA and how should it have a dimension of economic regulation and not just pharmaceutical?

Spatio-temporal variations in the use of antimalarial drugs in Côte d'Ivoire from 2016 to 2017

Jérôme KOUAME, OGA Agbaya S, KOFFI Kouamé, Félix Houphouët-Boigny University - Abidjan

Background and Objective The incidence of malaria can vary, at different times of the year, under the influence of environmental and climatic factors. Drug consumption data are important resources for understanding seasonal variations in malaria endemicity. The objective of the analysis presented here is to describe the spatio-temporal variations in the use of antimalarial drugs in Côte d'Ivoire and to estimate the expenditures that have been attached to them.

Methods This is a retrospective analysis of the data on the consumption and expenditure of antimalarial drugs, among the members and beneficiaries of the Mutual General of State officials and agents of Côte d'Ivoire (MUGEFCI). The study included people of all ages who had taken at least one antimalarial medicine reimbursed by the mutual between April 2016 and December 2017. Consumptions were expressed in terms of the number of official packaging units of

medicines equivalent to each ICD. Spatial variations were related to the number of "boxes" of drugs used in each of the 31 regions of the country. Average monthly expenditure was estimated for each drug from public prices in private pharmacies. The data was acquired on Excel spreadsheets and analyzed from July to October 2018 using the R studio software.

Results The sample consisted of 315420 people aged 0 to 87 years with an average age of 26.38 ± 19.88 years. 51.39% of the population was male.

764867 "boxes" of antimalarial drugs were consumed over the study period. 74.18% of these were artemether-lumefantrine-based drugs. The largest consumption (38.36%) was recorded in the district of Abidjan for all molecules and over time.

Consumption has increased gradually since the second quarter of 2016, until it reached the peak of 13,767 (18.04%) boxes in the last quarter of 2016. It then declined continuously during 2017, so that Consumption trends of the previous year have not been replicated.

The average monthly expenditure ranged from 1751 FCFA (for artesunate) to 5503F CFA (for artemether). They have changed little over time.

Conclusion The consumption of antimalarials has varied with regard to the population of beneficiaries, access to care, and actions to control expenses by the Mutual.

Keywords: Malaria; Use profile of antimalarials; Volume / price; Mutual health ; Ivory Coast

What are the potential health gains and policy implications of the World Health Organization recommendation on population-wide salt reduction by 2025?

Leopold N. Aminde, M.D. Faculty of Medicine, School of Public Health, The University of Queensland, Australia & Clinical Research Education, Networking & Consultancy (CRENC), Cameroon.
Co-authors: *Linda Cobiac, J. Lennert Veerman*

Background: Premature mortality from cardiovascular disease (CVD) is greatest in the low-income and middle-income countries. To address this growing CVD and non-communicable disease burden, the World Health Organization (WHO) recommended among others a 30% relative reduction in salt consumption as a population preventive strategy to reduce blood pressure and CVD for countries. To date, there is limited evidence from Africa on the impact of this policy strategy.

Aim: To estimate the potential impact on population health if Cameroon achieved this salt reduction recommendation by the year 2025.

Methods: With 2016 as base year, and data from the Global Burden of Disease 2016 study, we use a proportional multi-state lifetable model to estimate changes in burden of CVD in Cameroon over 10 years (from 2016 to 2025) if populations reduce their salt intake. Uncertainty in our estimates was assessed using probabilistic sensitivity analysis.

Results: If this salt reduction strategy is achieved, our modelling predicts that by 2025, there will be 15,500 (95%UI: 14,000 – 17,000) fewer incident cases of ischemic heart disease (7.3% reduction), 5,000 (95%UI: 4,500 – 6,000) fewer new cases of haemorrhagic stroke (9.4% reduction), 6,000 (95%UI: 5,800 – 6,200) fewer incident cases of hypertensive heart disease (16.9% reduction). Mortality will reduce by 3,400 (95%UI: 3,000 – 3,800) for ischemic heart disease (6.4% reduction), 3,100 (95%UI: 2,700 – 3,500) for haemorrhagic stroke (9.5% reduction), and 950 (95% UI: 900 – 1,100) for hypertensive heart disease (15.7% reduction). In addition, 29,000 (95%UI: 27,000 – 32,000) health-adjusted life years (HALYs) would be gained. Probability

of premature mortality from CVD is similarly predicted to decrease while life expectancy would increase for both men and women.

Conclusions: Substantial health gains could be made if populations reduced their salt consumption in line with WHO recommendations. This would translate to reduction in catastrophic health expenditure and reduced healthcare costs. These findings are very useful for health policy makers in Cameroon and Africa as they work towards initiating universal health care programs and contemplate on cost-effective measures for primary prevention of CVD.

Parallel Session 2-5 Economics of Immunization, malaria, TB and HIV-AIDS

Mathematical modeling of drug inventory for sustainable pharmacy management in Uganda

Paul Kizito, Senfuka Christopher**, Maureen N Ssempijja****
**Kyambogo Kampala, *Kabaale University, ***Kyambogo University*

In today's fast-paced and competitive market place, pharmacies need every edge available to them to ensure success in planning and managing inventory of drugs under demand uncertainty. In Uganda, the capacity to sustain cost-effective inventory of drugs in community pharmacies needs special attention. The paper intends to establish an optimal drug inventory model for sustainable pharmaceutical services in Uganda. The objective of this paper is to determine optimal replenishment policies of drugs so that customer requirements are met at least cost. An inventory model is therefore proposed that optimizes replenishment policies of a periodic review inventory system of drugs under stochastic demand; with particular focus on drugs for malaria in Uganda community pharmacies. We explain a finite state markov decision process model where states of a markov chain represent possible states of demand for drugs. The paper elaborates on the total replenishment, holding and shortage inventory cost matrix that is generated; representing the sustainability of performance for the markov decision process problem. The paper examines two critical replenishment policies that are relevant to the drug inventory problem for sustainable pharmacy management: (1) replenishing additional units of drugs for inventory versus (2) not replenishing additional units of drugs for inventory. Using dynamic programming, the optimal drug replenishment policies are determined over a finite period planning horizon. Preliminary results indicate the existence of an optimal state-dependent drug replenishment policy and the associated inventory costs incurred by the pharmacy chosen in the case study. As a strategy for optimizing inventory of drugs for sustainable pharmacy management under demand uncertainty, computational efforts of using markov decision processes show promising results. The stochastic inventory model proposed can improve pharmaceutical services through timely delivery of drugs in order to support sustainable pharmacy management in Uganda.

Dossier d'investissement pour l'accélération du programme de vaccination plus au Bénin (2018-2023)

Bakeu Gonhoko Jean-Macaire

Objectives The main objective of this study is to develop an investment plan to provide advocacy arguments for mobilizing additional funding to accelerate the wider immunization program in Benin.

Specific objectives *The specific objectives revolve around the following points:* Estimate the additional costs and impacts for accelerating the routine EPI; Develop realistic scenarios to accelerate the vaccination program more;

Methods The development of the investment case was facilitated by the use of the EQUIST platform and the OneHealth tool (OHT). Equist is a tool for identifying disadvantaged populations, why they are disadvantaged, bottleneck analysis and what combinations of high-impact, evidence-based interventions and health systems strengthening strategies would produce the best results . While the OHT makes it possible to determine the budget and the impacts in terms of lives saved by antigen and by intervention.

Three scenarios based on composite indicators were adopted. In order to take into account equity, allowing the prioritization of regions, several criteria such as vaccination coverage rate, mortality rate (severity) and number of deceased children (size) were defined and made it possible to select priority regions following 3 poles for modeling.

- The scenario1 is composed of the regions of Alibori, Couffo, Ouémé and Plateau.
- Scenario 2 includes the regions of pole 1 plus the Atlantic, Borgou, Collines and Zou regions.
- Scenario 3 takes into account all regions.

Findings The investment strategy proposed in this document for advocacy in mobilizing additional resources for vaccination more in Benin could save 1838 children by 2023 for all three scenarios. And considering a goal of 90% coverage by 2023 for penta3, the number of unvaccinated children would be reduced from 113,597 unvaccinated children in penta 3 in 2018 to 51,105 unvaccinated children in 2023 at the national level. And the additional costs required to achieve these results are estimated at an average of US $ 3.65 per capita, or CFAF 2005 per capita.

Conclusion The Investment case is an advocacy tool that combines equity with the budget and impact of interventions. It leverages additional resources for strengthening health systems.

Conclusion The Investment case is an advocacy tool that combines equity with the budget and impact of interventions. It leverages additional resources for strengthening health systems.

Impact and cost effectiveness of rotavirus vaccination in 73 Gavi countries

Clint Pecenka, PATH Seattle

Background and aims Immunization has been a cornerstone of cost-effective reductions in child mortality and PHC is an essential tool to continue health progress globally. Previous cost-effectiveness analyses of rotavirus vaccination have found rotavirus vaccination to be highly cost-effective in low- and middle-income countries around the world and especially across Africa. Since the last cost-effectiveness estimates of rotavirus vaccination across Gavi countries, there have been many changes in global trends and new evidence is now available. Rotavirus mortality has decreased from 528,000 to 215,000 deaths worldwide, countries have experienced economic growth, additional countries have adopted rotavirus vaccines, rotavirus vaccine prices have decreased, and new products are entering the market. The purpose of this study is to reevaluate the impact and cost-effectiveness of rotavirus vaccination across Gavi countries, and Africa in particular, in light of these changes and the push toward UHC.

Methods This analysis estimates the costs and benefits of rotavirus vaccination projected across 10 birth cohorts from 2018 to 2027 in 73 Gavi countries using the recently developed PROVAC's UNIVAC model. We track benefits and cost of vaccination for these cohorts over the first five years of life. During the period of analysis, individuals may or may not get rotavirus disease. If they get rotavirus disease, it can be non-severe or severe. Non-severe disease results in recovery with or without outpatient care. Severe disease results in recovery or death with or without outpatient or inpatient care. We also account for potential intussusception cases linked to rotavirus vaccination.

Results The analysis estimates the number of rotavirus gastroenteritis cases, outpatient visits, hospitalizations, and deaths averted by the vaccine. Analysis outputs also include economic benefits expressed in terms of cost of care averted. Total cost of vaccination programs is also calculated. Cost-effectiveness results use the discounted incremental cost-effectiveness ratio (ICER) expressed in US$ per Disability Adjusted Life Years (DALYs) averted from the government and societal perspectives. Results are expressed for all countries as well as per WHO Region.

Conclusions Rotavirus vaccination remains highly cost-effective across Gavi countries though many of the important global trends contribute to higher cost-effectiveness ratios. This finding is particularly relevant for countries, including many in Africa, facing increased budget pressure due to declining international support and a desire to achieve cost-effective PHC.

Impact and cost-effectiveness of RSV maternal immunization in Gavi countries

*Ranju Baral, Clint Pecenka**

Background and aims Childhood immunization has been a cornerstone of cost-effective reductions in child mortality globally. As childhood mortality falls, a larger share of the global disease burden is centered among young infants and women. These trends have heightened interest in new interventions to address this burden, including maternal immunization. Maternal vaccines to protect young infants from respiratory syncytial virus (RSV) are in advanced stages of development and may be available as early as 2023. Gavi, the Vaccine Alliance is also considering RSV vaccines as part of the 2018 Vaccine Investment Strategy. RSV is estimated to result in approximately 120,000 deaths annually, mostly among young infants in low-resource settings. The purpose of this study is to evaluate the impact and cost-effectiveness of RSV maternal immunization across Gavi countries and a focus on Africa.

Methods This analysis estimates the costs and benefits of RSV maternal immunization in 73 Gavi countries using a static population-based cohort model. We examine costs and impacts from 2023 to 2035 in comparison to no intervention, from government perspective. Disease burden inputs as well as cost inputs were primarily derived from recently published comprehensive systematic reviews. Costs are expressed in 2016 US$. Both costs and DALYs are undiscounted.

Results Under baseline assumptions across Gavi countries, RSV maternal immunization averts nearly 15 million cases, 3 million hospitalizations, and 150,000 deaths. At a vaccine cost of $2 per dose, the average annual cost of vaccination program across all countries for the duration of analysis was estimated to be about $211 million. The economic value of care averted was about $10 million. The incremental cost-effectiveness ratio (ICER) per Disability Adjusted Life Years (DALYs) is estimated to be $185. Results are discussed for all countries as well as the African Region.

Conclusions RSV maternal immunization is projected to be an impactful and cost-effective intervention in Gavi countries and the African Region. As the infant vaccine schedule becomes

increasingly crowded and disease burden shifts toward neonates, maternal immunization offers the opportunity to protect young infants from disease and may also enhance maternal health.

Parallel Session 2-6 Economic evaluation of health programmes

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Cross-country comparison of the costs of healthcare services, and the cost drivers, at cross-border locations in Kenya, Rwanda, Uganda and Tanzania

Agnes Gatome, Nairobi Abt Associates

Background: Private sources of expenditure constitute 20 to 49 percent of total health expenditure among East African Community (EAC) partner states (Burundi, Kenya, Rwanda, Tanzania and Uganda). Out-of-pocket expenditures make up between 68-95 percent of private spending, exposing households to catastrophic expenditures and impoverishment. With varying levels of insurance coverage (from 2% in Uganda to 95% in Rwanda), EAC Health Ministers recognized the need to enhance Social Health Protection Systems that reduce financial barriers to healthcare. The aim of this study was to gather objective, cross-country, comparable healthcare cost data to inform the development of sustainable healthcare financing systems for the EAC region.

Methods: The USAID-funded Cross-Border Health Integrated Partnerships Project collected financial and activity data from July 2014-June 2015 at 45 public and private clinics, health centres and hospitals within five kilometers of five cross-border locations in Kenya, Rwanda, Uganda and Tanzania. The excel-based Management Accounting System for Hospitals (MASH) was used to analyze the data from a provider perspective and generate average costs per outpatient visit and per inpatient bed day at 42 health facilities. MASH uses a top-down approach to allocate all facility costs to outpatient and inpatient departments. Outpatient visit and inpatient bed day unit costs are then derived by dividing the total department cost by the number of services provided in the time period.

Results: Results are presented by country, ownership and level (clinic, health centre, hospital) for the cost per outpatient visit and inpatient bed day. Unit costs varied widely between countries. Outpatient visit unit costs were US$1.54-14.19 (Kenya), US$3.09-4.11 (Rwanda), US$ 0.69-11.05 (Uganda), and US$3.38-13.56 (Tanzania). Inpatient bed day unit costs were US$20.37-49.00 (Kenya), US$14.64-17.24 (Rwanda), US$4.97-20.38 (Uganda). Costs were higher at private facilities compared to public facilities, and at hospitals compared to smaller clinics and health centres. Labor was the major cost driver in Kenya and Tanzania while drugs and supplies contributed the most to unit costs in Rwanda and Uganda. The contribution of drugs and supplies to overall costs was greater at hospitals compared to health centres and clinics, reflecting the increased complexity of services offered at higher level facilities. In all countries, workload was 3-5 times higher at public facilities compared to private facilities, with clinician ratios as high as 1:15,000 outpatient visits in public facilities compared to 1:4,000 in private facilities.

Conclusions: Implementing social protection systems in the EAC will require domestic resource mobilization from both public and private sources and well-structured systems to support the healthcare financing functions of collection, pooling, and purchasing. The results of this study

can support purchasing decisions by giving insight into the cost of providing healthcare services, and the cost drivers across countries and different levels of facilities. In addition, the findings can inform the design of provider payment systems that account for differences in costs across countries, ownership and levels and ensure sustainable provider reimbursement. Finally, the results can augment discussions on workload, staffing norms, and technical efficiency of facilities across the EAC region.

Examining the economic impact of Type 2 Diabetes and the risk of catastrophic expenditure among a defined patient population attending a tertiary healthcare facility in Nigeria: Implications for Universal Health Coverage

**Charles Ezenduka, **Chisom C. Nwankwo*
**Enugu University of Nigeria, Enugu Campus, **Nnamdi Azikiwe University Awka, Nigeria*

Background/Objective: Little is known about the economic burden of diabetes and the catastrophic health implications among patients with T2DM in Nigeria. The study evaluated the economic burden of T2DM including complications and co-morbidities and the risk of catastrophic health expenditures in a defined patient population.

Methods: A prevalence-based cost-of-illness study design was adopted to evaluate the direct and indirect costs of managing T2DM patients in a university teaching hospital setting. Data collection was based on non-interventional retrospective analysis of patient level data from medical records of diabetic patients as well as face-to-face interviews using semi-structured questionnaires. Bottom-up costing approach informed the identification and estimation of the total and average direct and indirect costs of treatment. Indirect costs estimate was on the basis of human capital approach. Catastrophic cost was measured from the non-food consumption expenditure of the respondents (income) while socioeconomic status group was measured by number of household items owned by respondents. Data were collected over a period of one year between September 2016 and August 2017.

Results: Up to 359 diabetic outpatients were included in the study. The mean total cost (economic burden) of the disease per patient was N384,948.83 (US$1,099.85) per annum, comprising 86% (US$948.60) direct and 14% (US$ 151.30) indirect costs, at a monthly average of US$91.61 per diabetic outpatient (at the 2017 prices approx. N350 = US$1). Greatest proportion of the cost, 17% was spent on medications, followed by laboratory investigations (13%). The costs/burden increased with co-morbidities, complications, length of disease. Majority of patients (93%) relied on OOP expenditures to finance treatment with only 6% who are federal employee enrollees paid through insurance. Of the OOP patients, 9% paid through sales of properties, while on the whole up to 65% of the patients subjected to the risk of catastrophic health expenditure at 40% threshold, with the poorest quartile mostly affected at over 51%.

Conclusion: Findings suggest that diabetes imposes substantial economic burden on the Nigerian population subjecting a significant proportion of the low income individuals and families to catastrophic health expenditures and financial impoverishments. Projected increasing incidences of diabetes, rising costs of care and absence of financial risk protection portends decreasing access to care with implications to achieving the goals of the UHC. There is need for financial protection mechanism for diabetes patients for enhanced access to care and reduced economic burden

Using Social Return on Investment (SROI) Methodology to Assess Value-for-Money of Public Health Interventions in Africa: An Example of an Evaluative SROI of Emergency Obstetric Care Training in Kenya

Aduragbemi Banke-Thomas [1,2]*

[1]Department of Health Policy, London School of Economics and Political Science, London, WC2A 2AE, UK
[2]Centre for Maternal and Newborn Health, Liverpool School of Tropical Medicine, Liverpool, L3 5QA, UK

Background Globally, there has been increasing interest to demonstrate value-for-money of interventions using various approaches including social return on investment (SROI), which is a form of social cost-benefit analysis. EmOC training has been a key strategy for reducing maternal and newborn morbidity and mortality. Although generally considered effective, there is minimal evidence on the broader social impact and/or value-for-money (VfM).

Aim of the research This study assessed the social impact and VfM of EmOC training in Kenya using the SROI methodology.

Methods Mixed-methods, including interviews and focus group discussions, quantitative stakeholder surveys, programmatic secondary data analysis and literature review were conducted to obtain all relevant data. Findings were incorporated into the impact map and used to estimate the SROI ratio. Sensitivity analyses were done to test assumptions.

Key findings Trained healthcare providers, women who received care from them and their babies were identified as primary beneficiaries. EmOC training led to improved knowledge and skills and improved attitudes to patients. However, increased workload was reported as a negative outcome by some healthcare providers. Women who received care expected and experienced positive outcomes including reduced maternal and newborn morbidity and mortality. After accounting for external influences, the total social impact for 93 five-day EmOC training workshops over a one-year period was valued at I$9.5 million, with women benefitting the most from the intervention (73%). Total financial valuation of inputs was I$745,000 for 2,965 healthcare providers trained. The cost per trained healthcare provider per day was I$50.23 and SROI ratio was 12.74:1. Based on multiple one-way sensitivity analyses, EmOC training guaranteed VfM in all scenarios except when trainers were paid consultancy fees and the least amount of training outcomes occurred.

Main conclusions This study pioneered the application of SROI in maternal and newborn health in Africa. Though there are still methodological improvements required for SROI before its application can be scaled up in settings like Kenya, using SROI provided critical additional insight on VfM of EmOC training. As shown in this study, EmOC training workshops are a worthwhile investment. The implementation approach influences how much VfM is achieved. The use of volunteer facilitators, particularly those who work locally, to deliver EmOC training is a critical driver in increasing social impact and achieving VfM for investments made.

Economic Evaluation of a community delivered project for leprosy case detection in Northern Nigeria

Charles Ezenduka, University of Nigeria, Enugu Campus

Background: High cost of detection in the declining phase of leprosy endemicity and dwindling funding has become a major concern in efforts at containing and eliminating the disease which has continued to spread. Evidenced-based information on the efficiency of strategies in leprosy case detection is needed to convince donors for continued funding support for the programme.

Objectives: This study evaluated the cost-effectiveness of an innovative community delivered legacy project designed to improve leprosy case detection in northern Nigeria, utilizing volunteers from selected communities.

Methods: Data was collected from 18 LGAs of the three states where the project was implemented to compare the costs and outcome of the innovative project with routine health

system method or usual care in leprosy case detection and control. Primary and secondary data were collected from the project and routine practice records and the NTBLCP 2015-2016 annual reports. All costs and effects were measured from both providers' as well as patients' perspectives. Effectiveness of the study was measured as the number of new leprosy cases detected and outcome expressed as cost per case detected, as improvement in leprosy case detection. Cost-effectiveness was calculated as the incremental cost per case detected. All costs were converted to the US Dollar (US$) at the 2018 exchange rate of N350 to $1.00. Univariate sensitivity analysis was carried out to evaluate uncertainties around the ICER

Results: Overall, the project detected a total of 373 new leprosy cases at a total annual cost of N17,268,016 ($49,337,19), averaging N46,295 ($132.27) per new case detected. Key cost drivers include routine meeting expenses which accounted for the highest proportion (28%) of the total expenditure. Social mobilization and training/workshop expenses followed at 17% respectively. Compared to routine practice , the legacy project generated ICER of N-4,917.48 ($-14.05) per additional new case detected, indicating a dominance over the routine care by detecting more cases at even lower cost, as a very efficient alternative method.

Conclusion: Evidence indicates that the legacy project is a very efficient and indeed cost saving strategy in leprosy case detection. It will surely boost leprosy case finding when complemented with routine practice and greater when combined with related community based health care services such as tuberculosis control for more cost savings and greater efficiency.

Parallel Session 2-7 Aid and International health financing

Political Economy of Development Aid for Health in Post-GDP Rebased Nigeria: implications for financing universal health coverage

Félix Obi, Université du Nigéria, Campus d'Enugu

Background: Nigeria transitioned into a low medium income country after rebasing its GDP rebasing in 2014. The economic growth has been at the expense of inclusive growth with about 70% of the population living under the poverty without access to social services including health. Against the backdrop of contracting revenue base due to low oil price, it has become imperative for the country to find ways to derive efficiency and value from existing sources such as development aid for health (DAH), while it explores innovative mechanisms for raising funds domestically to extend universal health coverage to the citizens in the SDGs era.

Methods: Using qualitative research approach, the study explored the political economy of DAH in Nigeria within the context of ongoing health financing reforms. Primary data collection was through in-depth interviews (IDI) of purposefully-selected key health system actors, and complimented by review of published and grey literature including policy and program documents. Data was analyzed using thematic and content analytical frameworks.

Results: Nigeria relies heavily on DAH to fund critical population-based interventions including health systems strengthening initiatives. Aside multilateral and bilateral donors from OECD countries, China and South countries have become key players, in addition to indigenous and international foundations. The main aid instruments include project support and technical assistance which are channeled mainly through grants and concessional loans/credit with little or no budget-support. Donor funds are rarely pooled into a basket fund and rarely use the country's

systems as transparency and accountability are major issues. Poor coordination by the government leads to duplication of efforts and poor alignment with the country's priorities. DAH projects are inequitably distributed with some states left as orphan states. There was no consensus on the efficiency of donor aid but services provided through donor funding were perceived to be of good quality due to use of standard procedures and adequate supervision and quality improvement mechanisms. While DAH was seen to provide some degree of financial risk protection to beneficiaries, there were concerns about its sustainability in Nigeria amidst dwindling donor funding now worsened by economic recession.

Discussion/Conclusions: As Nigeria grapples with aid transition issues, it needs to strengthen existing mechanisms for aid coordination, joint monitoring and accountability for results, while addressing inequities and ensuring value for money. Strengthening public finance management and related systems can potentially increase donor confidence in the country's system making centralized pooling of donor funds a possibility.

The impact of aid on health outcomes in Uganda

Tonny Odokonyero, Robert Marty, Tony Muhumuza, Alex T Ijjo, Godfrey O Moses Economic Policy Research Centre – SPEED for Universal Health Coverage

Health is a key component of human capital that strongly influences labour productivity, economic growth and development. In light of the importance of health, the sector has attracted significant foreign aid however, evidence on the effectiveness of this support is mixed. In Uganda and most Sub-Saharan African countries, evidence on the impact of aid on health outcomes remains anecdotal.

This paper combines household panel data with geographically referenced subnational foreign aid data (geo-coded data) to investigate the contribution of health aid to health outcomes in Uganda. Using a difference-in-differences approach, we find that aid had a strong effect on reducing the productivity burden of disease but was less effective in reducing disease prevalence. Consequently, health aid appears to primarily quicken recovery times rather than prevent disease. In addition, we find that proximity to health aid is highly influential on the health gains to individuals. Apart from the impact of aid, we find that aid tended to not be targeted to localities with the worse socio-economic conditions. Overall, the results highlight the importance of allocating aid close to subnational areas with greater need to enhance aid effectiveness. Channeling aid to the lowest level possible offers an additional advantage of driving the Universal Health Coverage strategy of "close to client" health system.

Foreign aid and the health sector: a case study from the Palestinian national authority

Wafa Mataria, Université Américaine du Caire

This study investigates the role of Foreign Aid (FA) on the health sector (HS) in Palestine. FA is considered a tool for promoting economic and human development. Considerable amounts of FA are directed to Health. The role of FA in development, including in health, has been a subject of debate with inconclusive results on its impact. In the case of Palestine: FA to Palestine increased in the period following the establishment of the Palestinian National Authority to reach USD 920.24 million in 2015. The Palestinian economy was found to be dependent on FA, where more than 60% of FA received was used in direct budget support rather than

development. Although the Palestinian health system benefits from FA coming to Palestine, the role of FA on health is under investigated.

Both a descriptive quantitative and a qualitative research approaches were used to explore, describe and explain the roles, procedures and challenges of FA in the Palestinian health sector. Data was collected using both: desk review of official documents and published data by specialized international organizations, and through semi-structured interviews with a purposive sample of the major stakeholders in the field. Data was analyzed using descriptive quantitative analysis and qualitative content analysis.

However, FA for health in Palestine is found to be facing many challenges; including: high influenced of donors' agendas, lack of communication between different stakeholders; absence of effective coordination structures and inclusive discussion platforms; low accountability of donors towards the recipients; and finally the Israeli occupation, which resulted in an unstable political situation with a continuous crisis situation rendering the development process very difficult. These challenges negatively affect the effectiveness and efficiency of FA for health in Palestine.

The study concluded that the distribution of FA between sectors in Palestine is context dependent. It has been also found that although the HS in Palestine receives around 3% of FA, FA has a positive role on the HS in Palestine, it has contributed to the establishment of the institutional structure and capacities of the HS in Palestine. It also contributed to the provision of health services. The effectiveness of FA in Palestine has been improving. Compliance with the Paris Declaration and its five principles improved. The ability of the Ministry of Health (MoH) personnel to assess the Palestinian health needs and to formulate them into priorities and strategies increased the ownership and alignment of FA-funded projects.

An analysis of Domestic and Donor Financing for Maternal, Neo-natal and Child Health in Sub-Saharan Africa

Jacob Novignon, **Dr Chris Atim, *Dr Eric Arthur: *KNUST / **African Health Economics and Policy Association (AfHEA)*

Background: Achieving improvement in maternal, neo-natal and child health (MNCH) is an important public health objective and key performance indicator of overall progress of a country's health sector. Despite efforts to improve these outcomes in the Sub-Saharan Africa (SSA) region, the rates of maternal and neo-natal deaths remain relatively high in the region, at 547 per 100,000 live births and 28.6 per 1000 live births, respectively, in 2017 (World Bank 2017). Similarly, the region has relatively poor infant and child health outcomes.

Objectives: This study is submitted by AfHEA as a framework paper to the AERC Collaborative Research on Health Financing in Africa. The study sought to analyse domestic and external financing for improving Maternal Neo-natal and Child Health (MNCH) outcomes in SSA. Specific objectives are: (i) analysis of the trends and patterns in MNCH financing in SSA and, given those trends, asks what are the potential gains to be realized from increased funding of these services? (ii) What are the funding gaps that need to be covered for SSA countries to achieve the SDGs by 2030? (iii) Is there potential fiscal space from domestic sources for MNCH financing across SSA?

Results: The trend and pattern analysis of MNCH outcomes in SSA showed wide variation across countries. While few countries achieved the MDG health related targets, the majority of countries failed to achieve the target. Also, health financing trends showed low resource commitments to health in SSA relative to the Abuja declaration target. This result demonstrate the need for extra resource mobilisation and high impact health policy interventions in these

countries if significant progress is to be made towards meeting the health related SDGs targets. Further, we found significant gains from domestic financing, but also modest gains from external financing. Interestingly, private domestic financing showed higher gains. Our study also showed that for the countries analysed in this study to meet the set SDG targets by 2030, there may be the need for progressive incremental cost until 2030. Finally, a combination of different fiscal space options could be harnessed and prioritised by SSA countries to finance MNCH interventions.

Conclusion: The results emphasised the need for accelerated commitment by governments towards improving MNCH outcomes in SSA if significant progress is to be made towards meeting the health related SDGs targets. Key among these commitments is the need to scale up financial resources (especially domestic resources) to the health sector.

Parallel Session 3

Organized session

OS 03 – Strengthening Capacity for Teaching and Learning of Health Policy and Systems Research (HPSR) and Health Economics in Africa: Practical Issues for Educators and Learners

Principal organizer: *Dr. Gina Teddy, Centre for Health Systems and Policy Research, Ghana Institute of Management and Public Administration, P. O. Box AH 50, Achimota, Greenhill College. Accra.*

Co-organizers: This organized session is prepared on behalf Health Systems Global Teaching and Learning Thematic Working Group. It will double as a skills building activity to engage educators in HPSR and Health Economics on practical issues affecting Teaching and Learning in the field broadly. List of speakers include:

- Gina Teddy – Ghana Institute of Management and Public Administration, Centre for Health Systems and Policy Research (CHESPOR), Ghana (Moderator)
- Jacinta Nzinga - Kemri Wellcome Trust, Health Systems Division (Kenya)
- Leanne Brady - University of Cape Town, School of Public Health and Family Medicine, (South Africa)
- Two Facilitator to be confirmed

Securing Primary Health Care for all to achieving Universal Health Coverage in Africa hinges on advancing the health systems for all and strengthening the capacity of educators and learners of HPSR to address practical issues and advancement in the field. This organized session is a participatory skills building activity organized by the Health Systems Global (HSG) Thematic Working Group (TWG) on Teaching and Learning in Health Policy and Systems Research aimed to deliberate and support capacities of African educators in Health Systems and Policy Research (HPSR) and Health Economics.

The aim of the organized session is to provide a platform for educators, researchers and learners to jointly discuss and strengthen their capacity for teaching and learning while addressing practical issues and challenges facing them. This will cover topics such as how to support educators across multiple subjects, fields, languages on the African continent; providing capacity building for leadership development and reflective practice; adopting innovative teaching modes through the use of audio and visual aids for HPSR and Health Economics teaching and learning; and curriculum development for HPSR and Health Economics capacity building and teaching. We propose a world café style discussion on the topics to engage participants to enable explore the various themes and their relevance to public health education in Africa.

Thus, the purpose of the organized session is to provide the platform for key actors in teaching and learning to advance key issues, dilemmas and changes in practice affecting the field to

inform steps towards supporting members of the TWG. As well as how to promote collaborative teaching across subjects, languages, fields and across the continent for health economics and health policy towards strengthening our health sector overall.

Findings from the session will be derived from the deliberations of the organized sessions. Two key findings are expected from this session: 1) that the session will be used to a network of educators in health economics and HPSR with the aim of setting capacity building agendas for the continent and 2) to advocate for improved teaching and learning in HPSR and Health Economics through collaborative process across the continent.

Abstract of each paper (Summary of each Presentation/ Activity)

This skills building session will facilitate learning from practice and lessons that is inclusive for both educators, researchers and learners of HPSR. It will create the space to engage those teaching in HPSR and Health Economics to openly and mutually develop steps towards advancing health system for all by building relationships for a broader learning community of colleagues to develop the field. Examples of themes guiding the discussions include but not limited to:

- Teaching and Learning across multiple fields for HPSR and Health Economics – Dr. Gina Teddy. This theme will explore the prospects and challenges associated with collaborative activity among educators on the continent be it for resources, materials or expertise through exchange, mentorship or any other means deemed appropriate to build capacity on the continent.
- Leadership development and reflective practice in HPSR – Dr. Jacinta Nzinga - Kemri Wellcome Trust, Health Systems Division (Kenya). The focus of this theme is to address fundamental issues around leadership capacity building in HPSR and Health Economics for leaders, practitioners, policymakers and researchers in their countries to enable them anticipate, respond and address challenges in their countries.
- Using audio-visual aids in teaching and learning HPSR – Dr. Leanne Brady - University of Cape Town, School of Public Health and Family Medicine, (South Africa). This theme will be activity packed exploring the trends, significance and multiple resources available towards using audio-visual aids in teaching HPSR and Health Economics and the presentation of research findings in the field.
- How do we support each other for the teaching and learning of HPSR and Health Economics across the continent, subjects, fields and language (Facilitator to be confirmed). This discussion is an exploration towards the various ways that educators of HPSR may support each other through networking, shared resources, community of practices, etc. and the concrete steps towards achieving them at a country, regional and global level.
- Syllabi and course materials development and pedagogy approaches for teaching and learning HPSR – (Facilitator to be confirmed). One of the challenges facing educators the world over is the appropriateness of their curriculum to enable them to develop the right competencies required by their learners. This discussion is a great platform towards exploring the appropriate ways to address these issues.

This is an open discussion and we expect participants to provide opportunities for mutual exchange, experiential learning, individual and group engagement. The session is open to all conference participants interested in teaching and learning HPSR. By the end of the session, we hope to build a network of educators in health economics and HPSR with the aim of setting capacity building agendas for the continent.

Abstract #1

Teaching and Learning across multiple fields for Health Policy and Systems Research (HPSR) and Health Economics (HE)

Presenter *– Dr. Gina Teddy, Centre for Health Systems and Policy Research, Ghana Institute of Management and Public Administration (GIMPA).*

It is increasingly necessary for public health education to be relevant, practical and embedded in the health and related fields. Learners require a multi-disciplinary perspective, skills and competencies to build their carrier in public health and to make them operable in a wide variety of fields and expertise. Educators therefore, must pay greater attention to these needs in training and developing leaders and professionals for the health sector. The responsibility to teach learners and professionals to bring these perspectives, competencies and skills to their work in the health and related fields has implication on how they address complex challenges facing the health system overall. Health Systems and Policy Research (HPSR) and Health Economics (HE) is an emerging and dynamic field under public health characterized by milti-disciplinarity to enable learners better conceptualized knowledge and build capacity to address complex problems. Gaining multidisciplinary perspectives and competencies in HPSR and HE is critical for learners to negotiate and appreciate the nature of the health system while removing the disciplinary filters that learners bring to graduate health education.

The Health Systems Global Teaching and Learning Thematic Working Group is leading the discussion on effective teaching and learning across multiple fields for field building Health Systems and Policy Research specifically and public health overall. Increasingly, professionals and graduates who do not exhibit these competencies are criticized for lacking cohesion and capacity to appreciate the complex solutions and processes of addressing today public health problems. HPSR and HE curriculum must be embedded to enable learners to appreciate the cross cutting nature to address routine challenges. Yet learning through multidisciplinary field is one of the biggest problems facing graduate students in public health and HPSR.

In a series of webinars and workshops by the T&L TWG on the subjects, it became evident that educators acknowledge multi-disciplinarity as a core competence for HPSR and HE education. Educators are using various strategies to support multiple perspectives in public health. Common among these strategies are the use of: case studies, embedded learning and problem-based approach, the use of multi-disciplinary frameworks and concepts, workplace learning and practical experience, as well as applying principles from different fields and subject areas. The challenge however is that, learners find it difficult to shift their perspectives form the narrow science fields to accommodate these multi-disciplinary perspectives. These discussions will bring together educators to deliberate on the best support for learners and continue to build interest in how multi-disciplinarity impact teaching and learning in Africa.

Abstract #2

Using audio-visual aids in teaching and learning Health Policy and Systems Research (HPSR) and Health Economics (HE)

Presenter *- Dr. Leanne Brady - University of Cape Town, School of Public Health and Family Medicine, (South Africa)*

Abstract: The call to make teaching and learning more innovative, scientific and learner-centered for public health education is a primary debate in Health Policy Systems Research (HPSR) and Health Economics (HE). This is to enable address the rapidly changing needs of the health sector and the challenges facing practitioners and researchers in the field. Various methods and tools are being used in the teaching and learning of HPSR and HE, however the role of audio visual aids is undeniably critical. The Health Systems Global Teaching and Learning Thematic Working Group is leading the discussion and advocacy for the use of audio-visual aids, exploring current practices, adapted and their impact on teaching and learning HPSR and related subjects like Health Economics.

Following a similar discussion at the Global Symposium held in Liverpool in July 2018, it became evident that the use of audio-visual aid facilitates learning by creating the ability for learners to better retain knowledge, interact with the teaching and learning materials and transfer knowledge innovatively while making sense of the field. The use of various media techniques such as: videos tapes, documentaries, pictures, photo diaries, power point presentations, films, posters, radios, audio-tapes, etc. are employed as may be appropriate to the subject matter. However, the use of these materials have both merit and demerit, their effective application to HPSR and HE is based on appropriate selection of various aids and their simultaneous use to make them beneficial to the learners. This organized session will further explore the specific case for Africa in terms of effectiveness use of audio-visual aid for HPSR and HE specially and public health education overall.

Abstract #3

Leadership development and reflective practice in Health Systems and Policy Research (HPSR)

Presenter *– Dr. Jacinta Nzinga - Kemri Wellcome Trust, Health Systems Division (Kenya).*

Leadership development is a topical issues in Health Systems and Policy Research (HPSR) and Health Economics (HE) education, research and advocacy. Reflective practice is increasingly a core competence for effective leadership development particularly for Health Systems and Policy Research. Reflection by health managers and leaders are critical for them to deliver and handle complex and multi-cultural workplace development. The health systems in LMICs needs to be resilient in the context of chronic stressors or challenges (resource constraints, constant policy change) and sudden shocks (epidemics, dramatic policy change or political upheaval), as well as to be responsive to the priorities and needs of patients and the broader public. Frontline providers and their immediate managers are key actors in complex health systems, and therefore central to develop a system resilience and responsiveness require leaders with certain core competencies. But how, where and when one develop such reflective practice skills as a health leaders is not universally agreed on despite the general agreement on its relevant to modern leaders.

The Health Systems Global Teaching and Learning Thematic Working Group through this organized session with further the discussions of the use of reflective practice as a core component and competency for public health leadership development and explore strategies for incorporating reflective practice in HPSR and HE education. This discussion will focus on the need for reflective practice, strategies for incorporating reflections in public health leadership education, identify areas and themes for reflections, assessment of such strategies and embedding it to the routine practices of health leaders and practitioners.

Preliminary report from the discussions at the Global Symposium held in Liverpool in July 2018 shows that reflective practice is a soft communication skills, yet provide enough opportunity for analytical thinking and problem solving. Reflecting on routine or chronic problems, new ideas and practices in the health sectors is important to understand health systems complexities. In Africa particularly, the complex and uncertain health situation couple with routine shortages and challenges that makes navigating the health systems difficult require leaders to be responsive and resilient to some of the problems and their ability to understand, appreciated and get to the root of these challenges make reflective practice fundamental to all leaders. The T&L TWG intend to further explore how reflective practice in African impact on leaders' ability to solve problems and improve their routine practices as health leaders and workers.

Abstract #4

How do Educators Support Each Other in Africa for HPSR and HE Education and what pedagogical approach can we use to improve curriculum

Presenter *– Ayat Abugla, Trinity College, Dublin (Ireland)*

Health Policy and Systems Research unlike Health Economics and public health is considered as an emerging field that draws on a body of knowledge from various disciplines. However, in the last decade the field is gaining momentum and popularity for its its contribution towards strengthening the health systems of countries across the globe. Despite these achievement there are some disparity in understanding of the field as there are in education and curriculum guiding the field. The session will also explore ways of engaging educators to support each other in building the field of HPSR and creating shared resources such as curriculum and teaching experiences. The challenge of sharing knowledge, experience and resources to enable support HPSR across the African continent, subjects, fields and language is important to using the field to strengthen country's health systems. This discussion will be based on exploring the various ways that educators of HPSR may support each other through networking, shared resources, community of practices, etc. and the concrete steps towards achieving them at a country, regional and global level.

The Health Systems Global Teaching and Learning Thematic Working Group through this organized session also noted that one of the challenges facing educators the world over is the appropriateness of their curriculum to enable them to develop the right competencies for their learners in public health education. This discussion is a great platform towards exploring the appropriate ways to address the issues associated with syllabi and course materials development and pedagogy approaches for teaching and learning HPSR.

OS 04 – Approaches for achieving Universal Health Care: Policy Perspectives from Africa and Asia

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Organizing Institution*: Health Intervention and Technology Assessment Program (HITAP), Ministry of Public Health, Thailand*
Co-organizers*: PRICELESS South Africa, Kenya Medical Research Institute (KEMRI), and Imperial College London (ICL), Access and Delivery Partnership (ADP), Hitotsubashi University*

Many countries across the world are working towards achieving universal health coverage (UHC) which is among the seventeen Sustainable Development Goals (SDGs). Over the years, there has been an expanding need and demand for improved, equitable, and affordable health care for people across Africa and Asia. For example, Kenya has announced its plan to achieve UHC as part of the government's "Big 4" agenda by 2022; in Ghana, a national health insurance scheme has been implemented with a commitment to achieve UHC by 2030; South Africa has explored several options to implement UHC for its under-insured population; Senegal launched the Strategic Plan for Development of UHC Program in 2013, aiming to achieve UHC by 2022 as well; and in Asia, Thailand implemented its Universal Coverage Scheme (UCS) in 2002 while in 2018, India launched what is considered the largest health insurance scheme in the world.

Transforming and strengthening primary health care (PHC) has been central to the discussion on achieving UHC. However, substantial investments are required for making PHC a reality for populations, bringing issues such as health financing and priority setting of services to the fore. The experiences of addressing these issues vary across countries and continents, yet there are common lessons to be learned from all. For example, in Thailand, the government instituted PHC reforms over two decades before implementing its UHC policy.

The organized session aims to bring together researchers and practitioners from countries in Africa and Asia to share their experiences towards UHC for a policy-oriented discussion. Representatives from Kenya, Ghana, South Africa, Senegal, Vietnam, India, the Philippines, and Thailand will speak to a topic related to the sub-themes of the conference (e.g., health system strengthening and key methodological changes including capacity building in health economics and policy analysis) and will give context of the reform, the challenges faced, and lessons learned as well as the way forward. The format of the session for both parts 1 and 2 will be as follows: a moderator will introduce the topic and panel, after which each speaker will have about 13 minutes to make a presentation and take clarification questions; the rest of the time will be allocated for discussion with the audience.

The topic areas for each speaker are provided below (TBC):

Country	Topic	Speaker (Organization)
Kenya	Role of research organizations in building capacity on health economics	KEMRI
Ghana	Applying Health Technology Assessment (HTA) for decision making: Cost-effectiveness management of hypertension in Ghana	Ministry of Health, Ghana
Thailand	Development of the pharmaceutical benefits package using health technology assessment (HTA) in Thailand	HITAP
India	Reaching the unreachable populations to achieve UHC	TBC

OS 05 – How can health systems be shaped to sustainably address the maternal health needs of the most vulnerable and under-served populations?

What motivates primary health care workers to perform well in resource-limited settings? Insights from realist evaluation of health systems strengthening in Nigeria

Speaker contact details: *Bassey Ebenso, University of Leeds, 10.28 Worsley Building Clarendon Way, Leeds, LS2 9NL, UK.*

List of co-authors: *Reinhard Huss[1]; Benjamin Uzochukwu[2]; Enyi Etiaba[2]; Ana Manzano[1]; Obinna Onwujekwe[2]; Nkoli Ezumah[2]; Joseph Hicks[1]; James Newell[1]; Tim Ensor[1], Tolib Mirzoev[1].*

[1] University of Leeds, UK - [2] University of Nigeria Enugu Campus

Background: In 2012, a UN General Assembly resolution endorsed the need for an adequate, well-trained, skilled and motivated primary health care (PHC) workforce, to accelerate progress towards Universal Health Coverage (UHC). While there is growing recognition that a motivated workforce provides quality healthcare that in turn improves access to and utilization of health services, however, information is limited on key factors that motivate PHC workers to perform well, especially in resource-constrained countries.

Aims and objectives: We present emerging insights on key individual, organizational and systems factors that influence workers' motivation, based on health systems strengthening work in Nigeria. The specific objective is to assess which aspects of a Government of Nigeria's social protection programme implemented from 2012 to 2015 (to improve the lives of vulnerable mothers and infants) impacted on workers' motivation. The programme's health systems strengthening activities included upgrading infrastructure, providing supplies, recruiting and training PHC workers (2,000 midwives and 10,000 community health workers), and providing incentives to pregnant women to promote access to maternity services.

Methodology: From June 2015, we conducted a realist evaluation combining documents review, 63 semi-structured interviews, 12 focus group discussions and secondary analysis of facility data, to assess sustainability of programme effects in Anambra State, south-eastern Nigeria. We used an analytical framework involving theory testing, verification and consolidation to understand how the implementation context shaped workers' motivation.

Key findings: A complex interplay of individual, organisational, system and societal factors during programme implementation, affected staff motivation in Anambra State. Individual-level motivators were PHC workers' love of their vocation and welfare of patients. Organizational motivators included on-the-job training, supportive supervision and increased availability of staff, equipment and supplies at health facilities. Societal motivators included community appreciation of workers' roles. Though withdrawal of programme support from 2016 caused significant material resource and staff shortages at organizational level, yet, individual and societal motivations were sustained. Prominent demotivators were lack of security and staff accommodation at facilities, which increased workers' vulnerability to attacks and reluctance to work at night. Other demotivators were poor workforce policies that prevented replacement of retired workers, and lack of ambulances to refer complicated cases to specialist facilities.

Main conclusions: Lack of material resources and security constrained the motivation of PHC staff to provide essential, round-the-clock maternity services, thereby hindering attainment of UHC. We recommend context-specific interventions, including improving workforce security and feasible changes in policy, to improve staff motivation and ensure quality PHC services.

How secure are primary health care facilities to provide services for the vulnerable population?: Experience of providers in a maternal and Child Health programme

***Speaker contact details**: Enyi Etiaba, College of Medicine, University of Nigeria, Enugu Campus.*
***List of co-authors**: Benjamin Uzochukwu[1]; Bassey Ebenso[2]; Uju Agbawodikeizu[1]; Ana Manzano[2]; Ugochukwu Ogu[1]; Reinhard Huss[2]; Obinna Onwujekwe[1]; Nkoli Ezumah[1]; Joseph Hicks[2]; James Newell[2]; Tim Ensor[2], Tolib Mirzoev[2].*
[1] University of Nigeria Enugu Campus [2] University of Leeds, UK

Background Maternal and Child Health (MCH) is a priority in Nigeria. Although mortality rates declined in the MDG years; Nigeria did not meet targets 4 and 5. Access to services remains one of key challenges. Abundant literature exists on supply and demand side barriers to providing and accessing proven effective interventions. However, little literature exists on how security

within health facilities affects provision and use of services, especially by vulnerable pregnant women from socio-economically disadvantaged backgrounds.

The Nigerian government, addressed this through a programme which aimed to mitigate both demand- and supply-side barriers to MCH services for the underserved population. During 2012-2015, the programme trained and deployed midwives and community health workers (CHWs) in primary healthcare facilities; upgraded infrastructure (including perimeter fencing in some facilities); provided supplies and financial incentives to pregnant women to access and utilize services. A novel group of CHWs; village health workers, were also trained and deployed to mobilise pregnant women and assist them to access services.

Aim of the study was to evaluate the effectiveness of these interventions towards providing equitable access to services to the rural and underserved population.

Methods This on-going study employs a phased mixed-methods Realist Evaluation approach to assess how and under what circumstances programme worked to achieve outcomes in Anambra state, southeast Nigeria. We conducted in-depth interviews with facility managers and health workers. Specific programme theories, showing causal pathways of change, have been continuously validated and refined throughout data collection and analysis**.**

Key Findings The programme had upgraded facilities and with help of the community attempted to keep facilities secure, for example through erecting perimeter fences and deployment of watchmen. However, most health workers felt insecure at night, due to lack of security guards. As a result most health workers who were all female did not feel confident to provide services at night. The sense of lack of security had detrimental implications for achieving programme outcomes, one of which was to increase facility deliveries by skilled birth attendants.

Conclusion Poor security contributed to lack of feeling of safety by this vulnerable population group and this directly influenced provision of round-the clock MCH services in an otherwise well-funded and equipped programme. Given that significant proportion of deliveries fall during night time, ensuring adequate security at night will contribute to round-the-clock MCH care and therefore can help address the needs of most vulnerable populations.

Costs and sustainability of a novel Community Health Workers programme in improving Mother and Child Health in Nigeria

Speaker contact details: *Obinna Onwujekwe, Health Policy Research Group, University of Nigeria Nsukka*
Co-authors: *Tim Ensor[1], Benjamin Uzochukwu[2], Uche Ezenwaka[2], Adaobi Ogbozor[2], Chinyere Okeke[2], Enyi Etiaba[2], Reinhard Huss[1], Bassey Ebenso[1] and Tolib Mirzoev[1]*
[1] University of Leeds, UK [2] University of Nigeria Enugu Campus

Background: A recent health intervention that was undertaken in Nigeria was the Subsidy Reinvestment and Empowerment Program/ Maternal and Child Health (SURE-P/MCH) programme, which had both supply and demand components. The funding for the programme ended in 2015, but there is the need to provide evidence on its performance. Hence, this study provides evidence on the costs and cost-effectiveness of the intervention, which has direct bearing on its sustainability and scaling up of community health worker programmes for MCH interventions.

Methods: The study was undertaken in Anambra state, southeast Nigeria. Cost and outcomes data were collected from three clusters; (1) With the SURE-P MCH intervention; (2) With the SURE-P MCH intervention + CCT and; (3) Without the SURE-P MCH intervention. Costs were for the year 2014. Information was collected from relevant key informants and from the records in health facilities, local government councils, and the state ministry of health. The costs were categorized into: personnel, infrastructural (capital), drugs and consumables, overhead and CCT

costs. Data on the outcomes of the intervention are being collected using a community survey in the three clusters and the results will be available in July 2018.

Key Findings: The highest total annual cost was incurred in the SURE-P +CCT facilities (93,643,613 Naira: US$307,028) and the least cost was incurred by the control facilities (52,717,114 Naira US$172,843). The cluster with just the SURE-P MCH incurred a total annual cost of 79,343,727 Naira (US$260,143). The highest contributors to costs in the SURE-P facilities were from personnel costs and drugs and consumable. The cost on infrastructure was almost uniform across the three sites. The effectiveness of the interventions increased moving from the SURE-P CCT cluster to the SURE-P non-CCT cluster to the control cluster, for ANC and delivery, but not for PNC.

Main Conclusion: There is a wide variation in the annual cost on MCH services across the three clusters. The finding of overall positive incremental cost analyses from the CCT cluster to the non-CCT SURE-P cluster to the control cluster were expectedly because of the higher level of activities in the SURE-P CCT and non-CCT clusters compared to the control cluster. The costs and consequences show that there are efficiency gaps but although the programme can be used to improve access to MCH services, the relatively most costly CCT cluster calls to question the sustainability of the CCT component, especially if run as routine programme.

OS 06 – Strengthening health systems through the application of health financing progress matrices: country experience

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Principal organizer: *Matthew Jowett, WHO Geneva*
Co-organizers:u *Grace Kabaniha, WHO AFRO*
Chair and moderator: *Dr Grace Kabaniha, WHO Regional Office for the African Region*

Session abstract:

Over the past decade a large number of countries in the African region have put significant effort into the design and implementation of health financing reforms, for example through the development of health financing strategies. But when we look closely, how consistent are these strategies with global evidence on what works to improve access to essential health services and financial protection for patients? To what extent are the values and objectives of the global movement for universal health coverage actually translating into health financing policies which are consistent with the evidence? Are countries designing and implementing policies which will lead to better effective coverage, and progress towards UHC? Finally, how can countries assess more systematically whether the policies they are considering, developing, or implementing, will lead to real improvements in access to services and financial protection?

To help countries to answer these questions WHO has developed a series of Health Financing Progress Matrices which provide a framework for such an assessment, which is largely a qualitative exercise. Based on existing knowledge globally, both theoretical and empirical, a set of questions have been developed which countries can use to discuss, reflect, and ultimately assess health financing policy in their country. Following conceptual development and testing in selected countries throughout 2018 and early 2019, the progress matrices are now being used in a number of countries, some of which are profiled in this session.

PAPER 1: An overview of the Health Financing Progress Matrix: a systematic approach to assessing policy developments at the country level

***Presenter**: Matthew Jowett (WHO Headquarters)*

Aim and objectives: This presentation will describe the motivation, and evolution of a series of health financing progress matrices over the past 18 months; building from existing health financing frameworks and a related set of guiding principles, matrices have been developed for the core functions of revenue raising, pooling, purchasing and benefit design; additional matrices have been developed to assess the policy development process, public financial management, and governance issues. Each matrix contains a number of questions which capture features of a health financing system, considered to be important for a health system to move towards UHC. A user-friendly instrument to guide users, prompt questions, and provide rapid heatmap summaries has been developed to house the matrices.

Key findings: Whilst the progress matrices have been developed to shine a light on health financing policy developments and support an assessment of whether these are consistent with the objectives and goals of UHC, they also support broader strategic planning and priority next directions. The robust nature of the matrices, in terms of the explicit connection between a set of guiding principles and the questions or criteria used to guide both discussion and an assessment of existing policies, offers something additional to existing assessment tools. The progress matrices aim to be comprehensive in scope, rather than depth, capturing the essence of ongoing reforms and judging their consistency with UHC; in this sense they complement other more in-depth assessments.

PAPER 2: Strengthening health financing in Tanzania: priority actions identified by the Progress Matrices

***Presenter**: Ms. Janet Kibambo, Senior Economist, Ministry of Health, Tanzania*

Aim and objectives: According to the current arrangements, all citizens of Tanzania are automatically entitled to access services in government health facilities. In practice, however, patients incur high out-of-pocket payments due to widely present user fees, especially for curative services and medicines. Several insurance schemes exist, organized by employment status and type, including a mandatory scheme for salaried civil servants (and their dependents) which provides the most generous coverage but reaches only 6% of the total population. Community health funds (CHF) cover less than 25% of the total population and offer a very limited package of services, providing little protection from impoverishing and catastrophic payments. To address these issues, over the past five years a comprehensive and ambitious health financing strategy has been developed which would result in a single national pool with unified provider payment methods and a minimum benefit package accessible to all Tanzanians regardless of their income or employment status. Given its ambitious nature, the strategy is yet to be adopted and implemented.

In the meantime, however, many important incremental policy changes have been introduced with the intention of providing a less fragmented and more equitable health financing system. These changes are difficult to capture through standard evaluation approaches and measures focusing on changes in health outcomes. In this context, the progress matrices were applied to assess whether these incremental changes in provider payment methods, health information systems, and public financial management were consistent with UHC. They also form a baseline

for continued monitoring of health financing policy reforms and provide direction for further policy engagement and support.

Key findings: The application of the matrices highlighted quality of care as a key challenge in the country. Among the three UHC goals it is the one in which least progress has been seen. Coverage (utilization relative to need) is also an important challenge. Among the intermediate objectives, equity in finance is the key challenge, resulting from existing rules related to intergovernmental fiscal transfers and fragmentation in pooling and purchasing. While some progress has been made with direct health facility financing, recognition of providers as spending units in the Chart of Accounts, and introduction of capitated payments for at least a portion of public funds significant challenges remain as identified through these matrices. It will be important to continue using these to monitor progress towards UHC in Tanzania.

PAPER 3: Strengthening health financing in Uganda: priority actions identified by Progress Matrices

***Presenter**: Brendan Kwesiga, WHO Uganda*

Aims and objectives: Uganda was a pioneer in its attempt to address financial barriers to health care through the abolition of user fees and declaration of free access to health services at public health centres and hospitals in 2001. Overall, however, financial protection did not improve, with out-of-pocket payments remaining high and a persistent challenge across the health system. Since 2004, Uganda has made a concerted effort to design and implement (to varying degrees) health financing policies to improve financial protection and service quality, and also to address problems of inefficiency in the health system. The development of a health financing strategy has focused on introducing a mandatory health insurance scheme, and also performance-based financing which has now been scaled up nationwide.

Key findings: the application of the health financing progress matrices in Uganda highlighted several issues in the overall design of the health financing system in Uganda, despite numerous reform attempts. Revenue mobilization is still dominated by high out-of-pocket spending and external financing; limited progress has been made in addressing the challenges of fragmentation in the way funds for the health system are pooled, and the inefficiencies in spending that result. While there has been remarkable progress in the implementation of public financial management reforms, resulting in a positive impact i.e. greater budget execution, there remain challenges in ensuring financial accountability and value for money in the use of resources. Uganda's National Minimum Health Care Package (UNMHCP) is very extensive with few exclusions, and the process of prioritization is not explicit in terms of the benefits and population entitlement funded. Due to limited public resources this results in implicit rationing, with the poor and vulnerable unable to access quality health care. Passive purchasing arrangements continue to predominate and undermined the country's efforts to improve value for money. However, there has been a systematic attempt to introduce performance-based financing over the last 15 years. As a way forward, the country has proposed to accelerate efforts in reduction of the out of pocket payments, fragmentation and scaling up of performance-based payment as a purchasing mechanism for the country.

OS 07 – Strategic purchasing for universal health coverage: the role of aligned mixed provider payment systems

Presentation 1: A Guide and key questions to assess a Mixed Provider Payment System (MPPS)

(by Inke Mathauer and Fahdi Dkhimi, WHO Department of Health Systems Governance and Financing

Aim and objectives The purpose of the analysis of MPPS is to inform and improve the national policy dialogue on purchasing. The results of such an analysis serve to make the case for and draw attention to the need of aligning payment methods within and across purchasers as an important step towards strategic purchasing.

Approach The Guide adopts an explicit systemic perspective and focuses on the provider payment mix: it is not about one instrument or one payment method – what matters is how all these individual payment methods come together and whether they generate a coherent set of incentives at the level of providers that works towards the UHC goals. This system perspective puts strong emphasis on the provider perspective and combines it with a purchaser perspective so as to look at the combined effects on the overall UHC objectives.

Content of the guide The first part of the Guide explains what a MPPS is, why this matters for UHC, and how this may result in undesirable provider behaviors such as cream skimming or resource shifting. Subsequently, it looks at how such behaviors may affect the UHC objectives, i.e. efficiency, equity, financial protection and quality. It presents the overall methodological approach of the assessment and provides indications on how to undertake such an assessment.

Part 2 of the Guide contains a detailed set of guiding questions to direct the assessment of a country's MPPS with regards to the five key steps outlined below:

a) Panorama of the Mix Provider Payment System: mapping exercise including relevant information on the overall context, the various purchasers andproviders, as well as the multiple payment methods in use;
b) Assessment of the incentives created by the mixed provider payment system in combination with the level of provider autonomy and managerial flexibility, how these incentives potentially influence the behaviour of each provider type and how they affect UHC objectives;
c) Assessment of the other effects of the mixed payment system across the whole health system;
d) Assessment of the effects of governance arrangements on the functioning of the MPPS;
e) Development of policy options in order to improve the overall coherence of the MPPS and its alignment on the UHC goals.

Presentation: Case study from Burkina Faso

Introduction: Despite scarce resources, the government of Burkina Faso invests a significant share of its budget in health in order to finance ambitious policies e.g. the free-health care policy for mothers and children under 5. However, severe resource constraints force the government to move towards enhanced strategic purchasing, in order to yield the maximum return on its investment in health and to secure steady progress towards UHC.

Objectives: The government opted to initiate the dialogue around Strategic Purchasing through a set of studies. One focus of interest was the current mixed provider payment system, which was assessed in two steps:

- A mapping exercise that described the current mixed provider payment system, i.e. the multiple payment methods used by the various purchasers in the Burkinabé health system;
- An analytical exercise that explored the causal chain between payment methods, the generated financial incentives, the behavioral responses of the PHC providers – public and private – and the induced consequences on the health system's objectives – i.e. equity, efficiency and quality.

Methodology: Building on the WHO guidance document, the study collated findings from four main data collection methods: a document review, a set of interviews with key stakeholders at national level, an analysis of data extracted from the National Health Information System and previous studies ; two case studies which allowed to zoom in on the MPPS and its effects in two districts.

Results: The study shed light on a highly complex mix of payment methods in place in Burkina Faso.

It made surfaced a strong disconnect between the intended incentives and those created in reality. Key factors that explained such an implementation gap are:

- A set of enablers for /preconditions to positive behavioral response which were not met at the time of the study – e.g. provider's lack of autonomy, but also weak provider's procurement;
- A set of payment features which are – according to the actors – determinant in influencing the behavioral response: predictability and regularity of payment. The rather erratic implementation process of payment reforms often killed the intended incentives in the egg;
- A lack of governance structures and modalities for the MPPS, which led to ill-coordinated payment methods, sending rather contradictory signals to providers.

Conclusion: Governance issues emerged as determinant in order to harness the potential of the current payment methods in place. They should be tackled in the first place, before introducing any "new" payment methods.

Presentation 3: Country case study from Egypt

by Ahmed Khalifa (WHO Egypt), Nevine El Nahass (MOH Egypt) and Mai Farid (MOF, Egypt)

Introduction and background: The promulgation of the new Universal Health Insurance UHI Law stimulates major progress towards achieving Universal Health Coverage UHC. By the full implementation, it is envisaged that all Egyptians will be covered with quality health services while ensuring adequate level of financial protection. This country study aimed to inform the implementation process of the UHI by anticipating the strengths and possible challenges as well as developing options to support the establishment of an aligned mixed provider payment system.

Methods: A mixed methods approach was applied, including document review, in particular of legal provisions relating to the previous health financing system and the new architecture, as well as interviews and discussions with key stakeholders.

Results: Even though the Law and the Bylaw do not specify the payment methods for UHI covered curative health services, there seems to be an implicit understanding of using case payment for inpatient care combined with fee for services, and capitation payment for the primary level.

The curative health services are covered by the UHI and will be paid through output-based payment methods (fee for service payment or preferably case payment), whilst preventive and promotive health services will be funded (and paid) through input oriented, line item budgets from the Ministry of Health and Population. In view of the incentives set by these payment methods, health facilities (and staff), both public and private, may very likely find the former more attractive There is a hence risk that this leads to undesirable provider behavior, namely resource shifting to the curative care provision (staff time, attention, medical supplies, etc.), leading to resources shortages (staff time hence longer waiting time, lack of supplies etc.) for preventive care.

Conclusions: The assessment points to the importance of aligning the funding streams for preventive & promotive care (line-item budgeting) and curative care (UHI payment methods) in order to avoid distortions in provider behaviour. If moving away from a budgeting approach based on line items for preventive and promotive care is not feasible within short time, an alternative is to add a pay for performance component to give incentives to health workers to put more emphasis on preventive & promotive health services. Introducing financial incentives for care coordination may be an additional option.

Presentation 3: Country case study from Malawi

Background: Malawi has made some progress towards universal access to effective and quality health services, though major challenges remain. Improving the purchasing function is crucial in order to effectively link resource allocations to actual population health needs and improve both allocative but also technical efficiency of the health system. This is one of the core objectives of the Health Sector Strategic Plan 2 covering the period 2017-2022. Following this decision, a review of the Mixed Provider Payment System has been identified as one of the most relevant one entry points to take the dialogue on purchasing to the next level.

Methodology: The study applied the WHO guidance for Mixed Provider Payment assessment.

Undertaking the analysis systematically and comprehensively requires the issues to be explored by a mixed method approach that is initially of qualitative nature, but should be combined with the analysis of quantitative data, where possible. The proposed methodology consists of the following activities: document review, secondary data analysis (household surveys and DHIS2), and qualitative primary data collected through interviews with key stakeholders (both at national and district levels, providers from the public and private sector, and from various levels of care (primary, secondary, tertiary), as well as users.

Results In Malawi, such review reveals two key findings:

- First, in the public sector, most financial flows received by providers of all levels of the healthcare pyramid are mostly input-based, channelled through rigid line-item budget lines. Budget allocations are typically determined by Treasury based on historical patterns. Primary and secondary care is largely purchased by district councils based on input-based line items. Performance-based Financing is being implemented as a remedy against the negative incentives created by these rigid payment methods, with mixed results so far;
- Second, in the private sector (mostly non-for-profit), services are mostly paid on inputs for salaries (line item budget allocated by the MoH) and on outputs for the consumables, quasi systematically through cost sharing – i.e. private payments from patients.

Beyond the detailed description of the current situation, the study makes also surface important issues of misalignments between the different incentives, the existence of perverse incentives across the health system and a lack of any coordination mechanism, a precondition to any attempt to optimize the Mixed Provider Payment Mix.

Conclusions: Several policy recommendations have been developed in order to move towards more harmonized Provider Payment System.

OS 08 – Is a per capita payment system a viable strategic purchasing option for assuring universal access to Primary Health Care in Ghana: What have we learned over time and what is the way forward

*Irene Agyepong, ** Timothy Ensor: Ghana Health Service, ** Leeds Institute of Health Sciences

The aim of this session is to presents experiences and lessons from the design and implementation as well as aspects of the evaluation of a pilot per capita payment system for primary care under the Ghana NHIS between 2010 and 2016. This is done to explore lessons for Ghana and other low and middle income countries (LMIC) in sub-Saharan Africa, struggling with strategic payment systems design and implementation to support UHC in the face of limited resources. Three starting presentation provide information on context, and processes from the perspective of the Provider Payment Mechanism Technical steering committee that designed and supported the early implementation of the pilot; as well as exploratory and explanatory research into aspects of the process and intermediate outcomes /effects. The three presentations are followed by an interactive interview and inputs from panel representing multiple stakeholder perspectives on the how and why of the processes and outcomes and lessons and suggestions for the way forward. The panel discussion also explores whether per capita payment systems can be a viable option for assuring universal access to primary care. The session structure is as summarized below.

(1) Introductory comments /remarks by the session chair
(2) Three initial presentations of 10 minutes each (abstracts attached)
(3) Interactive interview with presenters and a multi-stakeholder panel on how and why of the processes and outcomes and lessons from different stakeholder perspectives, and whether a per capita payment systems can be a viable option for assuring universal access to primary care under the NHIS. Facilitated by Ms. Vanessa Offiong, a West African journalist with specialized training in health reporting 30 minutes
(4) Contributions, questions, discussion and interaction with the audience (25 minutes).
(5) Closing summary /conclusions and comments by Session Chair (5 minutes)

Abstracts 1: Context and Process of the design and Implementation of a Capitation Pilot in Ashanti Region, Ghana from the perspective of the PPM-TSC: An insider view.

Irene A. Agyepong & PPM TSC

The Ghana NHIS started implementation in 2004, with provider payment by itemized fee for service. In response to cost escalation, variable and inequitable fee schedules; the Ghana Diagnostic Related Groupings (G-DRG) payment was introduced for services in 2008. Medicines continued to be paid for by itemized fee for medicine, but a medicine list and fixed prices periodically negotiated were introduced. In response to continued rising costs, cumbersome claims processing procedures and delays in provider payment; Ghana set out to develop policies and programs, and pilot a capitation payment system for primary care in 2010. The Ashanti region, with 19 % of Ghana's population, was selected for the pilot. A package of outpatient services including primary maternity care, basic laboratory tests and medicines was proposed by the technical policy actors in the Provider Payment Mechanism Technical Steering Committee (PPM-TSC). In response to stakeholder concerns about inadequate knowledge and possible negative side effects medicines were excluded from the package pending better evidence availability. Maternity services were retained despite some contestation, because the data about administrative feasibility seemed reasonably clear to the PPM-TSC.

Abstract 2: The rise and fall of maternity services and medicines as components in the capitation basket:

Dr. Augustina Koduah

This presentation explores firstly, how medicines part of the basket of services in a primary care per capita national health insurance scheme provider payment system dropped off the agenda prior to a pilot implementation in the Ashanti region. Secondly, how and why less than three months into the implementation of a pilot prior to national scale up; primary care maternal services that were part of the basket of services in a primary care per capita national health insurance scheme provider payment system dropped off the agenda. The study methodology was a case study design with in-depth interviews, observations and document review of media contents, reports and meetings records as data collection methods. Data analysis drew on concepts of policy resistance, power, theory of access and arenas of conflict. During the agenda setting and policy formulation stages; predominantly technical policy actors within the bureaucratic arena used their expertise and authority for consensus building to get medicines and antenatal, normal delivery and postnatal services included in the primary care per capita payment system. Before and during policy implementation, policy makers were faced with unanticipated resistance. Service providers, especially the private self-financing used their professional knowledge and skills, access to political and social power and street level bureaucrat power to contest and resist various aspects of the policy and its implementation arrangements – including the inclusion of medicines and primary care maternal health services. Arenas of conflict moved from the bureaucratic to the public as opposing actors presented multiple interpretations of the policy intent and purpose and gained the attention of politicians and the public. The context of intense public arena conflicts and controversy in an election year added to the high level political anxiety generated by the contestation. The National Health Insurance Authority in consultation with the Minister of Health removed the medicines from the capitation package before policy implementation. During the implementation, the President and Minister of Health responded to the contestation and removed antenatal, normal delivery and postnatal care from the per capita package. The tensions and complicated relationships between technical considerations and politics and bureaucratic versus public arenas of conflict are important influences that can cause items to rise and fall on policy agendas.

Abstract 3: Effect of a per capita payment system on utilization and claims expenditure under the NHIS

Francis-Xavier Andoh-Adjei, Bronke Boudewijns, Eric Nsiah-Boateng, Felix Ankomah Asante, Koos van der Velden, Ernst Spaan

Introduction: Ghana introduced capitation payment under National Health Insurance Scheme (NHIS) in 2012 with a key objective of controlling utilization and cost. This study sought to analyse utilization and claims expenditure data before and after introduction of capitation payment policy to understand whether the intended objective was achieved.

Methods: The study was cross-sectional, using a non-equivalent pre-test and post-test control group design. We did trend analysis, comparing utilization and claims expenditure data from three administrative regions of Ghana over a 5-year period, 2010-2014. We performed multivariate analysis to determine differences in utilization and claims expenditure between intervention and control regions, and a difference-in-differences analysis to determine the effect of capitation payment on utilization and claims expenditure in the intervention region.

Results: Growth in outpatient utilization and claims expenditure increased in the pre capitation period in all three regions but slowed in post capitation period in the intervention region. Linear regression analysis showed that there were significant differences in outpatient utilization ($p=0.0029$) and claims expenditure ($p=0.0003$) between the intervention and the control regions before implementation of the capitation payment. However, only claims expenditure showed significant difference ($p=0.0361$) between the intervention and control regions after the introduction of capitation payment. A difference-in-differences analysis, however, showed that capitation payment had a significant negative effect on utilization only, in the Ashanti region ($p<0.007$).Factors including availability of district hospitals and clinics were significant predictors of outpatient health care utilization.

Conclusion: Outpatient utilization and related claims expenditure increased in both pre and post capitation periods, but the increase in post capitation period was at slower rate, suggesting that implementation of capitation payment yielded some positive results. Health policy makers in Ghana may, therefore, want to consider capitation a key provider payment method for primary outpatient care in order to control cost in health care delivery.

(OS 09) Parallel Session 3 – The influence of Cultural Practices in the spread of Diseases: the case of far North of Cameroon

Dr Tolib Mirzoev, United Kingdom University of Leeds

This is an ethnographic study which reveals the fact that the health and healthcare of a given community in time and space mirrors the world view and values of that culture. Thus, the way people relate to nature, other people, time, persons, charity, community, and so forth has a lot to do with the human mechanism. Consequently sickness behavior determines who is susceptible to illness and even who agree to become a patient-since only about one quarter of the ill persons effectively see a medical doctor. It is therefore through cultural standards that

one is a patient and what it takes to be a patient in the hospital. Thus culture is general but specific. We would use both qualitative and quantitative methods to put the analysis of this write-up. Meanwhile through participatory observations, interviews, research sampling, focus groups, questionnaires, life stories and ethnology to collect our data as well as maintain objectivity and originality of this study. Meanwhile, the main objective is to understand how culture influence people's health and healthcare behaviours. Findings show that even religious thoughts on death vary within cultures, and particularly related to hospital-based treatment. Language and cultural interpreters can be essential since they are more available than realized, though there are pitfalls in their use. In effect, one must recognize that personality may overshadow the cultural and an excellent considerate affiliation can be balance for many cultural lapses. To that effect, medication and diet necessitate meticulous considerations. Hence, the view of a physical pain and psychosomatic suffering varies from culture to culture and influence the mind-set and success of care-givers than patients. Although our culture is our identity, it would be knowledgeable to guide members of the community about the different health systems and the need to understand that some cases of healthcare need a blend.

(OS 10) Parallel Session 3 – How agent-based modelling can help healthcare policy and planning

Agent-based modelling for health economic evaluations and healthcare policy decisions

Dr Itamar Megiddo, Chancellor's Fellow, Lecturer - University of Strathclyde

In this talk, we will introduce agent-based models (ABMs) and their use in economic evaluation of healthcare interventions. ABMs are often used in theoretical approaches with explanatory goals in mind. However, the flexibility of ABMs along with their ability to integrate diverse data sources also lends to a data-driven approach that can be used to model healthcare with predictive goals, to inform policy and decision making. That is the realm of health-economics, which has been primarily concerned with measuring the effectiveness, value, and efficiency of healthcare systems, services, and interventions. However, increasing demand for evidence-based decision making globally is driving a need for innovation in the field. For example, most trial data on the efficacy of interventions comes from high income countries, and we need to contextualize evaluations to consider local populations and healthcare systems. Furthermore, we have new goals and criteria in mind: The United Nation's Sustainable Development Goals have highlighted the importance of measuring the distribution of health in the population and the fairness of interventions. Working with ABMs provides modelling flexibility that can help in these areas.

Our goal is to understand whether and how ABMs can contribute to healthcare evaluations and planning in sub-Saharan Africa and globally. We will use IndiaSim—a data-driven ABM of the Indian population and its utilization of the healthcare system—and its application in economic evaluations as an example. IndiaSim has been used to publish evaluations of interventions such as public financing of epilepsy treatment, developing water and sanitation infrastructure to reduce the burden of diarrheal disease, and expanding India's Universal Immunization Programme. We will reflect on the challenges posed by working with data-driven ABMs; these challenges are particularly acute in low- and middle-income countries, where data is often limited. We will also suggest useful resources for beginning to work with ABMs.

Robust Analytics for Malaria Policy: What is the Role for Individual-Based Models?

Prof David L Smith, Institute for Health Metrics and Evaluation (IHME) - University of Washington

Mathematical models have played a role in malaria research, but there is a renewed demand for quantitative advice that has put greater demands on their use in making malaria policy. Some aspects of malaria can and must be dealt with using simple models, but there is also a critical role for individual based models, which are the most efficient way of dealing with systems like malaria that are heterogeneous and complex. Malaria transmission involves complex interactions between hosts, vectors, pathogens, and the interventions put in place to control malaria. A common theme running through all of malaria epidemiology and control is the role of heterogeneity. The intensity of exposure and transmission is heterogeneous because of the underlying mosquito populations. Mosquito habitats are spatially heterogeneous, and weather and mosquito ecology establish conditions to support pathogen transmission over both time (*e.g.* seasonal or ephemeral) and space (*e.g.* focality). Immunity to malaria is heterogeneous in populations, depending on age and exposure; immunity to malaria has a poor memory, and it develops differently in people depending on the intensity and patterns of exposure. There are multiple modes of vector control, and there are multiple ways of using anti-malarial drugs to cure malaria and reduce transmission. Malaria connectivity is also an important feature of these systems as malaria parasites move around in infected mosquitoes and humans. The policy questions driving malaria modeling are how to stratify geographical areas for control, which involves 1) subdivision into areas; 2) choosing combinations of interventions that are tailored to the specific conditions and programmatic goals; and 3) coordinating malaria across areas. Here, we discuss the use of individual based models to design interventions for forest malaria in the Greater Mekong System, the role of individual based models for the design of randomized control trials for mosquito-borne pathogens, and the role of human behavior in malaria elimination.

Health care priority setting in sub-Saharan Africa: what does agent-based models have to offer?

Dr Justice Novignon, Senior Lecturer, School of Public Health - University of Ghana

Recently, there has been a move towards promoting and, in many cases institutionalizing priority setting mechanisms within the health sector of many countries in sub-Saharan Africa. That urge stems from the increasing phenomenon of donor transition from health sector aid, occasioned by the economic growth in many countries, often moving them into higher income brackets.

With the need for priority setting comes the need to identify different methodological approaches and what they have to offer to contextualize SSA's approach to priority setting.

This presentation will build on the previous two presentations and seek to discuss how ABMs could be useful in health care priority setting on the continent. We will also seek to identify and discuss what challenges could arise in using ABMs, and we will engage the audience in discussing how to surmount such challenges.

Parallel Session 4 – Organized session

OS 11 – Sound decision making – a development partnership for UHC

Tommy Wilkinson, Health Eocnomics Unit, School of Public Health and Family Medicine, University of Cape Town, Observatory, South Africa - International Decision Support Initiative

Many countries on the African continent are progressing towards Universal Health Coverage (UHC), a key driver for the achievem ent of sustainable development goals for good health and well-being, reducing inequality and promoting economic growth.

The UHC journey involves frequent and continuous health policy decision-making at all levels of the health system by multiple actors and stakeholders. Decisions and processes about funding and access to a health benefits and services (the health benefits package, HBP) within available fiscal space are critical to the sustainability, political support and trust in the UHC system.

The explicit determination of a HBP can provide clarity on eligibility and promote access and expectations of a health service. It can facilitate a reduction of out-of-pocket expenditure and protection from health related impoverishment, improved programme budgeting, empowerment of patients and public and a platform for quality improvement. However, determining what interventions and services are included in the HBP requires a coherent and evidence informed strategy, that acknowledges budget availability and accommodates consideration of social values and wider health system objectives.

The role of development partners in assisting countries develop systems and processes for HBP development and sound decision making involves iterative change, building on successes and learning from failures. It requires integrated approaches and proactive coordination with country governments and between partners to address persistent challenges to HBP design for UHC including available transitions from funding and fiscal space, vertical program integration and strengthening primary health care benefits access and delivery.

This organised session will highlight the work of development partners in progressing UHC, HBP design, and evidence for decision making, and will elicit recommendations to address challenges and build on successes through active participation and participant discussion. Speakers for the session include the International Decision Support Initiative (iDSI – Kalipso Chalkidou), the Bill and Melinda Gates Foundation (Hong Wang), the Clinton Health Access Initiative (CHAI, Raph Hurley), the World Bank (TBC) and AfHEA leadership [request AfHEA exec to nominate discussant].

The session organisers are also very open to suggestions for further speakers/representation of institutions and request consideration for this organised session to be presented in plenary.

Parallel Session 4 - Oral presentations

Parallel Session 4-1 Health financing assessments

Do countries that spend relatively more on PHC compared to higher level care have better health outcomes than those that spend relatively more on higher level care compared to PHC?

Chris Atim, Zlatko Nikoloski**, Daniel Malik Achala**
**African Health Economics and Policy Association- AfHEA, Accra*
*** London School of Economics*

Background: Primary health care (PHC) has been touted as a critical cornerstone for achieving universal health coverage (UHC). Indeed, the just ended Astana Conference on PHC, on the 40th Anniversary of the Alma Ata Declaration, committed all participant countries to seek PHC for all as the basis for making progress towards UHC.

To demonstrate their commitment to PHC as a priority health policy, countries are frequently asked to do all they can to shift health spending from emphasis on secondary and tertiary levels towards the PHC level of the health system. Yet the empirical evidence that links a focus on PHC related expenditures to better health outcomes is scarce.

This study seeks to answer the question of whether countries that spend relatively more on PHC compared to higher level care have better health outcomes than those that spend more on higher level care. Countries from around the world including sub-Saharan Africa were selected based on data availability. Our approach is the multivariate panel data regression.

Objectives:

1. To find the effects of PHC related expenditures and higher level care expenditures on health outcomes
2. To find out whether countries that spend relatively more on PHC compared to higher level care have better health outcomes than countries that spend more on higher level care.
3. To assess the impact of other social determinants of health

Expected Results: Our working hypothesis is that a trend analysis of health outcomes and expenditures on the different levels of care would reveal that countries that spend more on PHC will have better outcomes than those that spend more on higher level care. The reason for this hypothesis is twofold. First, unit cost of PHC services is usually lower compared to higher level care and prior global evidence (e.g. global burden of disease studies) have shown conclusively that many PHC type services such as childhood immunizations, maternal care services, and community integrated management of childhood illnesses (C-IMCI) cost very little in relation to their benefits. Second, PHC focuses on prevention, gate keeping, early detection and treatment which can greatly reduce cost compared to higher level care. We also expect that a regression analysis will lend credence to the trend analysis and reveal results that indicate that PHC related expenditures exert significant influence on health outcomes much better than higher level care expenditures. Finally, we expect other social determinants of health (SDH) to significantly affect health outcomes.

Options for long term sustainable financing of HIV and AIDS responses in Uganda: results of a stakeholder survey

Charles Birungi, Hoima University College London

Introduction: The fiscal sustainability of HIV/AIDS responses in Uganda is increasingly uncertain. On one hand, overall costs of HIV/AIDS are rising, due to a commitment to achieve universal access and the changing need for services by people living with HIV. On the other hand, there is limited availability of domestic public financial resources, coupled with flat or declining levels of donor support (including funding transitions projected on the horizons in the next 6 – 10 years). Against this backdrop, a discussion about options to fund the national AIDS response in the future becomes very pertinent. This study elicits preferences among a group of key stakeholders (donors, people living with HIV, service providers, government, academia and HIV-related industry) on the issue of fiscal sustainability of HIV/AIDS responses and the future funding of HIV services, with a view to understanding the different degrees of acceptability between policy interventions and future funding options as well as their feasibility.

Methods: We invited 266 individuals to participate in an online survey collecting preferences on a variety of revenue-generating mechanisms and cost/demand reducing policies.

Results: We received 205 responses to our survey from all stakeholder groups. Across all groups, the highest preference was for policies to finance HIV services, and indeed universal health coverage (UHC), through public finances. There was a broad consensus not to reallocate resources from social security/education. Between stakeholders, there were marked differences of opinion between industry/advisory and a range of other groups, with industry being generally more in favour of market-based interventions and an increased role for the private sector in HIV financing/delivery. Conversely, stakeholders from academia, government, and civil society were relatively more in favour of more restrictive purchasing of new and expensive technologies, and (to varying extent) of higher income/corporate taxes. Taxes on sugar sweetened beverages, ultra-processed foods, tobacco and alcohol were by far considered the most politically feasible option.

Conclusions: According to this study, policy options that are broadly acceptable across stakeholder groups with different inherent interests exist but are limited to public finance (drawn from ordinary tax revenues), and excise taxes on harmful products. Representatives from the private sector tend to view solutions rooted in the private sector as both effective and politically feasible options, while stakeholders from academia and the public sector seem to place more emphasis on solutions that do not disproportionately impact certain population groups.

Institutionalization of National Health Accounts: Experience of Mauritius in shaping and implementing policies and strategies

Yogendr'nath Ramful ; Ministère de la Santé et de la Qualité de Vie

Institutionalization of National Health Accounts (NHA) in Mauritius is well underway and faring well since 2014. NHA in Mauritius is based on the integrative approach and the System of Health Accounts (SHA) 2011. The Health Accounts Production Tool facilitates the NHA process.

The latest and third round of NHA (NHA 2017) reports Total Health Expenditure (THE) of Rs 25.3 billion on health in 2016. General Government Health Expenditure (GGHE) amounted to Rs 11.3 billion. Private Health Expenditure was estimated at Rs 14.0 billion, out of which Out of Pocket (OOP) spending on health was Rs 11.9 billion. NHA 2017 confirms that, despite provision of free

quality services in the public sector, households are spending much more in the private sector. OOP spending on health which was Rs 10.8 billion in 2014 increased by 10.5% in 2016.

NHA 2017 also tracks expenditure on diseases. 66.5 % of Total Health Expenditure, representing some Rs 16.5 billion, was spent on non-communicable diseases, with an estimated amount of Rs 3.6 billion spent on cardiovascular diseases, Rs 1.2 billion on diabetes, Rs 955 million on cancer and Rs 1.8 billion on infectious and parasitic diseases.

The institutionalization of the NHA is closely linked to the national health policy process for the allocation of financial resources, formulation of strategies to enhance the performance of the health system and for monitoring progress of the Sustainable Development Goal 3.

NHA Reports are approved by Cabinet of Ministers, chaired by the Prime Minister. The previous NHA 2015 was extensively used during budget consultations. It contributed to a hefty rise in budgetary allocation granted to the Ministry of Health and Quality of Life (MOH&QL), representing an increase over 33% in FY 2018/19 as compared to that of 2014.Consequently, GGHE as a percentage of the GDP rose from 2.3% in 2014 to 2.5 % in 2016. Government has implemented several measures to consolidate universal health coverage (UHC). These include decentralization of specialized services to the community, further improvement of the quality of care in public institutions and emphasis on customer care. Besides, NHA have become important tools for private stakeholders who are key players to promote medical tourism.

The NHA 2017 Report, recommends that, for Mauritius to improve its UHC Index from 64 to 80, the fiscal space of the MOH&QL has to be gradually increased for GGHE to reach 5.0% of GDP by 2030. The Report also urges additional investment on health promotion programmes, regulation of user fees in the private sector, implementation of a Medical Insurance Scheme in the civil service, increasing the allowable reliefs for income tax purposes for people having private health insurance policies and conducting a national survey on the extent of catastrophic expenditure on health.

Examining multiple funding flows to public healthcare facilities in Kenya and their influence on provider behavior and service delivery

Rahab Mbau, Evelyn Kabia, Dr. Edwine Barasa Kemri-Wellcome Trust, Kenya Nairobi

Introduction: Healthcare providers often engage with multiple purchasers resulting in multiple funding flows. Where multiple funding flows exist, they may send signals to providers that may incentivize undesired provider behavior. We examined the characteristics of multiple funding flows to public hospitals in Kenya and how they influence provider behavior and service delivery.

Methods: We conducted a cross-sectional qualitative study in two first referral and two second referral public hospitals, purposively selected from two counties in Kenya. We employed a conceptual framework that theorized that a lack of coherence of multiple funding flows could lead to three types of undesired provider behavior; resource shifting, patient shifting, and cost shifting. We collected data using in-depth interviews (n=36), focus group discussions (n=4), and documents review, and analyzed them using a framework approach.

Results: The study hospitals experienced 10 identifiable funding flows across the range of their funding sources. Multiple funding flows improved the financial resilience of healthcare facilities by improving the level of resourcing and overall predictability of facility financing. Higher NHIF payment rates for outpatient services for civil servants compared to non-civil servants and, higher NHIF payment rates for inpatient services for all its beneficiaries compared to user fees led to shifting of resources to provide preferential services to civil servants or in other cases, insured patients in general. For instance, some facilities established special civil servants' clinics

and wards while others had amenity wards for all insured patients that were better staffed and equipped than the general wards and clinics for the uninsured patients. There was also discriminatory behavior in some hospitals. For instance, civil servants were permitted to jump queues (and hence had shorter waiting times) while other patients waited to be served at the healthcare facility. In case of drug stock outs, civil servants were assured of getting medication through the hospital's arrangements with private pharmacies while other patients had to buy the drugs themselves. The relative predictability of NHIF payments compared to user fee payments incentivized health facilities to facilitate the NHIF enrollment of patients needing expensive elective surgical procedures or long-term inpatient care.

Conclusion: Multiple funding flows can improve the financial flows of healthcare facilities. However, if not structured coherently, they could incentivize undesired behavior that could compromise health system goals. For instance, the shifting of resources and discriminatory behavior of the study hospitals is likely to result in inequity in access and compromised quality of care. There is a need to structure multiple funding flows coherently to avoid these undesired outcomes.

Healthcare financing in Nigeria: A systematic review assessing the evidence of the impact of health insurance on primary health care delivery

Yakubu Agada-Amade, University of Nigeria, Enugu Campus, National Health Insurance Scheme, Abuja

Strengthening health systems, improving health outcomes, as well as finding answers to the competing alternatives of healthcare financing are critical issues that continue to bother health policymakers. Irrespective of the options, the choice of health care financing should mobilize resources for health and improve access to quality care at the same time. Notably, the health financing policy in Nigeria provides a framework for establishing health insurance schemes so as to expand coverage in health care delivery for the formal and informal sectors as a strategy towards universal access to healthcare. Accordingly, the authors, through this review, systematically assess the evidence of the extent to which health insurance impacts on access to services and quality of primary health care in Nigeria. While this comes to bear, the findings reveal an evidence of moderate-to-high strength that health insurance increases access to care and improves the quality of care received; however, it remains equivocal in some instances. The review, therefore, contributes to the literature on health care financing by extending and qualifying existing knowledge and advocating for accelerated reforms if universal coverage will be achieved.

Is there any Fiscal Space for Health? Lessons learnt from resource mapping exercise in Malawi

Henry Mphwanthe[1] Pakwanja Twea[2] Henry Mphwanthe[1] Kate Langwe[2] Malema[3] Pakwanja Twea[2]
[1]Health Policy Plus
[2]Ministry of Health and Population- Malawi
[3]Options Consultancy Services Limited- UK

Background: The provision of health equitable and quality primary health care services is largely dependent on the availability of adequate financial resources. However, planning and coordination of health activities has been a challenge in Malawi due to the substantial off-budget donor funding. To address this challenge, the Government of Malawi has adopted an annual resource mapping exercise to track health sector resources and to inform planning and budgeting decisions both for the Ministry of Health and its development partners. The Ministry

of health has also been exploring a ways of increasing the fiscal space for health through innovating health financing mechanisms. However, evidence from a recent sector wide fiscal space analysis shows that the country has limited fiscal space for additional resources for the health sector and only points at efficiency as the only possible route to increasing the fiscal space for health. The recent resource mapping exercise showcases the areas where these efficiency gains to potentially be realized.

This THE per capita amount is significantly lower than the WHO recommended amount of $86 per capita. This situation is compounded by the fact that Malawi is heavily dependent on donor aid, according to the NHA 2015, external partners contribute 62% of the THE. In light of this, the country has been exploring mechanisms for generating additional domestic revenue. The Ministry of Health developed a proposal for generating additional domestic resources to the Ministry of Finance. However, Thirdly,

Objective: To explore how resource mapping and tracking information can be used to enhance resource allocation efficiency, technical efficiency, and improve predictability and effectiveness of donor financing for health in Malawi.

Methodology: The study used Resource Mapping round 5 data to understudy whether the compared to the HSSP II strategic priorities and costs to quantify the funding gap, analyze the funding gap by programmatic areas to identify areas of duplicative funding, overfunding, and underfunding to inform high level resource allocation and reprogramming decisions.

Findings: Despite having one of the highest Total Health Expenditures (THE) as a % of the GDP in the SADC region, at $40, Malawi has the lowest THE per capita.

Conclusion: The prospects for additional funding for health in Malawi are bleak. However, Resource mapping and tracking can be used to identify opportunities for efficiencies and generate additional fiscal space for health. This will help to ensure that health resources are going towards addressing population health needs.

What are the health financing needs of mobile populations in East Africa? The case of long distance truck drivers in East Africa

Agnes Gatome, Abt Associates Kenya Nairobi

Background: Landlocked countries Burundi, Rwanda, Uganda, South Sudan of the East Africa Community (EAC) rely on the trucking industry through Kenya and Tanzania for imports and exports. Long distance truck drivers (LDTD) spend long periods on the road and away from home, which tends to come with certain health risks such as abuse of alcohol and other stimulants, and high risk sexual activity. This study sought to understand LDTD's mobility characteristics, healthcare needs and means for paying for healthcare while on work related travel, and ability and willingness to pay for a portable health insurance product that would cover health expenses across all EAC countries during work travel.

Methods: USAID funded Cross-Border Health Integrated Partnerships Project conducted 361 LDTD interviews, as part of a larger study, between November 2016 and February 2017 from three cross-border areas: Malaba Kenya-Malaba Uganda, Holili Tanzania-Taveta Kenya, and Gatuna Rwanda-Katuna Uganda. LDTD were recruited while in transit at cross-border towns. Data was analyzed with STATA to generate descriptive statistics and multivariate models were used to estimate the impact of various individual level factors on ability and willingness to pay for portable health insurance.

Results: LDTD reported 20-30 work related trips in the past year with a median duration of one to two weeks. 19.1% reported using a health facility while on their most recent work trip of

whom half reported expenses outside their home country. 85.5% of LDTD reported paying out-of-pocket (OOP) for health expenses incurred during work travel. OOP expenses were as high as 40% of monthly income. 42.4% of respondents reported owning health insurance but only 16.3% with health insurance reported it could be used beyond their home country (portable benefits). 75% of respondents agreed a portable health insurance product was relevant to their health needs. Average household income varied between USD 120-415 across cross-border areas. 54.9% of respondents stated they were willing to pay USD 9.2 (2.6% of the lowest monthly income reported) quarterly for portable health benefits of whom 52% agreed they were willing to pay the higher price of USD 11.5 (3.2% of the lowest monthly income reported).

Discussion: These results demonstrate that LDTD are highly mobile, require access to health services outside their home country, face high OOP costs, and are currently under served with portable health insurance. As next steps, the results will be disseminated to public and private insurers within the region to inform design of portable health insurance for mobile populations.

Does Predictability of Multiple Funding Flows to Healthcare Facilities influence Provider behaviour? Lessons from Case studies in Enugu State Nigeria.

Ifeyinwa Arize[1,3,4], Chinyere Mbachu[2,3], Chinyere Okeke[2,3], Obinna Onwujekwe[1,3]
[1]Department of Health Administration and Management, Faculty of Health Sciences &Technology, College of Medicine, University of Nigeria Nsukka, Enugu Campus
[2]Department of Community Medicine , Institute of Public Health, College of Medicine, University of Nigeria Nsukka, Enugu Campus.
[3]Health Policy Research Group,
[4]Department of Pharmacology and Therapeutics, College of Medicine, University of Nigeria Nsukka, Enugu Campus.

Background: Achieving Universal Health Coverage (UHC) requires that health systems must seek ways to ensure that health services are efficient, equitable and with universal financial risk protection. It is also important that appropriate services are strategically purchased to ensure that UHC is achieved. Hence, it is necessary that fund flows from purchasers to providers must align with the interests of all major actors in the health system.

Objective: To examine the predictability of the different funding flows available to public healthcare providers and how predictability of the flows influences service delivery.

Methods: The study was conducted in Enugu State, Southeast Nigeria. We employed a cross sectional study design and qualitative method (Key Informant Interviews (KII), Focus Group discussion (FGD)) in collecting data for the study. Purposive sampling of two public tertiary and secondary health facilities each, purchasers, central Administrators, development partners and civil society organizations was adopted. Data were collected through KII (n = 108) of purchasers, FGD (n =64) of hospital clients.

Findings: The study found that the sources of funding to the public health facilities were multiple and are OOP, government budget, health insurance and donations. None of the different funding flows was predictable. However, OOP was considered the most predictable and most common source of funding for the facilities because most patients paying out-of-pocket pay their bills, and only a few delay in paying their bills. Findings showed that HMOs delay payments of capitation and reimbursement of fee for service, hence NHIS funding is unpredictable. Consequently, unpredictability of funds to health facilities results in poor planning and decision making. It also leads to preference for certain services and was found to affect quality of service delivery as it limits the range of services the facilities can provide. However, unpredictability of funds was not found to result in preference for certain patient groups for treatment as frontline healthworkers

are unaware of the patients' healthcare purchasing mechanism. In order to cope with unpredictability of funds the facilities come up with different coping mechanisms such as limiting drugs available for NHIS patients.

Conclusion: Predictability of funds to healthcare providers sends signals that influence provider behaviour as it influences effective service delivery. It results in poor planning and decision making as facilities are handicapped. Consequently, it has quality of healthcare services and efficiency implications posing a serious challenge in achieving universal health coverage in Nigeria.

Out-of-pocket healthcare payment in the era of national health insurance: A five-year study of primary health facilities in seven districts of northern Ghana.

Edmund Wedam Kanmiki Ayaga A. Bawah, Patrick Asuming, Caesar Agula, John Koku Awoonor-Williams, James F. Phillips and James Akazili
Regional Institute for Population Studies, University of Ghana

Background: Ghana introduced a national health insurance program in 2004 with the goal of removing the impoverishing effects of out-of-pocket healthcare payments and ensure access to equitable healthcare. However, over a decade of implementation, the impact of this program on out-of-pocket payments is inconsistent. This paper contributes to understanding the impact of Ghana's insurance program on out-of-pocket healthcare payments.

Aims and objectives: To examine the impact of Ghana's national health insurance program on out-of-pocket healthcare payment for primary healthcare using health facility-based data.

Methods: Using a five-year panel data of revenues accruing to public primary health facilities collected by the Ghana Essential Health Intervention Project (GEHIP), descriptive statistics and trend analysis are employed to examine revenues accruing from out-of-pocket payment vis-à-vis health insurance claims for health services, medication and obstetric care.

Key Findings: Out-of-pocket payment for health services and medications were found to reduce by 63% and 62% respectively between 2010 and 2014. Insurance claims for services and medication however increased by 37% and 34% respectively in 2013 and by 13% and 9% respectively in 2014. Obstetric care was entirely covered by insurance claims which increased by 92% and 75% for 2013 and 2014. Thus, the revenue base of primary health outlets is progressively shifting from out-of-pocket payment to insurance claims.

Conclusion: The evidence implies Ghana's national health insurance program is significantly contributing to reducing out-of-pocket payment for primary healthcare, thereby reducing financial barriers to accessing healthcare. Efforts to ensure the sustainability of this policy are in the right direction.

Parallel Session 4-2 Maternal and child health care 1

Health demographics and trends in child and youth health indicators in Ivory Coast from 2012 to 2016

Sackou-Kouakou Julie-Ghislaine, Centre for Population Health Research and Health Systems / Institut National of Public Health (INSP)-Abidjan, Ivory Coast
Kouamé Jérôme, Adou Philippe Agenor, Pongathié Adama, Malé Félix, Kouadio Luc

Justification: Health human resources contribute to improving access to health services and health indicators, including child and youth health indicators. To improve health demographics, Ivory Coast has adopted several strategies, including the regionalization of posts since 2014.

Objective: To analyse the correlations between health demographic indicators, and child and youth health indicators over 2012-2016 period.

Methodology: Retrospective study of annual reports on the health situation in Ivory Coast. The human resources for health (HHR) indicators were physician/population, nurse/population and midwifery/ **w**omen in **r**eproductive **a**ge (WRA) ratios. Child and youth health indicators were the incidence of diarrhoea, acute respiratory infections (ARIs), malaria and malnutrition. The evolution of the median of the indicators has been described. The HHR standard was compared to WHO standards. The Pearson correlation coefficient was used to measure the relationship between the two groups of indicators. We have chosen to consider r values not included between -0.5 and 0.5.

Results: The median incidences of child/youth morbidity indicators increased from 293‰ to 558‰ for malaria, from 68.32 ‰ to 95.24‰ for diarrhoea and from 6‰ to 9.43‰ for malnutrition. The median incidence of ARI increased by about 50% from 2012 to 2015 before declining in 2016 (174‰). The median population/physician ratios improved but remained below the WHO standard of 1 doctor per 10,000 population. The median population-to-nurse and midwife ratios improved from 2013 to 2016, from 1 nurse per 4262 inhabitants to 1 per 3069 and from 1 midwife per 2213 FAP to 1 per 1616, respectively. Except for the correlation between the midwifery/WRA ratio and the incidence of malnutrition in 2012, which was 0.70, the correlations between the HHR ratio and child/youth morbidity indicators were mostly < -0.5. Thus, the doctor/population correlation and the incidence of ARIs increased from 2012 to 2013 (-0.52 to -0.69) and then stabilized until 2016. The ratio between the nurse/population ratio and malaria incidence was -0.62 in 2012 and -0.68 in 2014. The correlation between the midwifery/WRA ratio and the incidence of diarrhoea was -0.61 in 2012.

Conclusion: These results could reflect a problem in the quality of management of childhood diseases by the human resources.

Community Walls of Good Health: Community-led monitoring and advocacy tools to improve maternal and child health outcomes in rural Ghana

Mohammed Ali[1], John Koku Awoonor-Williams[2], Felicien Paul Randriamanantenasoa[1], Elena McEwan[1], Adam Abdul-Fatahi[1] and Abubakari Abdul Ganiu Konlan[1]
[1]Catholic Relief Services
[2]Ghana Health Services

Background In the year 2000, Ghana Health Service (GHS) adopted its flagship Community Health Planning and Services (CHPS) concept. With community engagement as a key component, the CHPs initiative utilized participatory tools to monitor and advocate for improved health with a focus on maternal and child health (MCH) outcomes. Catholic Relief Services (CRS) and the GHS in collaboration with target communities implemented the Community Walls of Good Health (COWAH) strategy. COWAH is used in CHPS as part of the community decision system. In each community, a five-member committee rallies and empowers community members to support MCH data collection for planning and decision-making purposes. It also provides mechanisms for these communities to advocate for quality MCH service and availability.

Methods CRS carried out a baseline (October 2011) and end line survey (September 2015) in 240 communities to measure change in MCH outcomes where the COWAH, a participatory community-led monitoring and advocacy tool from the CHPS initiative were used.

Results Skilled assisted deliveries increased from 30% to 88% (p =0.002); Initiation of breastfeeding increased from 48% to 75% (p<0.001); exclusive breastfeeding improved from 47% to 92%-p>0.001; proportion of children(6-23months) fed on appropriate complementary foods increased from 55% to 98%: P <0.000); proportion of children (0-23 months) with diarrhea who received ORS/home fluids increased from 42% to 66%; p =0.005). Also, the COWAH concept contributed to reduction in maternal mortality from 258 to 81 per 100,000 livebirths as well as under five and infant mortality reduced from 98 and 72 per 1000 livebirths respectively to 26 and 32 per 1000 livebirths respectively. Among children 0-23 months, stunting rates reduced from 17% to 13%, p>0.001; underweight reduced from 43% to 11% and wasting reduced from 26% to 8%; p<0.001.

Conclusions COWAH strategy contributed to improved community ownership and engagement for primary healthcare provision and utilization. Also, COWAH appears promising as it impacts positively on MCH outcomes. Additionally, COWAH was found to strengthen community health systems as it served as a participatory community-led monitoring and advocacy tool. The strategy has since been adopted by some districts in its northern and upper east regions of Ghana as well as other CRS Country programs including Burkina Faso and Niger. COWAH has the potential of contributing to achieving Sustainable Development Goals 2 and 3.

An Evaluation of the Maternal and Child Health Project of the Subsidy Reinvestment and Empowerment Programme (SURE P)

Ifeanyi Nsofor, Ike Anya, Chikwe Ihekweazu : ABUJA EpiAFRIC

Background: Access and utilization of quality health care services by women and children in Nigeria remains poor. The Government of Nigeria partially removed petroleum subsidies in 2013 and used savings to set up an intervention programme between to address this. Funds were directed to increasing and improving infrastructure and human resources in primary care as well as improving demand through the use of incentives, primarily “Conditional Cash Transfer (CCT)” at 1000 health facilities across Nigeria.

Aims and Objectives: The aim of the evaluation was to assess the extent to which the SURE P MCH Project was meeting objectives, provide recommendations to guide the remaining implementation period of the project and proffer recommendations for the post-2015 period.

Methods: This evaluation was carried out using both quantitative and qualitative methods. Trend analysis was carried out to evaluate the impact of the intervention on relevant trends in utilization measures. Qualitative methods consisted of key informants’ interviews and focus groups discussions with stakeholders.

Results: The post implementation period showed improvement in most variables of interest, including a 36.3% increase in number of pregnant women’s antenatal care visits. We found that facilities with CCT component only performed better with respect to two of the six variables evaluated: newborns provided with OPV at birth and newborns provided with BCG at birth. Qualitative analysis showed improved perception of quality of care in intervention facilities and a lack of confidence in activities involving the transfer of cash incentives.

Main Conclusions: The programme led to an improvement in the utilization indicators and confidence of the users in the system. It would possibly have achieved greater success if it had been more independent. The project raised the question on whether a vertical intervention

addressing a specific indicator is appropriate or whether a broader strengthening of the primary health care system is a better approach.

Preferences of pregnant women attending antenatal care regarding prevention of mother-to-child HIV transmission service delivery models in Ethiopia: Discrete Choice Experiment

Elias Asfaw[1], Josue Mbonigaba[2], Mike Strauss[3], Sylvia Kaye[4]
[1]University of California Davis (MINIMOD Project) and The Children Investment Fund Foundation (SURE Program), Addis Ababa, Ethiopia
[2]University of KwaZulu Natal, Economics Department, Durban, South Africa
[3]University of KwaZulu Natal, Health Economics and HIV/AIDS Research Division, Durban, South Africa
[4]Durban University of Technology, Public administration and Economics department, Durban, South Africa

Background: The prevention of mother-to-child transmission (PMTCT) program is a vital part of the HIV response, but low PMTCT service uptake remains a critical challenge in Ethiopia. Understanding the demand-side factors that drive low service uptake is necessary to inform efforts to increase demand and offer client-centered services.

Objective: This study aims to analyze the preferences and drivers of choice regarding PMTCT service delivery models.

Methods: A total of 275 pregnant women attending antenatal care across twelve health facilities were randomly sampled to be interviewed using a discrete choice experiment (DCE) method. Participants were asked to choose between two service delivery models that included six attributes (pre-test counseling, service integration, disclosure counseling, waiting time, cost, and PMTCT site location). Each participant responded to 64 choice sets, which were generated to maximize D-efficiency. A conditional random effect logit econometric model was employed.

Findings: Couple pre-test counseling was preferred over individual pre-test counseling (OR 1.23, p = 0.000). A pregnant woman waiting for 1 hour and 2 hours was less likely to prefer the PMTCT service, respectively as compared to waiting for 30 minutes (OR 0.75, p=0.001; OR 0.76, p=0.000). The respondents preferred not to pay for the services (USD 1.27, USD 2.54). Pregnant women preferred PMTCT services at the health center as compared to health post (OR 1.26, p=0.001). The odds of choosing couple pre-test counseling by a pregnant woman from the rural areas was lower as compared to the urban respondent (OR 0.77, p=0.003). Urban pregnant women were less likely to prefer waiting for longer time period (OR 0.72, p=0.72, p=0.04). Pregnant woman from the rural settings were less willing to pay USD 2.54 for the PMTCT service (OR 0.52, p=0.000), and more willing to receive a payment USD 5.08 (OR 2.09, p=0.000).

Conclusion: Pretest counseling, waiting time, fees and location were the critical attributes affecting the preferences of pregnant women. The preferences of urban and rural pregnant woman varied in the PMTCT service attributes of service integration, waiting time, service fees and location. HIV programs should prioritize meeting client needs on these attributes and consider different models based on location.

Parallel Session 4-3 Result and performance based financing

Towards a constructive reflection on Performance-Based Financing: perspectives of implementing actors in Sub-Saharan Africa

Serge Mayaka MD, Phd, Economiste de la santé, Ecole de santé publique de Kinshasa
Lara Tembey, Eric Bigirimana, Christophe Y Dossouvi, Olivier Basenya, Elizabeth Mago, Pacifique Mushagalusa Salongo, Aloys Zongo, Fanen Verinumbe

Background information: An endless and fruitless debate around Performance-Based Financing (PBF) is becoming increasingly present among experts engaged in health systems strengthening, but without contributing to a better health status of our populations. As experts directly involved in the implementation of the PBF, we believe it is useful to share our perspective.

Goals: To be part of the of control's renewal of the debates around the PBF and the return to more important and technical foundations; but also, searching for evidence-based consensus.

Research objectives: (1) Reflect on the evolution of the PBF approach, particularly in our working countries, (2) highlight its benefits in our health systems and the transformations observed in health, and (3) examine the challenges and propose orientations for reforming its implementation.

Methods used: Documentary review and interviews with actors involved in implementation in different African countries

Key findings: The PBF has some advantages but we recognize that challenges need to be continuously improved, and that critical debates and analyses constitute openings to question oneself;

- Constructive debates must be evidence-based; value the wide range of experiences and require all parties to listen objectively to the arguments of stakeholders, particularly those with local knowledge and diverse institutional affiliations;
- The PBF was launched in Rwanda, and we recognize that in our countries it benefits from the financial and technical leadership of the World Bank and other external actors. Exogeneity can be a problem but too far from axiomatic.
- The PBF is an evolving strategy, characterized by several innovations and changes made by national actors in their context.
- We see the value of the PBF in its system-wide effects, such as improved coordination, accountability for decentralization and overall governance of the system, as well as the completeness and timeliness of the health information system data.

Main conclusions: Without complacency, our main concern should be to strengthen our health systems for the benefit of the population. We are committed to playing an important role both at the national and global level to continuously update the PBF approach as we learn from it.

Performance-based Financing and External Cross-Audit: a tool improving the governance approach in DR Congo

Serge Mayaka MD, Phd, Economiste de la santé, Ecole de santé publique de Kinshasa
Robert Yao, Michel Zabiti, Xavier Lannuzel

Background information: As part of the implementation of its PBF program in the DRC, the World Bank has contracted with an External Counter Audit Agency (ACVE) to conduct quarterly counter-audits. ACVE's mission is to confirm or deny the veracity of verified, validated and remunerated quantitative and qualitative data, as well as compliance with procedures, in the provinces of the DRC under PBF program.

Aims: By highlighting the differences between the results of the audit and the cross-checking in the PBF, this work analyses the indicators of using service and quality of care of the subsidized entities, their performance measurement and ways of improving tasks of the auditors.

Research objectives:

- Cross-check the performance frameworks of regulatory entities and contracting and audit agencies;
- Cross-check the reliability quantitative and qualitative data in selected health facilities; and at community level;
- Identify possible over/under performance evaluations;
- Suggest appropriate solutions to address identified issues.

Methodology: Data collection tools and methods should be fully consistent with the audit tools. A random (stratified) and reasoned sampling was used to select the entities to be cross-checked, except for the control and audit agencies and the automatically selected zone management teams.

Key findings: Most of the structures (zone management teams, health centres, HGR,) that were cross-checked presented, on average, higher evaluation results than those of the cross-check. The reasons for the differences observed are : problems with the documentation or reporting of certain documents, or even poor archiving with the absence of certain files ; follow-up of activities and implementation of recommendations; misunderstanding or interpretation of validation criteria, with some non-objective validations. These over declarations have consequences in terms of financial losses or lost profits for the World Bank (WB).

Main conclusions: We could claim that the principles of the PBF are applied rigorously and objectively in the various provinces financed by the WB, but with limitations in some of them. The proper performance of external cross-checking missions could strengthen the monitoring of health sector performance and the improvement of governance of the sector. It contributes to the approach of a perfectible financing approach.

Health Sector Application of Programme Based Budgeting – Early Lessons from Kenya

Benjamin Tsofa,[1] Protus Musotsi[1,] Sassy Molyneux,[1,2], Edwine Barasa[1,] Thomas Maina[3] ,Jane Chuma[3]*
[1]KEMRI Wellcome Trust Research Programme, KEMRI Centre for Geographic Medicine Research Coast, Kenya
[2] Centre for Tropical Medicine and Global Health, Nuffield Department of Medicine, University of Oxford
[3]The World Bank Group, Kenya Country Office - Kenya

Introduction: Health sector planning and budgeting is a governance process linking long-term strategies with daily operations and financial allocation. Kenya adopted a Medium-Term Expenditure Framework (MTEF) and Annual Work Plans (AWPs) to align public sector planning and budgeting process, but misalignment has continued to be witnessed; both in the health sector and public sector more widely. A Public Finance Management Act (PFMA) was adopted in 2012 to guide the planning and budgeting process, which introduced Programme Based Budgeting (PBB) replacing the traditional line item budgeting. PBB aimed at better linking of

priority technical programmes identified during planning, with budgetary allocation, and at increased accountability, transparency and openness. There is limited knowledge on the application and utility of PBB in the health sector in Low and Middle-Income Countries (LMICs) and this study sought to address this gap in knowledge.

Methodology: We carried out a systematic search and review of literature that has documented health sector application and utility of PBB in LMICs. We then sort out to collect empirical data to examine the experience of PBB in health sector planning and budgeting at County level. We reviewed all relevant policy and guidelines document that guide the planning and budgeting process in the country. We then conducted 28 in-depth interviews with individuals national level key informants from the Ministry of Health, Council of Governors Secretariat and donor agencies supporting health sector planning and budgeting process. We then conducted xx interviews with individuals involved in county level health sector planning and budgeting in six purposefully selected counties. We applied the Walt and Gilson policy analysis triangle to guide development of data collection tools and data analysis. We applied a thematic approach for data analysis.

Results: The County level health sector Annual Work Plan (AWP) development for financial year 2017/18 utilised the PBB. However, with no proper guidelines on the process, there was a variation across counties on the numbers and definitions of 'programmes' identified for allocation of resources. The planning process was perceived to have improved the alignment of technical priorities with budgetary allocation; and increased transparency, accountability, openness of the process. However, PBB implementation was facing challenges because of lack of clear tools and guidelines, low capacity at county level, political interference, and that the Integrated Financial Management Information System (IFMIS) used for public sector financial management was still organised around line Items.

Conclusion: PBB is potentially a useful tool for aligning health sector planning and budgeting, and making the AWP result-oriented. However, realization of this would be enhanced by the developed of clear tools guidelines; and building capacity for county health sector managers; and reforming the IFMIS budgetary management system to align it with the PBB

Understanding the contextual and implementation factors constraining the results of a Performance Based Financing scheme extended to malnutrition in Health centers of Burundi— insights from a mixed method research in Burundi

Manassé Nimpagaritse, ** Catherine Korachais * Jean Macq, ** Bruno Meessen:*
**Bujumbura Institut National de Santé Publique, ** Institute of Tropical Medicine, ***Université Catholique de Louvain*

Background: There is a growing interest within the scientific community for the channels through which PBF schemes deliver their effects (or not) at health facility level. More over, it is increasingly acknowledged within the Performance-Based Financing (PBF) research community that PBF is more than just payments based on outputs verified for quality. In fact, PBF schemes are implemented in a 'complex adaptive system'). The context, thus, becomes an inherent part of each PBF scheme and includes important drivers of change that influence the outcomes and the processes/mechanisms that are being initiated.

We used the opportunity of the introduction of malnutrition prevention and care indicators within the PBF program in Burundi to advance our understanding of contextual and implementation factors that influenced the course of the intervention and the outcomes.

Method: This study builds on the program theory of the intervention and a mixed methods model adopting a sequential explanatory design. The quantitative component mainly exploits a

large set of research instruments applied to the 90 health centres of the impact evaluation. The qualitative component mainly rests on logbooks filled in weekly in health centres and in-depth interviews with key informants from a subset of 12 health centres.

Results: Six contextual factors were identified to have contributed to the limited results of the nutrition PBF intervention: Payment issues of subsidies to health facilities /Health workers, lack of autonomy at health facilities level, communication /information problems on the new intervention, skills of health workers, resources non availability, and no improved supervision.

Conclusion: The intervention was constrained by health system factors as well. The PBF attempts to promote problem solving at the peripheral level, but this level remains constrained by more systemic elements. This confirms that the performance of a health system is a long struggle.

Using the Performance Based Financing (PBF) conditional grants to increase domestic resource allocation to health sector within the Kenyan context of devolution.

Consolata Oggot, Omar Ahmed: Nairobi Ministry of Health

Background: The health status of Kenya's population has improved over the last decade. However, considerable inequity still persists with wide variation in health status by geographic and socioeconomic factors. One of the barriers to access and utilization of health services is inadequate and inequitable health care financing. In 2014, Kenya's economy was rebased and is now a lower-middle-income country. Thus, the need for the mobilization of domestic resources. Kenya embarked on rapid devolution process to 47 counties. Subsequently, two-thirds of government health care allocations were devolved to counties, accounting for about 30% of the county sharable revenue. The Kenyan government is supporting the 47 counties to improve the delivery, utilization, and quality of (Primary Health Care) PHC services at the county level by using PBF that employs minimum conditions and allocation of resources to the counties based on their improved PHC results. The four key indicators used to measure performance are- fully Immunized child, fourth antenatal care, skilled birth attendance and family planning coverage.

Objectives: To assess compliance of the counties in attaining the minimum condition of the share of the county budget allocation for health is higher than the previous year, but not less than 20% and the Public Finance Management (PFM) criteria and verify the 47 counties improved PHC results.

Methodology: Data for the descriptive assessment was obtained from Ministry of Health, Kenya county health budgets and the District Health Information System-2 for the period April-June 2017 and April-June 2018. SPSS was used for statistical analysis.

Results: 94% counties complied with the PFM criteria .72% counties met the minimum condition of county budgetary allocation to health; 28% of the counties did not meet the criteria due to reduction in capital investments in the current financial year. 94% of the counties had positive PHC result improved; 19% of the counties have an average result improved greater than 20. Overall, only 72% counties were able to attain both the positive improved PHC results and the two minimum conditions concurrently.

Conclusion: The PBF is an effective policy tool in addressing increased county domestic resource allocation to health sector. The application of the minimum conditions at county levels have also improved PFM and accountability and ownership of PHC results at county. However, other factors that influence performance (access and utilization of health services) within health sector-political, and social-economic. Thus there is need to consider these factors in the PBF allocation to counties.

PBF in Sierra Leone: The Way Forward

Purava Joshi, Ministry of Health and Sanitation, Sierra Leone

Background: In 2011 and 2015, Sierra Leone implemented Performance Based Financing Schemes (PBF) with the aim of paying health facilities based on their performance on maternal and child health indicators. An evaluation of the Scheme[2] found that the PBF was successful in increasing provider autonomy, but its potential was dampened by delayed payments, and inaccurate external verifications. To rectify the past issues with the PBF, the Ministry of Health in Sierra Leone is re-designing the PBF and will pilot it in two districts this year.

Aim:

- To conduct a bottleneck analysis of the previous PBF, to identify the exact causes of its constraints and thereby offer recommendations for the new PBF.
- To recommend ways in which the PBF – a form of strategic purchasing – can be integrated with the rest of the health system of Sierra Leone, and the wider environment of provider-purchaser arrangements (i.e., "not missing the forest for the trees")[3].

Methods: The research will be primarily based on interviews with a variety of stakeholders involved in the previous PBFs – national and local Ministry of Health staff, district health management teams, local councils, health facility workers, and donor agencies. The authors are economists at the Ministry of Health, and are in a unique position to access data and anecdotes from stakeholders. Two of the authors were involved in the implementation of the first two PBFs. Findings from the evaluation of the PBF conducted by CordAid will also complement our research.

Initial findings: Initial findings show that before the PBF can be implemented, certain systems need to be strengthened: (i) Data reporting: Accurate data is crucial, as providers are paid on its basis. Therefore, certain systems are required to be in place – staff trained in data entry, technology for entering and uploading data, etc. (ii) Public financial management: The previous PBFs saw facilities receiving their money after more than a year. The research will propose PFM measures to address this, and also examine how to integrate the 'output-based' payments for the PBF, with the payments for the rest of the health system in Sierra Leone, which are typically input-based.

Using the Performance Based Financing (PBF) conditional grants to increase domestic resource allocation to health sector within the Kenyan context of devolution.

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[2] CordAid (2014). Performance Based Financing in Healthcare in Sierra Leone. External Verification – Final Report. In: Freetown and the Hague: Cordaid, vol. 1

[3] Soucat, A., Dale, E., Mathauer, I., & Kutzin, J. (2017). Pay-for-performance debate: not seeing the forest for the trees. *Health Systems & Reform*, *3*(2), 74-79.

now a lower-middle-income country. Thus, the need for the mobilization of domestic resources. Kenya embarked on rapid devolution process to 47 counties. Subsequently, two-thirds of government health care allocations were devolved to counties, accounting for about 30% of the county sharable revenue. The Kenyan government is supporting the 47 counties to improve the delivery, utilization, and quality of (Primary Health Care) PHC services at the county level by using PBF that employs minimum conditions and allocation of resources to the counties based on their improved PHC results. The four key indicators used to measure performance are- fully Immunized child, fourth antenatal care, skilled birth attendance and family planning coverage.

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Parallel Session 4-4 Purchasing of services

Analysis of the mixed system of payment terms and conditions for service providers in the context of the strategic procurement of health services in Burkina Faso

Joël Arthur Kiendrébéogo, University of Ouaga
Pr. Joseph Ki-Zerbo, Institute of Tropical Medicine (IMT), Anvers, Belgium, University of Heidelberg
Fahdi Dkhimi, Technical officer, Health Financing Team, WHO, Geneva
Olivier Appaix, independent Consultant, France & USA

Introduction: The reliable reformed health financing for the procurement function is a powerful lever for transforming health system and making progress towards universal health coverage (UHC). Nowadays, there is a wide-ranging consensus to move from a so-called passive approach to procurement health services (no selection of providers, performance monitoring, efforts to influence prices, quantity or quality of care) to an active or strategic approach. To become more strategic, the procurement function must create a coherent set of incentives to align caregiver behaviour with UHC objectives.

Objectives: The general objective of the study was to understand the mixed system of payment methods in place in Burkina Faso, the combination of incentives created on the behaviour of providers at the decentralized level, as well as the challenges in terms of governance.

Methodology: Naturally, the study was qualitative. Data collection took place from February to April 2017. It consisted of a documentary review (scientific and grey literature) and semi-directive interviews at the central and peripheral levels of the health system. A monograph, in consideration of two health districts, was carried out in order to clarify payment channels and to note the effects observed with service providers. The choice was made on these two districts for they have been the subject of various experiences over many years with the procurement function of services.

Results: The study proposed a mapping that highlighted a multiplicity of institutional purchasers of care as well as providers from whom they purchase services through one or more payment methods. This multiplicity adds complexity to the system and, sometimes, hinders the achievement of the initial objectives that prevailed when one or the other payment method was introduced. Moreover, it is aggravated by a dynamic of ongoing reforms and governance-related issues such as the low autonomy of health facilities, the lack of predictability and regularity of payments or frequent drug shortages.

Conclusion: This study clarified the situation of the payment mix of healthcare providers in Burkina Faso and identified some of the effects that can be attributed to it, in order to feed into the national dialogue on strategic purchasing as a lever for progress towards the UHC.

Attribute development and level selection for a choice experiment on capitation and fee-for-service mechanisms

Melvin Obadha[1], Jane Chuma[1,2], Jacob Kazungu[1], and Edwine Barasa[1,3]
[1]Health Economics Research Unit, KEMRI | Wellcome Trust Research Programme, Nairobi, Kenya.
[2]The World Bank Group, Kenya Country Office, Nairobi, Kenya.
[3]Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom

Background: The use of stated preference elicitation methods such as discrete choice experiments (DCEs) have been gaining ground in the field of health economics. However, the validity of DCEs has been criticised. One of the main aspects that affects the validity of DCEs is the process used to develop attributes and select levels. Researchers have been vague on how attributes and levels for their DCEs have were developed. This has been due to the lack of a standardised process in attribute development and level selection. To bridge this gap, we set out to document the process followed in deriving attributes and selecting levels for a DCE to elicit the preferences of health care providers for the attributes of provider payment mechanisms in Kenya.

Methods: We used a four-stage process proposed by Helter and Boehler to report the steps followed in attribute development and level selection. The steps include; raw data collection, data reduction, removing inappropriate attributes, and wording of attributes. Raw data was collected by conducting a literature review and a qualitative study that entailed semi-structured interviews with 29 management team members in six health facilities.

Results: The literature review unearthed seven characteristics of capitation and fee-for-service that influenced health care provider behaviour namely; payment rate, adequacy of the payment rate to cover the cost of services, timeliness of payments, payment schedule, performance requirements, and complexity of accountability mechanisms. The qualitative study reinforced the literature review results by identifying five attributes that providers considered important

namely; the predictability of the timing of payment disbursements, the predictability of amounts disbursed, the adequacy of the payment rate to cover the cost of services, complexity and burden of reporting and claims mechanisms, and autonomy over resources. Thereafter, data was reduced, classified, and summarised. Then, inappropriate attributes were removed considering criteria such as salience, plausibility, and capability of being traded. Finally, the attributes were worded appropriately which resulted in five attributes. These attributes were pretested in pilot study with 31 respondents. Four attributes made it to the final DCE. These included; payment schedule, timeliness of payments, payment rate, and, services covered (benefits package).

Conclusion: Rigorously reporting the process of attribute development and level selection increases the validity of discrete choice experiments in health economics. Researchers and choice modellers in all settings should always report the process used to derive their attributes.

Health care purchasing in Kenya: experiences of health care providers with capitation and fee-for-service provider payment mechanisms

Melvin Obadha[1], Jane Chuma[1,2], Jacob Kazungu[1], and Edwine Barasa[1,3]
[1]Health Economics Research Unit, KEMRI | Wellcome Trust Research Programme, Nairobi, Kenya.
[2]The World Bank Group, Kenya Country Office, Nairobi, Kenya.
[3]Nuffield Department of Medicine, University of Oxford, Oxford, United Kingdom

Background: Provider payment mechanisms play a critical role in universal health coverage due to the incentives they create for health care providers to deliver needed services, quality, and efficiency. Therefore, when designing provider payment mechanisms, understanding providers' experiences with- and preferences for- the characteristics of these payment methods is useful. For this reason, we set out to explore public, private, and faith-based health care providers' experiences with two common provider payment mechanisms in Kenya; capitation and fee-for-service. In doing so, we aimed at identifying the attributes of provider payment mechanisms that providers considered important.

Methods: We conducted a qualitative study in two counties in Kenya between September and December 2017. Data was collected using semi-structured interviews with 29 management team members in six health providers (two private, two faith-based and two public providers) accredited by the National Hospital Insurance Fund (NHIF). A framework approach was applied in data analysis.

Results: Providers had a good understanding of capitation and fee-for-service payment methods and how they worked. Capitation and fee-for-service payments from the NHIF and private insurers were reported as good revenue sources as they contributed to providers' overall income. The expected fee-for-service payment amounts from NHIF and private insurers were predictable while capitation funds from NHIF were not because the providers did not have information on the number of enrolees in their capitation pool. Moreover, capitation payment rates were perceived as inadequate to the cover costs of services provided. Additionally, capitation and fee-for-service payments from NHIF and private insurers were disbursed late and NHIF's reporting requirements for fee-for-service payments was perceived as complex, which led to monetary losses to health care providers. Finally, public providers had lost their autonomy to access and utilise capitation and fee-for-service funds from the NHIF.

Conclusion: Through their experiences, public, private, and faith-based health care providers revealed characteristics of provider payment mechanisms that they considered important. These include the extent to which provider payment mechanisms contributed to the overall revenue envelope, the predictability of the timing of payment disbursements, the predictability of

amounts disbursed, the adequacy of the payment rate to cover the cost of services, complexity and burden of reporting and claims mechanisms, and autonomy over resources.

Considering these characteristics in the design of provider payment mechanisms while also involving health care providers in the process is a crucial step towards improving quality, efficiency, and coverage of needed services.

A critical analysis of healthcare purchasing arrangements in Kenya: A case study of the county departments of health.

Rahab Mbau, Evelyn Kabia, Edwine Barasa: Kemri-Wellcome Trust, Nairobi

Background: Purchasing in healthcare financing refers to the transfer of pooled funds to healthcare providers for the provision of healthcare services. There is limited empirical work on purchasing arrangements and what is required for strategic purchasing in low and middle-income countries. We conducted this study to critically assess the purchasing arrangements of the county departments of health (CDOH) who are the largest purchasers of healthcare in Kenya.

Methods: We employed a qualitative case study approach to assess the extent to which the purchasing actions of the CDOH in Kenya were strategic. We purposively sampled 10 counties, and collected data using in-depth interviews (n=81), focus group discussions (n= 4) and documents review. We analyzed data using a framework approach.

Results: County departments of health did not practice strategic purchasing. The government's (national and county) role as a steward for the purchasing function was characterized by poor accountability and inadequate budgetary allocations for service delivery. The absence of a purchaser-provider split between the CDOH and public healthcare providers undermined provider selection based on performance and quality. Poor public participation and ineffective complaints and feedback mechanisms limited public accountability and responsiveness to the needs of the people.

Conclusion: Our findings show that while there are frameworks that could promote strategic purchasing of the CDOH, strategic purchasing is impaired by poor implementation of these frameworks and the inherent weaknesses of a public integrated purchasing system that lacks purchaser-provider split.

Strategic procurement of basic health care: what role for planned demand (mutual health insurance) in the UHC process in Comoros?

**Nailat Bahati, **Pascal Ndiaye, *Mohamed Bacar:*
**National Federation of Mutual Health Insurance Companies of Comoros,*
*** Technical Advisor of International Development and Research Centre*

Background: Like most African countries, Comoros has been committed to Universal Health Coverage (UHC) since 2017. One of the coverage mechanisms considered in the strategy is the mutual health insurance schemes that developed with the Community model, in the Comoros in the 1990s. Gradually, 3 mutual unions were set up and then a national federation (FENAMUSAC). The network currently covers nearly 32,944 beneficiaries. A Joint Management Service (SCG) to which mutual delegate health risk management, provider relations and governance capacity building, has been established. Institutionally, the SCG, composed of professionals, ensures quality technical management. It has been included in the PBF scheme in Comoros, to fulfil the function of care buyer.

Methodology: This is a 5-year retrospective study. We compared 6 health indicators: service utilization rate, particularly for curative consultations, which are essential care; use of ANC services; and assisted childbirth.

Results: Between 2013 and 2017, the total amount allocated to the PBF program was € 2.5 million. A proportion of 90% was used for the procurement of care and 10% for intermediation costs. In terms of technical results, the following changes were observed:

- An improvement in the use of curative services which is 15.15% significantly higher than the national average of 14.6%;
- An improvement in pregnancy follow-up, the coverage rate in ANC3 is 50.73% with an increasing use of ANC services. The approach has helped to build pregnant women's loyalty to the use of ANC services, with a steady increase in the number of ANC4 by 1.83%;
- An increase in the rate of assisted childbirth from 72% in 2013 to 85% in 2017.

Another observed effect is the increase in the intermediation capacity of the SCG, which was able to recruit 3 additional professionals.

Conclusion The networking of mutual health insurance can have an impact on the strategic procurement of basic health services. The technical control of disease risk and experience in contracting constitute an added value for the UHC edifice. In addition, this approach is a response to the problem of the financial viability of intermediation structures for mutual and a strengthening of their negotiating power with the provision of care (because they have a procuring function with incentives). This experience is a real contribution to the articulation of health insurance and health system performance from a UHC perspective, with targeted action on the provision of care.

Impact of the RBF approach on the technical viability of mutual health insurance - focus on streamlining care

TARTOUDJIBE Watade[1], DJIMRAMADJI Armand[2], NDIAYE Pascal[3]

Introduction: Financial access to health care is still an ideal for a large part of the Chadians. The establishment (in 2010) of a network of seven mutual districts (MDs) aims to meet this challenge. Like most mutual health insurance companies in Africa, those in Chad give priority to primary care at a medium cost (MC) estimated at CFA F 2,500, in the health centres (HC). However, after a few years of implementation of the Program, there has been a persistent increase in care costs.

Objective: To analyse the effect of the financial incentive for providers on streamlining care and the financial viability of mutual, about the CM of benefits.

Methodology: The effect was analysed over the period (2014-2018), in an MD (Danamadji) covering 16 HC, and selected for its high MC level. Rational requirements are those that comply with the national flow-chart in force which determines their cost. This indicator was combined with three others (penetration rate, promptness and completeness) to form the Mutual Results Based Financing (RBF-M) package.

Results: The study revealed non-rationalization as one of the main causes of soaring costs. The introduction of the FBR-M made it possible to significantly reduce the cumulative MCs in the HC on study. The other indicators (penetration rate, promptness and completeness) also declined over the same period. On average, MCs fell by 32% with disparities between HCs (2.79% to

40.95%). MCs for the treatment of recurrent diseases such as malaria and acute respiratory infections decreased by 29% and 23% respectively. Overall, the introduction of the RBF-M has made it possible to significantly improve the mutual health insurance company's performance indicators.

Conclusion: The results obtained suggest that the RBF-M influences the cost of services and prescription for a basic package. It also demonstrates that rationalization of care is a critical determinant of the viability of insurance mechanisms like HM. This provisional conclusion is to be endorsed by countries that are implementing the UHC and hold RBF programs. However, it deserves more comparative investigation to establish more correlation of cause and effect (scoring method). These mutual are showing themselves as a gateway to reach the UHC.

Strategic purchasing in healthcare in Kenya: Examining reforms by the National Hospital Insurance Fund

Rahab Mbau, Evelyn Kabia, Edwine Barasa: Kemri-Wellcome Trust, Nairobi

Introduction: Kenya has prioritized the attainment of universal health coverage through the expansion of health insurance coverage by the National Hospital Insurance Fund (NHIF). In 2015, the NHIF introduced reforms in premium contribution rates, benefit package, and provider payment mechanisms.

Objective: To examine the influence of the NHIF reforms on NHIF's purchasing practices and their implications for strategic purchasing and health system goals of equity, efficiency and quality.

Methods: We conducted an embedded case study with the NHIF as the case and the reforms as embedded units of analysis. We collected data at the national and county level through in-depth interviews with purposively selected health financing stakeholders and, public and private facility managers and frontline providers (n=41), focus group discussions (n=4), and documents review. We analyzed the data using a framework approach.

Results: Our findings show that even with the new reforms, the NHIF remains a passive purchaser with potential negative implications on equity, efficiency and quality of care. Equity was compromised by: 1) limited awareness of the new benefits and unaffordability of the new premiums for certain population groups (rural, poor, elderly, people with disabilities, unemployed and informal sector workers), 2) Differences in the benefit package between the national scheme and civil servants scheme whereby members of national scheme lacked preventive services and other curative services, 3) Pro-urban and pro-private distribution of contracted health facilities which hindered access for those in rural and marginalised areas and lastly, 4) Delayed reimbursements and lower capitation rates for the outpatient services for the national scheme which led to discrimination of national scheme members in favour of other patients (civil servants, privately insured and/ or uninsured cash-paying patients) particularly in private hospitals. Efficiency was compromised by weak accountability mechanisms that led to resource loss through unnecessary treatment procedures and fraudulent claims. Quality of care was compromised by poor monitoring of quality of services, poor infrastructural capacity of public hospitals, and rationing of services due to perceived low reimbursement rates.

Conclusion: In pursuit of universal health coverage, reforms should focus on strengthening strategic purchasing actions that are aimed at improving equity, efficiency, and quality of health service delivery.

Parallel Session 4-5 User fees - removal and exemptions

Co-existence of High Out of Pocket payments for health and free health care in public health facilities a paradox for consolidating primary health care in Mauritius.

Mr Ajoy Nundoochan, World Health Organization, Country Office, Mauritius,
Dr Laurent Musango, World Health Organization, WHO Representative, Country Office, Mauritius
Mr Yusuf Thorabally
Mr Sooneeraz Monohur, Ministry of Health and Quality of Life, Mauritius

Background: Mauritius is embracing welfare state principles since four decades and any citizen indistinctly is eligible for free health care in public health facilities, including tertiary specialised care. Paradoxically, a new trend has emerged recently with Household Out of Pocket (OOP) expenditure on health outweighing General Government Health Expenditure (GGHE). This may hinder progress made till date to strengthen Primary Health Care (PHC) for achieving Universal Health Coverage (UHC).

Objectives: This paper analyses trends in OOP and its impact on key indicators of financial protection i.e. Catastrophic Health Expenditure (CHE) and impoverishment due to OOP health expenditure. The study, also, determine benefit distribution of health care, in terms of pro-rich or pro-poor.

Methods: Using multiple Household Budget Surveys, incidence of CHE is estimated using the capacity to pay and the budget share standard approach. Impoverishment due to OOP is measured by changes in incidence of poverty and severity of poverty based on the US$ 3.1 international poverty line. To carry out the benefit incidence analysis a four -stage approach is implemented, starting with ranking household using expenditure variables followed by estimating utilization rates of day care services for each household, multiplying the utilization rate of health services, and aggregating benefits of utilization expressed in monetary terms, for each household. The distribution of health benefits across income quintiles is estimated using a concentration index.

Findings: A declining trend in CHE and impoverishment over the ten-year period in the lowest quintile is confirmed. Conversely, for other income quintiles CHE increased across all the three thresholds (10%, 25% and 40%) from 2001 to 2012. The incidence of CHE is more significant in urban area prompting a dichotomy between urban and rural regarding equity of access health services. Households pushed below the poverty line due to OOP spending dropped from 0.0848% to 0.054% over the ten-year period. In 2012, only households classified under Quintile 1 (0.244%) and Quintile 2 (0.025%) were drifted under the poverty line due to OOP expenditure on health. Concentration index for all income quintiles was 0.12, inferring health care policies are pro-poor oriented and promotes financial protection. The quality of care in public services was not assessed in this study.

Conclusion: Progress towards UHC can be accelerated through expansion of the fiscal space. Existing conducive macroeconomic fundamentals favour potential expansion through widening of tax base, improved use and performance of public resources as well as assessing the quality of care in public health services. Taxes on Tobacco and Alcohol represent 80% of GGHE. However, instituting earmarking taxes may lead to fungibility and reprioritization within the health sector rather than between health and other sectors.

Aligning public financial management system and free healthcare policies: lessons from a free maternal and child healthcare programme in Nigeria

Ogbuabor Daniel, Institute of Public Health, University of Nigeria Nsukka
Onwujekwe Obinna

Background: Despite that public financial management (PFM) system can influence how health financing policies contribute to universal health coverage, relatively little is known about how to align PFM and financing of universal coverage schemes in low- and middle-income countries. In Enugu State, declining number of health facilities reimbursed for free maternal and child health (MCH) services, persisting out-of-pocket payment for MCH services and inadequate funding of free maternal and child health programme (FMCHP) suggest that PFM and health financing functions are misaligned.

Aims and objectives: The paper assessed the alignment of PFM system with health financing functions in the FMCHP of Enugu State, Nigeria, and provides evidence of how PFM can be better aligned with FMCHP objectives.

Methods: Data were collected through document review (policy documents and administrative and financial records) and semi-structured interview with 16 purposefully selected state and district-level policymakers (n = 16). Qualitative data were analysed using a framework approach guided by Cashing and colleagues' framework for assessing the alignment of public financial management (PFM) and health financing policies. We conducted revenue and expenditure trend analysis using descriptive statistics (means, standard deviations and graphs) and analysis of variance (ANOVA). Level of significance was set at $\rho < 0.05$.

Findings: The results showed that no more than 50% of the promised fund were collected between 2010 and 2016 despite significant increases in the population of target beneficiaries ($\rho < 0.05$). Level of pooling was limited by recurrent unauthorised expenditure (averaging 34% per annum over 7 years) and absence of expenditure caps. Misalignment of budget monitoring and purchasing include delays in provider payment (range: 1-15 months), high administrative cost, poor financial information disclosure and absence of auditing. Whereas the drug costs significantly declined from 86% in 2013 to 38% in 2016 ($\rho < 0.05$); the cost of services significantly increased from 10% in 2013 to 43% in 2016 ($\rho < 0.05$). Yet, the administrative cost of purchasing significantly rose from 4% in 2013 to 19% in 2016 ($\rho < 0.05$).

Conclusions: There is a need for evidence-informed annual budget, compliance with health financing rules, clarity of roles and responsibilities for various FMCHP committees, disclosure of financial information, use of clear resource allocation strategy and timely payment of providers. These strategies would ensure efficient and effective use of public funds to finance free healthcare policies in low-resource settings.

Cost implications free maternal policies: Lessons from both the globe and implementation in Kenya

Boniface Oyugi, Sally Kendall, Olena Nizalova0, Stephen Peckham
Centre for Health Services Studies (CHSS), Rutherford Annex, University of Kent, Canterbury, CT2 7NX, UK
University of Nairobi, School of Public Health, Health System Management, Nairobi, Kenya

Background: There are nearly 290,000 maternal deaths due to preventable pregnancy and childbirth related complications globally. Low- and middle-income countries are the most affected because of poor access to and utilization of maternal and family planning services.

Several countries, including Kenya, are addressing the challenge by reducing catastrophic expenditure on maternity care through incentives such as free (non-user fee) delivery (birth) policies with a view to achieving UHC.

Objectives: To explore the cost implications of the global free maternal policies (FMP) and evaluate the cost of the free maternity implemented in Kenya

Methods: An ongoing study that uses mixed methods. In part one, we systematically searched through EBSCO Host, ArticleFirst, CCRCT, Emerald Insight, JSTOR, and PUBMED databases guided by the preferred reporting item for systematic review and meta-analysis protocol (PRISMA) guideline. A total of 43 papers met the criteria and their themes were analysed thematically. Part two, is an embedded case study done in 3 county hospitals in Kenya that will use a structured questionnaire to collect cost data from postnatal mothers and health workers from October 2018 till February 2019.

Results: Review findings showed that households, in different countries were still bearing the burden of out of pocket (OOP) payments, and some experienced catastrophic expenditures, despite the implementation of FMPs. Majority of the reviewed policies were unsustainable due to poor planning or haphazard implementation of the policies and some governments were resorting to more domestic tax or grants from donors. Additionally, the review evidenced inequality of access and utilisation of FMPs between the rich and poor households particularly in rural areas. We anticipate having results from Kenya during the conference to build on the review.

Conclusion: Many FMS were formulated on the premise of reducing maternal mortalities and catering for pregnant mothers with a view to achieving UHC. The results from the Kenyan case study and the review will be used to contribute to the current discourse on Universal Health Coverage (UHC) and help improve the Kenya FMP. The policies can reduce the financial burden on the households if well implemented and sustainably funded. In addition, they may also contribute to decline in inequity between the rich and poor though innovation and strategic collaboration with partners. Additionally, there is a need to promote awareness of the policy to the poor and disadvantaged women in rural areas to help narrow the inequality gap on utilisation and reduce impoverishment of households.

Factors explaining catastrophic health spending in Côte d'Ivoire

C. Juliana F. Gnamon, Felix Houphouet Boigny University of Cocody, Côte d'Ivoire

As in many low and middle income countries plagued by high poverty rates, health spending is essentially financed by private spending in Cote d'Ivoire, Out of pocket spending being the essential part of those. In the context of the institution of a national scheme for health insurance, it is of interest to analyse incidence of catastrophic spending and investigate its determinants.

This study uses different thresholds including a composite one to provide a descriptive evidence of catastrophic spending and a logit model to estimate the determining factors of the phenomenon. Data comes from a nationally representative secondary source of a Living Standards Measurement Survey of 2014.

Results suggest that health spending is very low for poor households. A certain number of socio-economic factors proved to be related to catastrophic spending. Large household size, location in urban areas and higher level of income appeared to protect households from incurring catastrophic health spending. Having a household head who is male, employed and have attained university also reduced the odds of suffering from catastrophic health spending.

Utilization of formal care (outpatient and inpatient) and existence of health shocks are other determining factors.

Access to health care is a three-tier market in the country. Very poor households skip use of health care in case of need, avoiding to incur spending. Households who dare to use health care without insurance are at tremendous risk of incurring catastrophic health spending. Richer household use health insurance to protect themselves against the phenomenon. Health systems reforms should aim to extend prepayment mechanisms and increase financial protection. They should also target vulnerable population and ensure progressive contributions so as to reduce the current fragmentation of health care market and inequities in access.

Effect Of Public Health Expenditure On Catastrophic Health Expenditure In Sub-Saharan Africa

Albert Opoku Frimpong,University of Professional Studies, Accra, Ghana

The basic function of health systems towards achieving universal health coverage is to improve health outcome and prevent financial catastrophe due to payment for health services. The available evidence indicates that larger proportion of households in sub-Saharan Africa incur catastrophic health expenditures. Therefore, how public policy influences the risk of and exit from catastrophic health spending is a moot point to consider. There is extensive literature on the relationship between public health expenditure and health outcome. However, how public health expenditure influences the risk of and exit time from catastrophic health expenditure is relatively scarce, especially on sub-Saharan Africa, and this study took this up by exploring data on 45 sub-Saharan countries for the 1995-2014 period, sourced from the World Bank's World Development Indicators. The analyses employed the 5 percent catastrophe threshold of households total expenditure, 1.27 percent growth rate of out-of-pocket health expenditure, and the population average generalised estimating equation regression model. The study found the average exit time from catastrophe to be 2.58 years. Also, the results showed that out-of-pocket health spending has positive, immediate, and larger effects whereas public health spending has negative, delayed, and smaller effects on risk of and exit time from catastrophic health expenditures. The results again revealed that when a household is faced with catastrophic health expenditure, a unit increase (decrease) in out-of-pocket health expenditure as percentage of household's income increases (decreases) the exit time by 3.41 years whiles a unit increase (decrease) in public health expenditure reduces (increases) the current exit time by 1.12 years. This study, therefore, concludes that exit time from catastrophe is less responsive to public health spending than to out-of-pocket health spending. As regards, a more proactive public policy option is, perhaps, to influence the growth rate of out-of-pocket health expenditure via provision of primary health services to prevent entry into catastrophic health expenditure among households.

Key words: Catastrophic health expenditure, public health expenditure, exit time

Equity in Out of Pocket Health Care Expenditure in Turkey: An Analysis of 2004 – 2013 Years

Rasi Ceyhan, Ankara Ministry of Health

Health financing can be defined as means of creation of resources necessary to cover health care costs. Aim of health care financing is to create sufficient and sustainable resources to ensure all individuals to access health care. There are also other aims that are productive use of resources,

insurance of equity in finance while providing financial protection for all, and protection of households against poverty with means of creation of resources.

Equity in health means absence of systematic differences among groups who have different levels of social advantaged and disadvantaged, and major social determinants of health. Equity in health financing means that individuals make contributions to health care financing in proportion with their financial power. Vertical equity in health financing means that individuals who have different levels of income contribute health financing differently, and horizontal equity means that individuals who have the same level of income contribute health financing the same amount.

In this study, vertical equity in out of pocket health expenditures of 2004 – 2013 years in Turkey was researched. Data of 2004 – 2013 Household Budget Surveys done by Turkish Statistical Institute were used. Descriptive statistics were held by analysing data with SPSS. Concentration indexes, Gini coefficients and Kakwani indexes were produced by analysing data with STATA. Research period of this study includes implementation of Health Transformation Programme that changed Turkish Health System substantially, and transition years of Universal Health Insurance.

Out of pocket health expenditures in Turkey are regressive from 2004 to 2013 years. There is -0,01 increase in regressivity from 2004 (Kakwani index is -0,31) to 2013 (Kakwani index is -0,32). From Health Transformation Programme implementation in 2003 that changed Turkish Health System substantially to transition to General Health Insurance in 2010, and after three years of this, equity in out of pocket health expenditures couldn't be ensured.

The most important improvement in equity in out of pocket expenditures is after two years of Health Transformation Programme implementation (Kakwani index is -0,29 in 2005). Then, an increase in regressivity in out of pocket expenditures is seen due to effects of economic crisis in the World. There is an improvement again in equity in out of pocket expenditures due to transition to General Health Insurance trough out the country after 2010. As a result, equity in out of pocket expenditures in Turkey for the years of 2004 – 2013 remained regressive and vertical equity couldn't be ensured.

Parallel Session 4-6 Evaluating PHC performance 1

Assessment of the operational capacity of first contact health institutions in the management of malaria in Côte d'Ivoire

Hounsa Annita, Meless David, Sangaré Aboudramane, Pongathie Adama, Samba Mamadou, Kouadio Luc
Department of Public Health, Hydrology and Toxicology, Faculty of Pharmaceutical and Biological Sciences, Félix Houphouët-Boigny University, Ivory Coast, Department of Public Health, UFR Odontostomatologie, Félix Houphouët-Boigny University, Ivory Coast, Directorate of Information and Sanitary Informatics, Ministry of Health and Public Hygiene, Ivory Coast

Introduction: In 2017, 80% of malaria deaths worldwide were concentrated in 18 countries, including Côte d'Ivoire. Early diagnosis and correct treatment are the backbone of malaria management. However, do health facilities (ES), especially those at the entrance of the health system, have the basic resources for the management of malaria cases? The objective of our study was to analyze the Operational Capacity (CO) of Ivorian first-contact ES in the management of malaria.

Material and Methods: The Service Availability and Readiness Assessment (SARA) methodology was used to carry out a descriptive cross-sectional study from July 10th to 30th, 2016. The OC for the management of malaria expresses the average availability of 9 indicators divided into 3 domains: (i) Staff and directives; (ii) diagnostic capability; (iii) drugs and products. A score per domain was calculated based on the number of elements present in each domain. This score by domain and CO were compared between the first contact ES according to the management body (public / private) and the zone (urban / rural) using the Chi2 test for a risk of the first species α fixed at 0.05.

Results: A total of 963 ES were selected including 818 of first contact including 651 from the public sector and 167 from the private sector; 331 located in urban areas and 487 in rural areas. Staff availability and guidelines, diagnostic capacity, drugs and products were higher in the public (75%, 93% and 85% respectively) than in the private sector (40%, 71% and 53%). This was the same in rural areas (77%, 92% and 87%) compared to the urban area (54%, 82% and 67%). The OC for malaria treatment was also higher in the public than in the private sector 81% against 49%, and in rural areas compared to the urban area 83% against 63%.

Conclusion: The first-line public and rural ESs had the basic resources for malaria management in contrast to their high mortality. There is a need to focus on the malaria treatment process at the level of first contact HEs, strengthening the health system as a whole in addition to prevention.

Key Words: Ivory Coast. Operational capacity. Health institutions of first contact. Malaria.

Universal Health Coverage Primary Health Care Self-Assessment in Sudan

Mohammed Mustafa, Ministère Fédéral de la santé

The study identified practical policy opportunities in the health system to improve the relationship between health financing and PHC efforts in Sudan. It has assessed how public health financing institutions and health insurance interact with other PHC actors and programs. Also, it has identified key areas of improvement and opportunities to align health financing policymakers in the country with PHC goals.

The assessment was a rapid descriptive cross-sectional mixed method study including qualitative and quantitative methods. It covers national level and selected six states. The respondents represented Ministry of Health, Ministry of Finance, National Health Insurance Fund and providers of services at both private and public facilities.

There is a consensus among all interviewed policy makers on the importance of PHC to achieve UHC. PHC seen as the basic component of health system that include comprehensive essential services package directed towards all population age groups. Lack of well-trained health staff, insufficient funding and low services quality are the main barriers to achieve PHC objectives in Sudan.

The main source of health system funding in Sudan is direct OOP, which has reached 79.4% of total health expenditure in 20154. Most of those expenditures were exerted on curative care at secondary and tertiary level. Nevertheless, the patients have to pay user fees for Most of the curative services provided at PHC level. Most of the respondents agreed that funds were not enough to cover all PHC services components. Available funds were used mainly to cover staff salaries or incentives and the running costs. There is a financial gap that usually affects equipment, drugs and consumables for laboratories. That situation resulted in reprioritizing

[4] Sudan Health Accounts Report with Specific Diseases Accounts (2015), FMOH, 2017.

provision of PHC services at the state level. The NHIF's reimbursement policy is misaligned because it provides reimbursement only for the provision of curative PHC services.

Weak referral system is a shared comment among different states. That was attributed mainly to lack of basic services at the PHC-level which has led consequently to a misalignment between PHC and UHC. Findings show that when PHC facilities lack qualified staff or basic items like laboratory services, patients often bypass PHC level facilities.

In analyzing the results of the survey, the team found that there are a lot of gaps that hinders the achievement of proper PHC alignment with UHC in Sudan. These include political, structural and organizational adjustments.

Community Participation in Primary Health Care Delivery: A Mixed Methods Study of the Community-based Health Planning and Services programme in the Builsa North District, Ghana

Shieghard Agalga, Faculty of Planning and Land Management, University for Development Studies, Wa, Co-Authors: Shieghard Agalga and Gilbert Abotisem Abiiro

Background: Community participation is essential for the successful implementation of Primary Health Care (PHC) programmes. The Community-based Health Planning and Service (CHPS) programme is one of the PHC interventions in Ghana which by design and implementation heavily relies on community participation. However, little is known about the actual levels of community participation in the various components of the CHPS programme including needs assessment, leadership, organization, resource mobilization and management, and the factors influencing community participation in the programme.

Objectives: This study assessed the level of community participation in the planning and implementation of the Ghana Community-based Health Planning and Services (CHPS) programme and the factors that influence community participation in the programme in the Builsa North District.

Methods: A mixed methods approach was adopted in which the quantitative design was used to assess the level of community participation whereas the qualitative design was used to explore the factors that influence community participation in the programme. A survey was administered to all the 450 CHPS related stakeholders and interviews were administered to a purposive sample of 105 of these stakeholders. Descriptive statistics was used to analyze the quantitative data whereas the qualitative data was analyzed using thematic analysis.

Key findings: The study revealed a moderate level (56-60%) of community participation in various components of the programme. The creation of awareness within communities, ability of communities to contribute material resources, strong and effective local leadership and a high spirit of voluntarism are the factors promoting community participation, whereas contracting out the construction of CHPS compounds to external contractors, volunteer attrition, lack of sense of ownership by distant beneficiaries, competing economic activities, dispersed settlement patterns and financial constraints are the major factors impeding community participation in the programme.

Conclusion: Volunteer motivation and the empowerment of communities to construct their own CHPS compounds are key measures that can enhance effective community participation in the programme.

Operationalization of health districts as a strategy for revitalising primary health care in Ivory Coast

Tania BISSOUMA-LEDJOU, Dr Yameogo Jean-Marie Vianny, Dr Lanwis Gogoua Nahounou, WHO Abidjan, Ministry of Health and Public Hygiene of the Ivory Coast

Following the Harare declaration (1988), Ivory Coast adopted in 1994 the decentralization of its health system and the health district as its operational unit for the implementation of primary health care (PHC). Various regulations have been drafted to define the organization and functioning of health districts.

However, after more than a decade of implementation, district performance and health outcomes at the national level are unsatisfactory. Maternal, new-born and infant mortality ratios are high, with 614 deaths per 100,000 live births (2012), 33‰ (2016) and 108‰ (2016) respectively, limiting the achievement of the Sustainable Development Goals (SDOs) and Universal Health Coverage (UHC).

Indeed, the evaluation of the functioning of the health districts and other key studies on PHC and efficiency carried out over the period 2016-2017 showed that these results would be attributable in part to a policy of strengthening tertiary hospitals rather than PHC. In addition, there are inefficiencies in using public financial resources, an inadequate distribution of health personnel, insufficient supervision and monitoring of providers, and weak managerial capacities of health district managers.

To provide an adequate response, the Ivorian government has committed itself to the revitalization of PHC through the operationalization of health districts considering the above-mentioned parameters.

The methodology of the intervention consisted in strengthening the dialogue between the Ministry of Health and key partners, organizing a reflection on the health districts and identifying the priority areas for action.

In terms of results, a consultation framework between the Ministry of Health and partners has been set up with the appointment of a national focal point to maintain dialogue around the district, a system for coordination and monthly monitoring of the performance of health districts on the basis of key performance indicators has been established, and a framework for actions to strengthen health districts has been defined. This framework of actions aims at an efficient use of public funds allocated to health, an equitable distribution of human resources with an emphasis on PHC, an adequate system of supervision, monitoring and evaluation and the strengthening of the managerial capacities of health district managers.

Nevertheless, the challenge remains political will, the integration of these commitments into an institutional framework in order to sustain the gains made, including the real participation of the communities.

Parallel Session 4-7 Governance and accountability 1

All hands-on deck: lessons learned from effective multi-stakeholder engagement to strengthen primary health care in Senegal

Dr. Kadhy Seck, Coordinator of the Community Health Unit, Ministry of Health and Social Action, Senegal
Dr. Mame Cor Ndour, Chief of Party, USAID-funded Health System Strengthening Project implemented by a consortium led by Abt Associates

Background: Many countries are asking how to strengthen primary health care to accelerate progress towards universal health coverage. The involvement of all stakeholders in strengthening primary health care, from the national level to the community level, including the public and private sectors, is crucial. Although this is a well-known fact, it is rarely seen in practice.

Goal: In Senegal, the Ministry of Health and Social Action (MSAS) collaborates with partners such as Health Systems Strengthening (RSS) program and USAID to increase citizens' participation in defining primary health care needs, and in holding their health facilities accountable, and in reducing their financial risks when they need primary care. This presentation will share the experience, and the positive and negative lessons reached out from the genuine stakeholder engagement, particularly from communities, to achieve Universal Disease Coverage (UDC).

Research Objectives: The objective of the presentation is to share the advantages and limits in strengthening primary health care through citizen engagement. We will share the operational, and technical and political recommendations that Senegal must consider in continuing these universal health coverage efforts. This will help other countries seeking to accelerate their efforts in support of the UDC through primary health care.

Methods used: The authors draw on decades of collaboration between MSAS and the USAID/RSS Plus programs, the experience of the RSS Plus project at the sub-national level in six regions of Senegal and the lessons reached out from international technical experts to draw in some lessons to learn.

Main conclusions: MSAS and development partners have invested in strengthening at least three community platforms such as Community Restitution Frameworks, and Monitoring and Alerting Committees, and Health Development Committees. These platforms aim to strengthen communication between regional and district health teams, primary health care facilities and the community so that (i) community health needs are better defined and addressed by health facilities; (ii) the community and the Ministry of Health have a mutually accountable relationship and (iii) community members can engage in epidemiological monitoring and to improve SRMNIA and malaria indicators. As this communication is two-way, community members, in addition of giving their opinion, receive information about their health system, public health messages and how to access care without imposing a significant financial load. This knowledge allowed communities to enrol in community health insurance program, mutual, so that they can access primary health care services.

Through these community platforms, local political and religious leaders, community representatives, public and private health providers, and health workers meet regularly and discuss how to improve primary health care services and monitor progress. DHIS2 tools and information provided valuable data to enrich these discussions. These efforts have also been supported by partners such as USAID by providing direct funding to regional health management teams in five regions to strengthen primary health care.

Main conclusion(s): Citizens are the ultimate beneficiaries of the UDC and play an important role in his achievement. In addition to being beneficiaries, they can also make a valuable contribution to strengthening the availability and quality of primary health care services. They can ensure that the services provided (i) meet the needs of the population, (ii) are of a high quality and (iii) are sustainable through national funding. Empowering communities about their options for reducing their financial risk, for example through mutual, can also help to ensure that community demand for primary care services is met without sumptuary spending.

Who is More Corrupt: Identifying the perpetrators of absenteeism among health workers in Nigeria.

Pamela Adaobi Ogbozor, Health Policy Research Group, University of Nigeria Nsukka
Co-authors: Charles T. Orjiakor, Obinna Onwujekwe, Pamela A.Ogbozor, Prince Agwu, Aloysius Odii, Martin McKee, Eleanor Hutchinson, Dina Balabanova

Background: Unplanned and voluntary absenteeism is a serious corruption concern among health workers as it undermines effective health care delivery and compromise strive stowards Universal Health Coverage (UHC). Low resource settings are most impacted by absenteeism, yet the nature of absenteeism, perpetrators and motivators are poorly researched and understood in low resource settings.The rationale of the study is to illuminate absenteeism as a form of corruption afflicting the health sector. It is part of a new anti-corruption evidence (ACE) consortium aimed at identifying/providing evidence for types of corruption existing in Low to Middle Income Countries (LMICs) and subsequently engaging concerned, often grass root stakeholders, especially street level bureaucrats, to tackle the corruption.

Aim: In this study we aimed to identify: i) which group of health workers are mostly absent,ii) factors that contribute to absenteeism among each group and iii)effective strategies and policies that may be valuable in checking absenteeism among health workers in Nigeria.

Method: A qualitative design and approach to investigating corruption was adopted. Health workers (N = 18: 6 physicians, 6 nurses, 6 health administrators) and 6 service users were interviewed using in-depth interview topic guides. Thematic data analysis was used to explore the data.

Key findings: Health workers in rural areas were reported to be more absent from work. Drivers of absenteeism were low patient load, poor monitoring/supervision and poor social amenities to support living and working conditions. Primary health centres reportedly had higher absenteeism than other levels of formal healthcare, as they were often located in rural regions.It was widely reported that absenteeism was often noticed among higher ranking staff, albeit senior doctors were observed to be the most absent spurred by dual practice. The results showed that there were cover-up processes for absent staff. No disparity was observed in the frequency of absenteeism between males and females. However, family roles were reported to be implicated in female absenteeism, whereas, dual practice and a callous personality were blamed for males who were absent. The use of biometrics to monitor absenteeism has not been effective for health workers especially in rural areas.

Main Conclusion: The findings are helpful to health policy researchers and policy makers targeting groups that are more likely to absent from work in specific health settings. Motivators for absenteeism for the different groups could be targeted in interventions aiming to reduce absenteeism in the health sector.

Identifying and prioritising health sector corruption in Nigeria.

Charles Tochukwu Orjiakor, Health Policy Research Group, University of Nigeria, Nsukka
Department of Psychology, University of Nigeria Nsukka
Co-authors: Obinna Onwujekwe, Charles T. Orjiakor, Eleanor Hutchinson, Martin Mckee, Prince Agwu, Chinyere Mbachu, Adaobi Ogbozor, Uche Obi, Aloysius Odii, Hyacinth Ichoku and Dina Balabanova

Background: Corruption is wide-spread in the health sector, with negative effects on health and access to care. However, there is paucity of knowledge on the subject of corruption in Nigeria's health sector: its systemic nature, and ways institutions and social systems drive corrupt practices. Understanding corrupt practices thriving in health systems is important in positioning health systems for Universal Health Coverage.

Aim: To examine existing types of corruption, the incentives that enable corrupt practices and the ways and means of reducing such corrupt practices in the Nigerian health system. This will then inform the planning, designing and implementation of feasible high-impact anti-corruption strategies in Nigeria.

Methods: A systematic review of literature identifying corrupt practices reported in studies focusing on Nigeria was conducted. To further identify and prioritise main types of health sector corrupt practices and their possible solutions, a priority setting workshop using Nominal Group Technique (NGT) with 30 frontline health workers was held. The NGT was used to prioritize different types of corrupt practices according to their significance in Nigeria and how feasible they could be addressed. Microsoft Excel was used to assign numerical weights to the rankings made by participants with the most disturbing and addressable corruption emerging with the greatest value and the least corruption, the least value.

Key Findings: In the literature review, 50 publications were reviewed identifying a wide range of corrupt practices in Nigeria's health sector. In the NGT, frontline health workers originally identified 49 types of corruption which was later aggregated to 19 distinct corruption types. Ranking and re-ranking sessions revealed the top five corrupt practices that emerged (with their weighted scores) to be: *absenteeism(53), procurement-related corruption(34), under-the-counter payments(33), health financing-related corruption(28), and employment-related corruption(26)*. Participants in the NGT agreed that some of the corrupt practices could be meaningfully tackled using horizontal approaches that exclusively involve health workers, street level bureaucrats and community groups. Findings from the systematic review corroborated with corruption types identified and rated by frontline health workers and policy makers.

Main Conclusion: Corruption is pervasive in the Nigerian health sector, but there are 'horizontal' solutions that can be implemented at the health facility and community levels to reduce the scourge and improve health system performance. Further studies will be undertaken to reveal the preferences of health workers of the ways and means that could be used to tackle the most common corrupt practise, which is absenteeism.

Use of health facility committees to improve health system governance and accountability: Institutionalization and Sustainability issues in Enugu State Nigeria

Uzochukwu BSC, Okeke CC, Onwujekwe OE, Etiaba E
Health Policy Research Group, College of Medicine, University of Nigeria, Enugu-campus

Introduction/background: Facility Health Committees or Health Facility Committees have been around for some years in Nigeria in various guises. It was originally designed for the Bamako Initiative's promotion of Drug Revolving Funds but has expanded to improve health system

governance. However, there are sustainability issues with the establishment of these committees especially in areas where they are supported by a donor programme

Objective(s): To explore the institutionalisation and sustainability of these committees beyond the life of a donor agency that had supported the initiative in Enugu State Nigeria.

Materials and methods: Desk review of documents and Key stakeholders' interviews (IDIs & FGDs). The basic assumption was that committees would be institutionalised and sustainable if theyhave strong internal relevance, viability and functionality;are well integrated into their relevant community and institutional environment; and are capable of renewal and reproduction without donor supported assistance.

Results: Committees' internal viability key factors included Payments; Composition; Mentoring; LGA Role; Membership renewal; Threat of Ward Development Committees; Training and availability of Printed Reference Materials. The key factors that enhanced integration and replication included integration into the State, LGA and community Health System and Scaling up mechanism.

Conclusion and recommendations: Institutionalisation of FHC is essential for sustainability and maintaining the positive impact of FHCs especially with their proposed role in the implementation of BHCPF and other health financing reforms in Nigeria. It should be pursued with institutions in the community, LGA and the State health system. A Formal agreement with the State health system is desirable

Governance challenges and solutions within a free Maternal and Child Health (FMCH) services programme: Re-visiting the SURE-P MCH programme in Nigeria

Benjamin Uzochukwu, Enugu UNN

Introduction/background: Health governance is the totality of ways in which a society organizes and collectively manages its health affairs. The Subsidy Reinvestment and Empowerment Programme (SURE-P) included MCH related interventions referred to as SURE-P/MCH. It was launched on January 2012, but was shut down in April 2015 following emergence of a new National government. The programme was aimed at improving access to quality free MCH services. There is need to look at the lessons learnt around governance of such programmes. This will inform the planning and implementation of free MCH services as will be provided by recent health financing programme reforms in Nigeria like the Basic Healthcare Provision Fund (BHCPF)

Objective(s): To explore the governance challenges and solutions within the free MCH services in the SURE-P MCH programme.

Materials and methods: Document Reviews, IDIs and FGD as part of an ongoing Realist Evaluation of the SURE-P/MCH programme. The Siddiqia et al. 2009 framework for assessing Health Systems Governance was used for analysis

Results: The key challenges included issues around strategic vision; participation and consensus orientation; rule of law; transparency; responsiveness of institutions; equity; effectiveness and efficiency; accountability; information and ethics

Conclusion and recommendations: The FMCH within the SURE-P/MCH programme was fraught with lots of challenges. Access to information, social accountability efforts, increased effective health reporting, financial audits, equity, inclusiveness and others are associated with improved governance of the FMCH. The information provided here will assist development and implementation of similar FMCH programmes in Nigeria to ensure good governance

Parallel Session 5 – Organized session

OS 12 – Teaching Health Economics – a LMIC focus

AfHEA Organized Session: Teaching Health Economics

***Concept**:* Health economics research and analysis has substantial potential to provide solutions to some of the most critical challenges in health policy, resource allocation, and financing in countries around the world, and particularly in resource-constrained environments in low and middle-income countries (LMICs).

However, the capacity to provide and utilize this research and analysis is contingent on a sustainable pipeline of individuals with the skills, knowledge and attitudes in health economics, which in turn is reliant on local universities and educational facilities offering high quality and comprehensive courses and research opportunities.

In high income country settings, there has been a proliferation of training and educational opportunities in health economics in the past 30 years commensurate with the growth and importance of health economics research in support health policy. Growth in targeted training and educational opportunities in LMIC settings has also increased in recent years, in addition to high-income country institutions offering teaching specifically targeted to LMIC settings and/or offering teaching to individuals from LMIC settings.

This 90-minute session will explore the current status of teaching health economics in and for LMIC settings, with specific focus on sub-Saharan Africa. The session will present examples from existing institutions and will open discussion on challenges and opportunities for teaching health economics in LMICs. The discussant, representing the WHO, will reflect on the range of short courses in health systems and financing currently offered by the WHO and the potential for synergies between short courses and formal degree programs to meet the need and demand for health economics in the region.

Speakers/institutions:

- Dr Justice Nonvignon, Department of Health Policy Planning and Management, University of Ghana
- Prof Vincent Okungu, School of Public Health, University of Nairobi
- Prof Moustapha Thiam, Institute for Public Health and Reproduction Research, Cheikh Anta Diop University, Dakar, Senegal *(Instiut de Formation et de Recherche en Populaiton development et santé de la Reproduction de l'Universite Cheikh Anta Diop ed Dakar)*
- Mr Tommy Wilkinson, Health Economics Unit, University of Cape Town, South Africa
- Dr Jolene Skordis, Centre for Global Health Economics, University College London

Discussant: Matthew Jowettt, World Health Organization
Chair: Di McIntyre, Emeritus Professor, Health Economics Unit, University of Cape Town

Jolene Skordis, University College London, Institute for Global Health Economics

Founded in 1826, UCL has a long history of Economics teaching in London. However, only in the last two decades has Health Economics emerged as a separate taught discipline. UCL's Department of Economics offers a technical module on the Economics of Health aimed at advanced Economists, while UCL's Institute for Global Health offers modules on the 'Key Principles of Health Economics' and 'Economic Evaluation,' which are open to students from a wider range of disciplines.

More recently, UCL identified the need to better develop capacity in Health Economics and in 2017 launched **a new MSc** in Health Economics and Decision Science. The practise and teaching of Health Economics is commonly characterised by the integration of different expertise and perspectives including micro-economics, medical statistics, epidemiology, philosophy and management. UCL's MSc in Health Econonmics and Decision Science aims to embrace this diversity and prepare students with solid theoretical foundations, while allowing them to choose applied pathways that focus on either advanced decision science modelling or advanced applied economic theory. In doing so, we cater for able students from a wider range of backgrounds including Economics, Medical Statistics, Epidemiology, Applied Mathematics and Demography. Uniquely, students on this programme are able to select a dominant 'context of interest', focussing either on the health systems and policies of high income countries, or taking a global view of health systems and policy that places equal weight on low income contexts. Students are required to take 8 modules and complete a substantive piece of research as a dissertation or project. Very able students may go on to study for doctoral degrees, usually within the UCL Institute for Global Health Economics, where they can take advantage of the substantive body of world-leading research already underway. That research spans every continent on the globe and students are usually able to work on questions relevant to their own home context. While scholarships for masters level study are available from the Commonwealth Trust, few applications are received from African Scholars each year. This under-representation is then magnified at the doctoral level, where full funding is more scarce. Our program faces a key challenge in attracting excellent African Scholars to the study of Health Economics.

Mr Tommy Wilkinson, Health Economics Unit, University of Cape Town, South Africa

The session will present the approach to teaching health economics at the Health Economics Division (HED) in the School of Public Health and Family Medicine, University of Cape Town, and describe how this contributes to strengthening capacity in skills, knowledge and attitudes in health economics in support of Universal Health Coverage (UHC) in the region.

The HED is integrated with the research outputs of the Health Economics Unit (HEU) at the University of Cape Town and offers three main teaching streams: the specialist health economics programme within the Master's in Public Health, the post-graduate diploma on health economics and a doctoral health economics programme. In addition, HED staff contribute to a range of courses at post and undergraduate level across the University's school of health sciences and business.

The HED teaching covers central concepts in health economics, including health economic theory and microeconomics, economic evaluation and decagons making, population health, strategic purchasing and health financing and organization. The HED consists of eight staff, with numerous guest lectures on specialist topics.

The post-graduate diploma in health economics can be completed remotely with dedicated onsite block teaching. Due to its format and use of online resources, it contributes to building

basic health economics skills and knowledge amongst those that may not have capacity to undertake formal Master's level instruction and research, such as health managers and policy makers. As such, it is a highly popular program and limited by available faculty.

Key challenges associated with teaching health economics at HED include ensuring dedicated time to dedicate to student teaching and supervision and ensuring appropriate support for students' post-graduation, particularly for individuals moving into policy or health management. Continuing to strengthen national, regional, and global networks for programme quality improvement and external supervision will contribute to the division's capacity strengthening activities. Dedicated funding to expand teaching outputs would assist in course development to match the demand for health economics teaching to available supply in a sustainable manner.

Justice Nonvignon University of Ghana

The objective of this presentation is to describe the current status of teaching health economics and related courses at the University of Ghana and contribute to discussion on the future direction of teaching health economics in Africa through sharing current challenges and opportunities in the area. The presentation will also highlight the need for a collaborative effort across institutions in Africa which have a strong capacity in teaching health economics, in order to share innovation in techniques.

The University of Ghana School of Public health was established in 1994 through a collaboration with the Ministry of Health and the University of Ghana, to train mid-level manpower required to champion health sector reforms in Ghana and in the sub-region. One of seven departments in the School of Public Health, the Department of Health Policy, Planning and Management hosts and teaches graduate level courses in health economics and related areas, including to Master of Public Health, MSc Monitoring and Evaluation and doctoral students. The full-time faculty strength of eight – four of whom are trained health economists – and affiliate faculty from cognate institutes across the University – six of whom have training in or experience in teaching health economists. The department also hosts the Health Economics, Systems and Policy Research Group of the University of Ghana, which comprises nine faculty across university departments with expertise in health economics, systems and policy. In addition to the courses above, the department is also preparing to roll out a Master of Health Economics Programme, which is at final stages of accreditation by relevant national bodies.

The department, through its faculty, maintains collaborations with leading health economics training institutions in Africa, Europe and North America, with a wide network of people who contribute to teaching through guest lectures, and to supervision of doctoral students through serving on advisory committees of students. Key challenges include high demand from prospective students with limited space and faculty to teach and supervise them in health economics. An innovative solution to the above could be reassessing and institutionalizing teaching collaboration across African institutes expand health economics capacity on the continent

Parallel Session 5 - Oral presentations

Parallel session 5-1 – Health Financing and policy

Evaluation of Public Policy for Population Wide Health Reforms in Sub-Saharan Africa; A Critical Review of Salt Reduction Policies in South Africa & Nigeria

Amable Ayebare, Liverpool School of Tropical Medicine

Background: A maximum dietary salt intake of less than 6g per day is the recommended adult guidelines from the World Health Organisation. Increased salt intake is a known risk factor for raised blood pressure (hypertension) which in turn increases the chances of developing cardiovascular diseases among many other non-communicable diseases (NCD's)

Rationale: NCD's are the leading cause of morbidity and premature mortality in the region. With the existing health systems already grappling with the burden of communicable diseases; limited resources and increasing effects of urbanization; there is need to facilitate the use of population wide health interventions to reduce the rising incidence of NCD's. This is in line with achieving target 3.4 of the SDG agenda: reduce by one third premature mortality from non-communicable diseases through prevention and treatment and promote mental health and well-being by 2030.

Aim: To evaluate the existing policies supporting policy environment on salt reduction in the sub-Saharan Africa with particulate goal of gaining insight on policy development processes and implementation strategies and their eventual impact on population-wide health outcomes and reforms

Methods: Using document analysis; the existing public policies on salt reduction in Nigeria and South Africa were reviewed against pre-set criteria from global recommended guidelines. Policies were also examined using checklists developed from known policy evaluation frameworks to assess relevance to cause and utility to context

Findings: Most countries in SSA do not have national gazetted salt policies. The few existing policies are backed by context specific needs assessment. There is limited stakeholder engagement in policy processes and discussions and approaches to implementing the public policies isn't based on what works. Both countries showcased limited evidence on monitoring and evaluation structures of existing policies.

Conclusion: There is need to invest in context-driven empirical research coupled with relevant multi-stakeholder partnerships during the process of policy formulation. Both approaches to implementing public policy when cohesively planned out present viable pathways to not only reducing the incidence of NCD's but in the long run achieve the health related SDG's

Macro-economic determinants of public expenditure for health in sub-saharian african countries

Gnande Romeo Boye, CIRES

The World Health Organization is promoting universal health coverage to reach the third point of the Sustainable Development Goals. Funding from the public sector is essential to move towards this goal. But how can this funding be further increased in sub-Saharan African countries where income levels are already low? And where the poverty rate for him was around 41.1% in 2015.

A UN study in 2015 suggests increasing public health spending as a function of GDP growth. Indeed, an increase in GDP leads to an increase in public health expenditure. But other authors find that health spending in general, respond very weakly to the change in income. This situation is explained by the fact that income is not the only factor explaining the increase in public health expenditure. Indeed, some authors refer to political and institutional factors as the main explanatory factors for the increase in public health expenditure. In the case of Sub-Saharan African countries, what are the factors that influence the evolution of public health spending?

The objective of this article is to determine the explanatory factors of public health expenditure in sub-Saharan Africa.

The analysis in this study is conducted using a nonlinear model on which the generalized moments method was applied based on a sample of 30 countries in sub-Saharan Africa and observed from 2000 to 2015.

The main findings of this study indicate that for the majority of countries in sub-Saharan Africa, the variables that have a positive effect on the relative share of public health expenditure in GDP are: the growth rate of GDP, democracy, the ability to collect taxes and the fair allocation of public resources. In addition, the results of the estimates show that social unrest leads to a decline in the relative share of public health expenditure in GDP.

The results of the study imply that the main explanatory factors of public health expenditure are the current fiscal capacity of countries, the priority given to health and the sound management of public resources. In this perspective, broadening the tax base and improving governance could increase public health spending in sub-Saharan African countries.

Fiscal Space for Health at Decentralized Level: The Potential Impact of Fiscal Arrangements in Kenya

Kenneth Mungej, PhD Fellow, Initiative to Develop African Research Leaders, KEMRI Wellcome Trust Research Programme
Edwine W Barasa, Health Economics Research Unit, KEMRI Wellcome Trust Research Programme
Kara Hanson, Faculty of Public Health and Policy, London School of Hygiene and Tropical Medicine
Jane Chuma, Senior Health Economist, World Bank Kenya Country Office

Background Universal health coverage (UHC) arrangements anticipate a significant role for public expenditure. Fiscal space for health is the capability of a government to assign more resources to health without affecting its financial and economic position. While fiscal space for health is usually assessed at national level, decentralization is a feature of many health systems. The objective of the study was to perform a critical assessment of the fiscal space for health at decentralized (county) level in Kenya and its implications on the attainment of UHC.

Methods We used a qualitative multiple case study approach with the unit of analysis being the county. We developed and applied a conceptual framework that accounted for changes in the government-citizen relationship and the four pillars of fiscal decentralization: revenue and

expenditure assignments, intergovernmental transfers and subnational borrowing. Three case study counties were purposively selected based on their level of own revenue generation and public health expenditure (PHE), and sophistication of health systems. Data were collected through document reviews (statutes, policies, and reports), in-depth interviews (n=25) and focus group discussion (n=17) with citizens who were members of organised groups (e.g. community-based organisations).

Results Expenditure and revenue assignments were described in policy and supported by institutional arrangements. There was overlap in performance of functions, others were neglected, and institutional arrangements to address conflicts did not function as required, though the impact on PHE was unclear. Fiscal decentralization resulted in high levels of county PHE. Conditional grants that were earmarked and supported by contracts and organizational capacity to monitor performance increased PHE. PHE was negatively impacted by inappropriate budget constraints e.g. fixed ratios on development and recurrent spending. PHE was also negatively influenced by poor vertical transfer and conditional grant design, irregularity of financial flows, planning capacity gaps, and favouring of capital expenditure. Service mix remained unchanged even though the design and implementation of conditional grants disrupted county planning activities, encouraged hospital-centric expenditure. and undermined accountability between national and county levels.

Discussion/Conclusions Well-functioning institutional arrangements will address conflicts in expenditure assignments and other implementation challenges. Dependency on transfers from central level is likely to continue in the near term. The design and operationalization of these transfers, and of conditional grants in particular, is critical to ensuring county-level PHE helps meet equity, efficiency and quality of care goals of UHC.

Demonstrating the benefits of investing in rehabilitation: evidences from 3 Sub-Saharan African countries studies

Anna Boisgillot, Lyon CERDI, Humanity & Inclusion

Background Integrated rehabilitation services in the health system are one of the challenges of the universal health coverage and the WHO dynamic “Rehabilitation 2030”. Persons with disabilities are the most expose to catastrophic financial risk, and it is particularly due to additional specific care needed and a high unemployment rate.

Aims and objectives of the research This study aims to assist rehabilitation stakeholders to strengthen the health system to provide rehabilitation services through a situation assessment of the financial access to rehabilitation services in low-income Sub-Saharan African countries. This study seeks to describe and analyze the rehabilitation sector in financial and economic terms, and identifies its strength, weakness and priorities.

Methods The analysis focused on three low-income economies, Burkina Faso, Rwanda, and Madagascar where economic studies were conducted respectively in 2015, 2017 and 2018. Policy documents, past research and studies on financial access to rehabilitation services have been studied. Interviews, with semi-structured questionnaires, have been organized with state and non-state actors involved within the rehabilitation sector. This evaluation analyzed the financing of this sector for all its components from human resources to social protection programs in aim to highlight the estimated gap of investment for this sector.

Results This study highlighted some convergences in the rehabilitation sector between these three countries. We observed a lack of protection mechanisms for persons who need rehabilitation care, in particular for prosthetics and orthotics, in addition to geographical barrier

that reduce access to these healthcare services. Another strong point of convergence is related to a shortage of human resources for rehabilitation care that need to be financed. In Madagascar, more than 24 000 physiotherapists are missing to satisfy the demand for rehabilitation care in the country. A large investment from the government is required to cover the various needs of this sector. In Rwanda, there is a needed investment from 20% to 36% of the Ministry of Health budget.

Conclusion Despite significant efforts from governments to legally formalize and improve rights of persons with disabilities, applications of laws, and taking care of this issue remains limited. Many opportunities exist to improve accessibility to quantitative and qualitative rehabilitation services in these countries, national efforts must strengthen the health system in order to provide available rehabilitation services at all levels of healthcare. Analyses of financing of rehabilitation services in the health system provide guidance for the government to determine appropriate financing volume and mechanisms, especially for informal sector persons. The objective of universal health coverage will not be reached if rehabilitation is not a priority of the government.

Key words: Rehabilitation, equity, UHC, health financing, social protections, sustainable financing, persons with disabilities, Africa

Fiscal Policies for Health

[1]*Gavin Surgey,* [2]*Peter Hangoma,* [2]*Maio Bulawayo,* [2]*Mwimba Chewe,* [1]*Nick Stacey,* [1]*Karen Hofman*
[1]*PRICELESS SA (Priority Cost Effective Lessons in System Strengthening South Africa)*
School of Public Health, Faculty of Health Sciences, University of Witwatersrand
[2]*School of Economics, University of Zambia*

OBJECTIVE Zambia is experiencing a rise in the mortality and morbidity associated with obesity related non-communicable diseases (NCDs); including cardiovascular disease, diabetes mellitus (Type II), and cancers. This will all have an associated cost of treatment, specifically with the introduction of the newly introduced NHIF bill.

The excessive consumption of sugar from non-alcoholic caloric beverages such as sugar-sweetened beverages (SSB), has been associated with obesity and related diseases such as CVDs and diabetes. The introduction of a sugar tax has potential to reduce the burden of NCDs and raise revenue which will add to the Zambian Budget

METHODS A mathematical model was developed in Microsoft Excel to simulate the effects of introducing a SSB tax in Zambia. Baseline consumption values for SSBs and their substitutes were derived from the 2015 Zambia Living Conditions Monitoring Survey (LCMS) data. Age and sex specific Body Mass Index (BMI) were computed from the 2017 Zambia NCD STEPS Survey. Own-price and cross price elasticities from the literature were applied to find the effect of a 25% excise tax on SSB consumption, energy intake and the corresponding change in BMI, obesity prevalence, deaths averted, and life years gained. We conducted Monte Carlo simulations to construct 95% confidence bands and sensitivity analyses to account for uncertainties in key parameters.

RESULTS Over a 40-year time horizon, a 25% SSB tax was found to avert 2,526 deaths. The tax was found to potentially generate an additional US$ 5.46 million (95% CI: US$ 4.66 million – US$ 6.14 million) in revenue annually.

DISCUSSION AND CONCLUSIONS The introduction of an SSB tax in Zambia has the potential to significantly decrease the amount of disability-adjusted life years lost to lifestyle-related disease in women, highlighting important health equity outcomes. Women have higher baseline BMI and

therefore are at higher risk for NCDs. In addition, the significant revenue generated through the introduction of an SSB tax may make an important contribution in financing the Zambian health system, given the limited financing options presently available.

Utilization of free maternal healthcare services under the National Health Insurance Scheme in rural Ghana: Results from the Kintampo Health and Demographic Surveillance System (2005 – 2015)

Rebecca Kyerewaa Dwommoh Prah. Kintampo Health Research Centre.
Stephaney Gyaase, Theresa Tawiah, Mahama Abukari, Kwaku Poku Asante

Background: Thousands of women die yearly through pregnancy and childbirth and this is highest in Sub-Saharan Africa. This can be reduced through improved access to skilled and emergency care services in these countries. However for most poor households, lack of financial resources hinder the ability to access skilled delivery. In 2008, the Government of Ghana introduced a policy on free maternal healthcare under the National Health Insurance Scheme (NHIS) to provide access to free maternal healthcare services for all pregnant women and nursing mothers resident in Ghana and reduce maternal mortality.

Aim: To assess the trends in the utilization of maternal healthcare services and maternal mortality in rural settings in Ghana, following the introduction of the policy on free maternal healthcare under the NHIS.

Methods: Secondary data from longitudinal household surveys on pregnancies and deliveries conducted in the Kintampo North Municipality and Kintampo South District in Ghana from 2005 to 2015 was used for this analysis. These surveys were conducted by the Kintampo Health and Demographic Surveillance System (KHDSS) and it involved all pregnant women and nursing mothers within the KHDSS study areas. The analysis compared statistics from before and after the implementation of the policy to determine trends in utilization of maternal healthcare services and maternal mortality. Stata version 13.1 was used for the analysis.

The key findings: Utilization of maternal healthcare services increased after the introduction of the policy in 2008. Facility delivery increased from less than 30% prior to 2008 to about 55% in 2015, (eight years after the introduction of the policy). This was matched by a decline in home deliveries from above 50% prior to 2008 to about 34% in 2015. The percentage of women attending four or more Ante-natal care visits increased from less than 1% prior to 2008 to about 68% in 2015. Maternal mortality also decreased over time after 2008. As at 2015 about 76% of the study population were covered by the policy.

The main conclusion: Utilization of maternal healthcare services increased after the implementation of the policy on free maternal healthcare under the NHIS in 2008. Increasing the coverage of the policy could further improve access to maternal care services, especially for women from poorer households.

Financing Universal Health Cover (CMU): a single agency funded by a tax on products

**Mansoum NDIAYE, **Hervé LAFARGE*
** CESAG, ** Paris Dauphine University*

Context. Financial risk protection is a component of Universal Health Coverage (UHC), which is developing with difficulty in West African countries. It faces the characteristics of the context of poverty: a largely informal economic activity, the omnipresence of the behavior of financial resources and the weak legitimacy of the post-colonial states. Poverty has everywhere imposed

compulsory social protection, the informal imposes voluntary contributions, the capture of money undermines microinsurance, the low legitimacy of the state creates mistrust.

Goal. Demonstrate the feasibility and potential of a CMU device consisting of a single agency, funded mainly by a tax on products.

Objectives:

1) Analyze the strengths and weaknesses of CMU devices developed in Francophone West Africa.
2) Evaluate the financing needs of a single agency acting as a paying agent
3) Evaluate the financing potential of a tax on products
4) Show the regulatory potential of this device.

Methods: Make a documentary analysis of laws, decrees, draft laws and decrees, national health accounts, state budgets.

Results All states are developing and developing CMU schemes based on the strengthening of existing mechanisms (AMO, free) and the development of voluntary and subsidized membership mutuals. This last part is also the most problematic.

Universal and sustainable coverage requires the establishment of a unified, non-contributory facility financed from domestic resources.

A system consisting of a single agency that takes care of the invoices of all citizens, financed by a tax on products (VAT type and customs duties), seems economically sustainable.

This arrangement has a strong potential to strengthen the information system and regulation of the supply of care.

Conclusion: Such arrangement should be experimented.

PHC and Healthcare financing **by income tax revenues, and inequalities reduction in Côte d'Ivoire**

Olivier Zohoré KOUDOU*, Ph.D Candidate in Economics, University Félix Houphouët Boigny of Abidjan - Côte d'Ivoire*

Background: In most developing countries, the goal of universal health coverage (UHC) is not easy to reach due to the fact that large, resource-poor populations have limited access to health services. Given that resource-poor people cannot afford out-of-pocket health expenditures, or can pay for them only by sacrificing other priorities, a health financing system under which people are required to pay for use directly is one of the major barriers to reaching UHC. Although cost sharing is necessary to prevent the overutilization of health services arising from the potential problem of moral hazard, universal coverage is more likely to be reached when the out-of-pocket ratio for direct payment is sufficiently low.

Objective: Our paper studies the impact of tax-financed universal health coverage schemes on macroeconomic aspects of labor supply, asset holding, inequality, and welfare, while taking into account features common to developing economies, such as informal employment and tax avoidance, by constructing a dynamic stochastic general equilibrium model with heterogeneous agents. Agents have different education levels, employment statuses, and idiosyncratic shocks. This paper tries to fill the research gap by exploring the following questions. First, what is the impact on individuals in terms of their optimal decisions for labor supply and asset holdings?

Second, what are the impacts on inequality and social welfare? Third, what are the different impacts at both the aggregate and disaggregate levels?

Methods: To quantitatively answer these questions, the paper adopts a modern dynamic stochastic general equilibrium framework, which is being increasingly used for the study of social security and public finance. Broadly, the paper aims to provide a rigid framework for evaluating such socioeconomic policies that can help policy makers to understand the impacts across different social groups, as well as the aggregated outcomes.

Result/conclusion: Given three tax financing options, calibration results based on the Ivorian economy suggest that the financing options matter for outcomes both at the aggregate and disaggregate levels. Universal health coverage, financed by labor income tax revenue, could reduce inequality due to its large redistributive role. Social welfare cannot be improved when labor decisions are endogenous and distortions are higher than the redistributive gains for all tax financing options. In the absence of labor supply choice, mild welfare gains are found. In a broader sense, the paper aims to provide a frame for policy evaluation of socioeconomic policies from both macro and micro perspectives, taking different social groups into consideration.

A review of the incidence and determinants of catastrophic health expenditure in Nigeria: implications for universal health coverage

Background:. Health expenditures that result in financial hardship or impoverishment are catastrophic and impede Universal Health Coverage (UHC). Every year, some 100 million people fall below the poverty line as a result of out-of-pocket expenditures on health, and a further 1.2 billion, already living in poverty, are pushed further into penury for the same reason**.** Three key preconditions for Catastrophic Health Expenditure (CHE) identified as availability of health services requiring payment, low capacity to pay, and the lack of prepayment or health insurance are present in Nigeria. The most widely used thresholds for CHE are 10% of the household's total consumption and 40% of the household's consumption net of expenditures on basic necessities (capacity to pay). The aim of this review was to review studies conducted on incidence and determinants of Catastrophic Health Expenditure (CHE) in Nigeria.

Methods: This study was a systematic review. A MEDLINE Entrez PubMed search was performed in August 2017 and studies on household (HH) incidence and determinants of CHE in Nigeria between 1997 and 2017 sought. Search terms used include household, out-of-pocket, catastrophic expenditure, Nigeria. Primary research on CHE done in Nigeria were selected. Studies not estimating CHE at the household level, on CHE in animals or not published in English were excluded.

Results: A total of 13 relevant studies that fulfilled the study inclusion criteria were identified out of 62 studies found. Ten were cross-sectional surveys while 3 were secondary data analyses. All thirteen studies reported on the determinants of CHE while eleven of them reported on the quantitative incidence of CHE in Nigeria using different thresholds. Out of the 11 studies that reported CHE, 1 reported CHE of 20.7% at >10% total HH income. At 10% Capacity To Pay (CTP) 9.6-96.7% HH had CHE, at 40% CTP, 3.2%-100% HHs incurred CHE. One study reported 8.2% CHE at 5% CTP. CHE was more among the poor, elderly, rural dwellers, private facility utilization, female gender and the non-insured among others.

Conclusion: Incidence of CHE is marked among Nigerians. UHC should be made a political priority in Nigeria and contextually feasible strategies to reduce CHE adopted. Exemptions for payment should be applied for those at-risk of CHE such as the poor, elderly and rural dwellers. Formal and informal sector mandatory prepayment insurance mechanisms should utilize existing local social institutions to increase coverage.

Parallel Session 5-2 Maternal and child health care 2

Socioeconomic correlates and the demand for child healthcare services in Ghana, Kenya and Zambia

Eric Arthur, Kwame Nkrumah University of Science and Technology

The health of the child is an important factor for proper childhood development. Unfortunately, efforts to improve child health in many countries have not yielded the desired results as many children do not receive appropriate health care when sick, hence contributing to high child mortality and morbidity from avoidable causes. To address this problem, it is important that we understand the factors that drive the demand for child health care services. This study, employing the binary and multinomial logistic regression models, examines the effect of household socioeconomic status on the demand for child health care in Ghana, Kenya and Zambia using data from the 2014 Demographic and Health Surveys. The results indicate that the likelihood of seeking appropriate health care for the child is higher when both parents' make decisions in the household compared to when the woman alone makes decisions. The findings further indicate that the odds of seeking for treatment for the child falls with the birth order and age of the child, but increases with household wealth, insurance status and proximity to the health facility. Working women are more likely to demand for child health care than their counterparts who are unemployed. Our results, therefore, suggest that improving child health will need the participation of both parents in the household on such decisions. Besides, there is the need to educate parents on the importance of seeking for appropriate care for all the children born irrespective of the birth order and age of the child. There should also be deliberate efforts to improve the economic lot of households and encourage them to participate in health insurance schemes to enable effective utilization of health care services for the child in the efforts to improve child health in these countries.

Kenyan women's preferences for place of delivery: A comparative Discrete Choice Experiment between Embakasi North sub-County and Naivasha sub-County, Kenya.

Jackline Oluoch-Aridi[1], Francis. N. Wafula[1], Mary Adam[2] and Gilbert K'okwaro[1]
[1]Institute of Healthcare Management, Strathmore University
[2] AIC Kijabe Hospital

Background: Many sub-Saharan Africa countries over the years have introduced policies aimed at removing barriers to access health service utilization including removal of user-fees. The Kenyan Government in 2013 via presidential decree initiated such a policy with an aim of increasing access to facility based delivery in an attempt to reverse Kenya's high maternal mortality ratio. Despite the new policy women continue to choose to deliver their babies at home and women are also bypassing smaller primary health facilities and having their babies at tertiary facilities. Health system factors related to place of delivery are well studied however women's preferences that drive the demand for certain health facilities over others are not well understood. This study aims to fill this research gap by using a discrete choice experiment to

establish the relative importance of attributes that drive women's preferences for a place of delivery to improve the understanding of patterns of maternal health service utilization.

Objectives: The study aims to examine women's preferences for place of delivery and establish the relative importance of attributes of the health facilities that drive women to choose facilities where they deliver their babies. The study will compare attributes of women in a peri-urban context in *Embakasi* North sub-County with those in a predominantly rural context in *Naivasha sub-County* in Kenya.

Methods: The study intends to utilize mixed methods framework incorporating both a qualitative study and a quantitative methodology known as Discrete Choice Experiment (DCE) to determine the most important health facility attributes preferred by women when choosing their place of delivery. Household characteristics data for women will also be collected via a cross-sectional survey.

Conclusion: This study hopes to establish the relative importance of health facility attributes valued by women particularly in the two settings in Kenya and use the information to inform policy making both at the devolved county units and National Ministry of Health. This information should be used for resource reallocation to promote health equity and efficient service delivery within health facilities in both urban and rural areas.

How secure are primary health care facilities to provide services for the vulnerable population?: Experience of providers in a maternal and Child Health programme

Enyi Etiaba, Benjamin Uzochukwu, Enugu University Of Nigeria

Background: Maternal and Child Health (MCH) is a priority in Nigeria. Although mortality rates declined in the MDG years; Nigeria did not meet targets 4 and 5. Access to services remains one of key challenges. Abundant literature exists on supply and demand side barriers to providing and accessing proven effective interventions. However, little literature exists on how security within health facilities affects provision and use of services, especially by vulnerable pregnant women from socio-economically disadvantaged backgrounds.

The Nigerian government, addressed this through a programme which aimed to mitigate both demand- and supply-side barriers to MCH services for the underserved population. During 2012-2015, the programme trained and deployed midwives and community health workers (CHWs) in primary healthcare facilities; upgraded infrastructure (including perimeter fencing in some facilities); provided supplies and financial incentives to pregnant women to access and utilize services. A novel group of CHWs; village health workers, were also trained and deployed to mobilise pregnant women and assist them to access services.

Objective: Aim of the study was to evaluate the effectiveness of these interventions towards providing equitable access to services to the rural and underserved population.

Methods: This on-going study employs a phased mixed-methods Realist Evaluation approach to assess how and under what circumstances programme worked to achieve outcomes in Anambra state, southeast Nigeria. We conducted in-depth interviews with facility managers and health workers. Specific programme theories, showing causal pathways of change, have been continuously validated and refined throughout data collection and analysis.

Key Findings: The programme had upgraded facilities and with help of the community attempted to keep facilities secure, for example through erecting perimeter fences and deployment of watchmen. However, most health workers felt insecure at night, due to lack of security guards. As a result most health workers who were all female did not feel confident to

provide services at night. The sense of lack of security had detrimental implications for achieving programme outcomes, one of which was to increase facility deliveries by skilled birth attendants.

Conclusion: Poor security contributed to lack of feeling of safety by this vulnerable population group and this directly influenced provision of round-the clock MCH services in an otherwise well-funded and equipped programme. Given that significant proportion of deliveries fall during night time, ensuring adequate security at night will contribute to round-the-clock MCH care and therefore can help address the needs of most vulnerable populations.

Financing Family Planning Activities Using Domestic Resources at District Level in Malawi

Christine Ortiz, The Palladium Group - Health Policy Plus

Background: Malawi's Costed Implementation Plan for Family Planning (CIP) guides family planning (FP) programming in Malawi, and seeks to increase domestic financing for FP at national and district level.[5] In Malawi, decentralization gives District Councils the mandate to develop budgets that reflect local priorities, including determining which FP activities are implemented annually. Councils are critical in earmarking resources for FP activities and reducing partner and donor dependency. This abstract describes the processes, impacts and lessons learnt from an advocacy intervention carried out by the USAID-funded HP+ project, in collaboration with the Reproductive Health Directorate (RHD) in the Ministry of Health aimed at integrating the CIP into the District Improvement Plans (DIP) in four districts in Malawi.

Objectives: To test advocacy approaches to increasing government financing FP activities at the district level.

Methods: RHD and HP+ followed a multi-stage approach through national and zonal consultative workshops to prioritize FP activities to be programmed in Malawi. HP+ and RHD then focused on four selected districts, where additional workshops provided evidence on status of sexual and reproductive health and FP in the district based on national surveys such as MICS and MDHS; and building advocacy skills of district teams, which comprised members of the District Health Management Team, FP focal person, youth-friendly health services coordinators, and DIP coordinators. They prioritized high impact activities for changing sexual and reproductive health outcomes in the district. HP+ conducted a follow-up workshop to assess progress and to provide technical assistance. After completing the DIPs and the approval of budgets, a review meeting was conducted to review the advocacy process.

Findings: District FP coordinators were better advocates to key decision makers on the importance of FP for achieving district objectives. Machinga was the only district that allocated FP funds in their government budget, even though the district had a reasonable number of partners supporting FP activities compared to the others.

Conclusion: The district health budgets lack resources generally, and district leaders prioritise curative over FP (preventative) services. FP activities are left to donors to support. In response, HP+ has expanded its advocacy scope to target the district councils, with the hope of influencing an increased allocation to health in the overall budget, so that it reasonably covers a range of health needs, including FP.

[5] Malawi FP Costed Implementation Plan Pg 29

Factors Affecting Access and Utilization of Child Health Care in Nigeria

Rifkatu Nghargbu, Federal University Lafia

Nigeria has one of the highest under-five mortality rates in the world at 128 out of 1000 live births. Although the under-five mortality rate decreased from 201 deaths per 1,000 live births in 2003 to 128 deaths per 1,000 live births in 2013, Nigeria could not achieve the Millennium Development goals (MDGs target of reducing the under-5 mortality to 64 deaths per 1,000 live births in 2015. The objective of this paper is to estimate the factors affecting access and utilization of child health care in Nigeria using DHS data from 1990-2013. Logit and multinomial regression results shows that wealth, education, region, mothers age and child age are the most significant factors affecting child health care access and utilization. Hence child health care utilization can be improved if education and empowerment programmes are enhanced.

Investing in the Midwifery profession in Cameroon: a strategic condition to strengthen maternal health coverage

Yves Bertrand DJOUDA FEUDJIO, Sociologist / Lecturer / University of Yaounde I
Antoine SOCPA, Anthropologist / Professor / University of Yaounde I

Context: In Cameroon, the two decades (80-90) of economic recession were marked by the retreat of the state which, until 2012, suspended direct training to the midwifery profession (SF), thus abandoning maternity services in the face of a critical shortage of qualified human resources. All public maternity services in Cameroon must cover a need that requires the availability of 5,400 midwives (UNFPA 2013: 6). In 2011, the number of women of childbearing age (15-49 years) was 4,817,000; the number of births per year was 701,000. However, the density of midwives, midwives and obstetricians was only 1.8, indicating a real shortage of caregivers (UNFPA, 2011: 60). The current ratio estimates more than 39,483 women for the services of a single midwife, one midwife per 5,000 live births. This crisis in the availability of SF human resources contrasts with the worrying epidemiological situation of 782 maternal deaths per 100,000 live births (DHS, 2011).

Objective: This paper aims to make a situational analysis of the many crises that shape the midwifery profession and contrast with the promises to combat maternal mortality in Cameroon.

Methodological and theoretical framework: This communication is a specific aspect of a broader postdoctoral project on the issue of supply and access to maternal health care in Cameroon. In addition to the literature review, comprehensive observations and interviews were conducted with midwifery providers, specifically in rural health facilities. Data collection covered approximately 15 peripheral level health structures reasonably selected for case studies. Data analysis is part of a comprehensive sociological approach.

Main results: Like many countries in the South, Cameroon faces a quantitative and qualitative deficit of Midwives. Although the Cameroonian health authorities are strongly committed to the fight against maternal mortality, the midwifery profession is still very poorly organized, is subject to interference by many actors with very diverse and contradictory profiles and practices, which are not always part of the fight against maternal mortality. national or international standards.

Main conclusion: In Cameroon, there is an urgent need to invest more in the midwifery profession to hope to strengthen the coverage of maternal health.

Key words: invest, midwife, strategic condition, maternal health, Cameroon.

Women Empowerment, Spousal Violence and Maternal and Child Health Seeking Behaviors

Kwame Ansere Ofori-Mensah, Dr. Eric Arthur
Kwame Nkrumah University of Science and Technology

Gender based discrimination has been identified to be a major constraint to economic wellbeing across countries. This is particularly relevant in developing countries where system is not well developed to deal with such challenges. In recent years, empowering women and reducing gender-based violence has dominated national and international policy spaces. Several targets of the recently launched sustainable development goals are directly or indirectly linked to empowering women. The reason for this is not far-fetched; empowering women has several pathways to welfare improvement, including education and health. In this study, we seek to understand the effect of women's empowerment and spousal violence on maternal and child health seeking behaviors.

The research analyzed data on women aged 15-49 who were interviewed on spousal violence from the 2008 Ghana Demographic and Health Survey (GDHS). A total of 2,442 women were sampled for the purpose of the current study. To measure women's empowerment, we develop a composite Women's Empowerment Index (WEI) using Multiple Correspondence Analysis (MCA) that included four indicators; household decision-making, women's education, ownership of land or house and proportion earning cash. Spousal violence was measured by a dummy variable that takes the value of 1 if a woman has ever experienced some form of violence and 0, otherwise. Child and maternal health indicators used in this study include delivery care by skilled attendants, contraceptive use, immunization and low birth weight. The models were estimated using logit technique.

The results suggest a positive and statistically significant relationship between spousal violence and contraceptive use. This implies that victims of spousal violence were more likely to use contraceptive. On the other hand, we found empowered women were less likely to use contraceptives. There was a negative and statistically significant relationship between spousal violence and delivery by skilled birth attendants. Victims of spousal violence were less likely to use delivery care from skilled attendants. We also found empowered women were more less likely to be delivered by skilled attendants. There was evidence of strong negative relationship between women empowerment and low birth weight. That is, more empowered women less likely to have children with low birth weight.

These findings indicate that women empowerment and spousal violence have important implications for the health of women and their children. It is advocated that an approach to improving the health of women and children in Ghana incorporate programmes to promote women's empowerment and reduce gender-based violence.

Parallel Session 5-3 Health behaviours and perceptions

Are NHIS clients served inferior and sub-standard medicines?: Perceptions and factors that influence medicines access and quality under the NHIS in Ghana

Daniel Kojo Arhinful, (1); Daniel Nana Yaw Abankwah (2); Irene Akua Agyepong (3);

1:Noguchi Memorial Institute for Medical Research, University of Ghana, Legon, Accra, Ghana; 2:School of Public Health, University of Ghana, Legon
3:Research and Development Division, Ghana Health Service & Public Health Faculty, Ghana College of Physicians and Surgeons

Background The National Health Insurance Scheme (NHIS) has since its establishment in 2003 become an integral part of Ghana's strategy towards the attainment of Universal Health Coverage (UHC). Increased enrolment and utilization over the years has however been accompanied by perceived quality of care issues, lowering confidence and sustainability challenges in the scheme.

Objective As part of a review to inform and introduce reforms to enable it achieve its strategic social goals, this paper presents the outcome of a study that examined the factors that influence medicines access and quality under the NHIS and perceptions that NHIS clients are being served inferior and sub-standard medicines compared to non NHIS clients.

Methods The study design used a mixed methods approach involving cross sectional exploratory qualitative and quantitative data collection and analysis techniques comprising focus group discussions, in-depth interviews, exit interviews and a prescription survey in four (4) purposively selected regions in all three ecological zones of Ghana.

Results Issues around medicines access including quality emerged as contested topic under the NHIS. Delays in the payment of claims for services rendered to NHIS members on behalf of the scheme was cited as a major factor that influences access to medication. Providers complained about low reimbursement costs that does not take account of current economic and inflationary conditions so some providers resort to prescribing lower priced generics from less known pharmaceutical companies. On the other hand the insured members considered being issued with prescriptions to purchase them outside and the resort to lower priced generics or "unfamiliar" brands that the non-insured clients receive better quality medicines. However, when this notion was validated using WHO rational use indicators prescription analysis, the results actually showed that from a medically rational perspective, the insured are receiving more appropriate care.

Discussion Lay and popular notions about medicines tend to perceive and interpret appropriate treatment in settings like that NHIS in Ghana differently. Insured members in the Ghana NHIS are receiving more appropriate care than the non-insured because the scheme has become an important enforcer of rational prescribing through claims auditing.

Conclusion Systemic interrelated factors influence perceived access and quality use of medicines in the NHIS in Ghana that need to be tackled to improve membership drive, retention and confidence in the scheme.

Perceived barriers and facilitators to adherence to antiretroviral therapy among persons living with HIV in the Upper East Region.

Gifty Apiung Aninanya[1], Michael Wombeogo[1]
[1]University for Development Studies, School of Allied Health Sciences, P. O. Box 1350, Tamale, Ghana

Antiretroviral therapy (ART) suppresses HIV replication and decreases progression to Acquired Immune Deficiency Syndrome (AIDS). High levels of adherence to ART are required to improve the quality of life of persons living with HIV and AIDS (PLHIV). However, little evidenceexists on barriers and facilitators to ART adherence in Ghana. This qualitative study examined barriers and facilitators to ART adherence among PLHIV in the Upper East Region.

Using descriptive phenomenology approach to qualitative enquiry, we conducted five focus group discussions (n=31) and ten (10) in-depth interviews with persons living with HIV. In addition, twelve in-depth interviews were conducted with health staff. Purposive sampling technique was used to select study participants. Colaizzi's descriptive phenomenology approach was adopted and used to code the data with the aid of Nvivo 11 software before thematic content analysis.

Barriers that affected adherence to antiretroviral medicines were lack of nutritional support,side effects of ART, occasional travels,inadequate social support,lack of health insurance, access to transportation, economic problems, lack of confidentiality, negative attitudes of some health staff, queuing up for antiretroviral, non-disclosure of HIV status and stigma and discrimination. Perceived facilitators to ART adherence were appropriate counselling and education, provision of nutritional support, improved health status due to ART, the use of reminder aids, pregnancy and stigma-reduction policies.

Several factors have been found to have a negative effect on PLHIV adherence to antiretroviral therapy. Nonetheless, it is recommended that effective and appropriate counselling techniques, provision of food supplements, stigma-reduction policies and regular training programmes for health staff on HIV case management could help to improve adherence to antiretroviral therapy by PLHIV. If all these measures are executed, Ghana will achieve its aim of having zero AIDS-related deaths by 2030.

Awareness of Lassa Fever Virus Disease Survey

**Ifeanyi Nsofor, Ugonna Ofonagoro, **Bell Ihua,*
**ABUJA EpiAFRIC, ** NOI Polls*

Background: Lassa fever is a viral haemorrhagic fever cause by the Lassa virus. In 2018, Nigeria witnessed a large Lassa fever outbreak. Consequently, EpiAFRIC in partnership with NOI Polls conducted another survey to assess Nigerians' awareness about modes of transmission, symptoms and prevention of Lassa fever. The same questionnaire was used for both the 2016 and 2018 surveys.

Aims and Objectives: The objective was to compare results from both surveys to determine how Nigerians' Lassa fever awareness changed between 2016 and 2018.

Methods: The survey involved telephone interviews of a random nationwide sample. One thousand randomly selected phone-owning Nigerians aged 18 years and above, representing the six geopolitical zones in the country, were interviewed.

Key findings: Awareness of Lassa fever virus disease dropped slightly from 81% in 2018 to 80% in 2018. Across geo-political zones, the North-Central zone accounted for the highest percentage of respondents (88%) who are aware of the outbreak of the disease compared to 89% in North-East zone in 2016. 'Radio' (40%) topped the list of sources of awareness and 'television' was second (39%). In comparison, the 2016 survey results indicated that 'television' (46%) came tops. There is an 8% increase of residents who believe that keeping their environment clean would prevent being infected by Lassa Fever virus. At 35%, there was no change in respondents who said that 'they will ensure all foods are covered and properly stored'. At 14%, there is a 10% drop - down from 24% - in respondents who said they would prevent the disease by 'getting rid of rats in their environment'. Sixty-six percent of respondents stated that 'fever' is one of the symptoms of the disease. This shows a 3% increase from the 2016 report result of 63%. There is no change in the percentage of respondents who are willing to seek medical assistance (92%).

Main Conclusions: Results from the 2016 and 2018 surveys indicate that awareness of Lassa Fever, as well as awareness of modes of transmission and what to do to prevent the disease is high. Unfortunately, this does not seem to translate to behavioural change. Food are still dried in the open and people still exhibit poor attitudes to refuse disposal. Health workers must observe the strictest standards of infection prevention and control protocols in handling patients that are suspected. They must adopt the test and treat practice especially for malaria.

Exploring the perceived risks and benefits of heroin use among young people (18-24) and service providers in Mauritius: A Qualitative Study

David White, Quatre-Bornes Collectif Urgence Toxida

Introduction: Despite an existing tradition of harm reduction policies backed by routine data and surveys, existing tools do not capture the perspectives of young users themselves on the risks which they face when using heroin and harm reduction (HR) services. How such risks are perceived, assessed and acted upon by clients can impact on both individual drug use and the effectiveness of current harm reduction strategies.

From the traditional economic perspective, the behaviour of individuals is compounded by decisions resulting from the careful weighing of costs and benefits. Ideally, this individual process is informed by existing preferences, leading to optimal decisions which are shaped by rational choice. This approach, however, struggles to explain illicit drug use which is deemed as "risky behaviour" or "irrational" from a traditional economic perspective. The inductive qualitative approach used in this study addresses some weaknesses in the traditional applications of economic theory when confronted with heroin use and assesses how individuals frame their decision to use in terms of perceived losses and gains.

Methods: The sample for this study consisted of 22 individuals, aged 18-24, who were either using or had recently used heroin and 5 service providers. Data collection methods included a systematic literature review and in-depth interviews. The coding framework was revised as themes emerged and participants were recruited accordingly. Cross-case analysis was used until saturation of themes occurred.

Findings: The analysis gradually unveiled how participants assessed risk while managing their individual drug use over time. Polydrug use emerged as a recurrent coping mechanism resulting from changing dynamics within the heroin market. Several variations were noted within the initiation into long-term injecting drug use which further highlighted the changing nature of the risks and benefits perceived by young users at a very early stage. The study also highlighted significant gaps in information among users which encouraged the existence of power relationships characterised by information asymmetry.

Recommendations: The changing nature of the risks incurred by young heroin users implies the need to develop second- generation HR strategies specific to Mauritius which stratify and reduce risks incurred by individuals (including pregnant women), couples and communities. Qualitative research which also explores contextual rationality and uncertainty can thus complement programmatic studies with in- depth behavioural-economic insights, provided they are client-driven.

Red Zone Paramedics– a film about the everyday experiences of an ambulance crew in Cape Town: Using film to develop bottom-up solutions to address violence.

PLEASE NOTE: This is a multimedia submission (short documentary film: https://vimeo.com/285241755)

Background: Health systems are deeply rooted in historical and socio-political contexts. In 1994, the South African government inherited a deeply inequitable health system and apartheid policies created large disparities between racial groups in terms of socio-economic status, occupation, education, housing and health. These patterns of inequality are still present today, and exceptionally high levels of violence persist in geographic areas that mirror apartheid spatial patterns. Although outcomes for key issues (such as maternal and child health) are improving in South Africa as a whole, violence remains endemic and in the Western Cape specifically, the rates of violence are on the increase. This poses a significant challenge for delivering PHC for all, and emergency medical services in this context have specific challenges. With an increasing number of attacks on ambulance crews since 2012, the safety of paramedics has become a national priority.

Methodological approach (action research in HPSR): Violence is connected to Sustainable Development Goals 3 (Good Health) and 10 (Reduced Inequality) and given its complex nature, requires new research methods to support the community-based interventions required to address it. In the WCDOH, film is part of th process. Historically, addressing violence was seen as the responsibility of the criminal justice system. However, the Western Cape Department of Health (WCDOH) is currently implementing a range of evidence-based inter-sectoral interventions that take a public health approach to violence, and seek to address the complex social factors (at the level of society, community, family and individual) that interact to produce violence.

'Red Zone Paramedics' is a film about an ambulance crew working the night shift on New Years Eve in Mitchells Plain, a particularly violent part of Cape Town. The film follows the crew as they respond to emergencies. With long granular shots winding through darks streets while navigating the visceral complexities of delivering healthcare – this is a film about the everyday experiences of life on the road.

Sub-theme significance: Community-led and participatory governance initiatives are a key part of this strategy. Paramedics are the community health workers (CHWs) of emergency care. They deliver healthcare to people in their homes, at the time when they need it most. Improving neighborhood safety requires new models of community engagement to develop shared governance and bottom-up accountability frameworks, to achieve the goal of delivering emergency health care for all.

Purpose/Objective: WCDOH uses the film to facilitate public conversations with community-based inter-sectoral groups about issues of violence, and to co-produce appropriate strategies.

(NOTE: The film is 16 minutes long)

Perceived barriers to accessing female community health volunteers' services amongst ethnic minority women in Nepal: a qualitative study

Sarita Panday, Paul Bissell**, Edwin van Teijlingen****
**Stanford University*
***School of Human and Health Sciences, Huddersfield University*
****Faculty of Health & Social Sciences, Bournemouth University*

Background: Disparities in health service utilisation by ethnic minority groups have been well documented in Nepal, yet much less is known about the factors that contribute to these disparities. One way that the Nepali government has attempted to address these disparities is through mobilising community health workers, known as Female Community Health Volunteers (FCHVs). FCHVs provide basic maternal and child healthcare services across Nepal and in other resource poor countries, yet, women from ethnic minority groups continue to underutilise such services. This study sets out to explore perceived barriers to accessing maternal and child healthcare services amongst ethnic minority groups.

Methods : Villages were selected in two different geographical locations (the hill and terai regions- flatland bordering south India) with varying degrees of access to local healthcare centres. Data was collected between April 2014 and September 2014 using qualitative methods. Semi-structured interviews were conducted with twenty FCHVs, 26 women service users and 11 paid local health workers. In addition, 19 FCHVs participated in four focus group discussions. Data were analysed thematically.

Results: Service users from ethnic minority communities, Dalits, Madhesi, Muslim, Chepang and Tamang, underutilised FCHVs' services, including biomedical services. The following four key barriers to accessing maternal and child healthcare services by ethnic minority communities were reported: a) a lack of awareness of healthcare services; b) traditional beliefs and healthcare practices; c) low decision-making power of women; and d) perceived indignities experienced when using health centres.

Conclusions: We conclude that community health programmes should focus on increasing awareness of the importance of healthcare services amongst ethnic minority groups and the programme should involve family members and traditional health practitioners. Both the FCHVs and local healthcare providers need training and educational support to develop effective communication skills for delivering context specific and respectful care to these groups if we want to achieve universal healthcare coverage for maternal and child health.

Perspectives of males on utilization of health services: important stakeholder in achieving household sustainable health

Author: Agbo, H.A[1, 2] [MBBS, FWACP, MSC, MPH]
Department of Community Medicine, [1]Jos University Teaching Hospital/[2]University of Jos
Co-authors: Akosu T.J [MBBS, FWACP], [1, 2] Adah G [MBBS][1]

Introduction: Health of the citizen are been promoted by different government through diverse methods in Nigeria, however the expected desired outcomes is still a mirage. Many reasons may be attributed such as lack of resources, illiteracy, poor health behaviours which may be influenced by lack of male participation in household health seeking behavior. Male inclusiveness in household decision making is an essential component if the needed health outcome is envisaged especially in Africa where cultural/traditional practices which bestow unlimited power to the male counterparts are still held in high esteem.

Studies have accrued to the importance of male inclusiveness at promoting family planning uptake, delivery services, prompt health decision making etc. Most recently, the growing need to encourage male participation in household health have being promoted. A pilot study on observed poor health seeking behaviours of mothers in a densely populated semi urban community in Jos Plateau state necessitated this study.

Aims and objectives: The study assessed the male willingness to encourage household utilization of health services, their knowledge of the benefits of utilizing health services and challenges to utilization.

Methods: Study was conducted at Nassarawa ward, Jos, Plateau state. Having had permission for the study by the head of a religious group (Imam of a mosque) where virtually all the male household heads attend for their mandatory morning prayers, a semi structured questionnaire was administered aided by two trained assistants over three days to all adult male household heads who consented to be studied.

Findings: One hundred and sixty six married household heads participated, 23(13.9%) had no formal education, 95(57.3%) practiced polygamy, 52 (31.3%) had more than 10 household members. Ninety seven (58.4%) indicated their willingness to encourage household members to utilize health services, 102(61.4%) had a good knowledge of accrued benefits, 36 (21.7%) were skeptical of its high cost, 72 (43.4%) indicated long hours of waiting, 16 (9.6%) felt wives take undue advantage of hospital visits for other ventures.

Conclusion: Unaffordability of services and long hours of waiting were some of the challenges identified. In such a high fertility setting, community health insurance will alleviate out-of-pocket spending on health to promote utilization.

Patient satisfaction and clinical quality in South Africa's public primary healthcare

Dumisani Hompashe, Prof Ronelle Burger, Prof Ulf Gerdtham, Dr Anja Smith, Carmen Christian
Stellenbosch University

Background: Patient satisfaction surveys have gained traction as valuable sources of information for developing effective remedies for quality healthcare improvement. There exists evidence of correlation between highly satisfied patients and continuity of care, with satisfied patients tending to comply better with treatment. However, there is concern that patient satisfaction ratings are influenced by patients' personal preferences and expectations. Another shortcoming of patient satisfaction surveys is the existence of positivity bias, with patients tending to respond overly positive due to social desirability biases. Yet these surveys provide an inexpensive way to policymakers of obtaining signals of health system performance.

In measuring the quality of healthcare, studies are increasingly focusing on the nature of the clinical encounter between the healthcare worker and patient. One way of obtaining more objective information on the encounter is through standardised patient (SP) visits.

Aim: The aim of this study was to explore the advantages and limitations of patient satisfaction measures at primary healthcare level by analysing the relationship between reported patient satisfaction and measures of clinical quality.

Method: We conducted SP visits and patient exit interviews in primary healthcare facilities in two South African provinces for three health areas: tuberculosis, hypertension and contraception. The study captured data on the clinical quality of 464 primary healthcare SP consultations and 1064 patient exit interviews. This allowed us to compare the satisfaction ratings of SPs to the clinical quality of their encounters. We also compared the satisfaction of real patients as collected through exit interviews to more objective self-reported clinical measures from their visits.

Key findings: The satisfaction rating of standardised patients corresponded to clinical quality measures in facilities. Patient satisfaction from exit interviews showed social desirability biases especially in areas in which the socio-economic status was low. While the sample is not nationally representative, it could be considered as indicative of the experiences of patients in metropolitan areas (most likely an upper limit to these experiences compared to rural areas), while it also provides an indication of the limitations of patient satisfaction measures.

Conclusion: Findings from the study add to existing literature on patient satisfaction as a measure of quality and provide suggestions for future research.

Keywords: Patient satisfaction measure, clinical quality measures, standardised patient approach, South Africa

Outreach as A Tool to Prevent Chronic Diseases and Create Demand for their Care in Uganda: Cost-Effectiveness and Community Perceptions

Kenneth R. Katumba[1], Dominic Bukenya[1], Arthur Namara[1], Giulia Greco[1,2,3], Janet Seeley[1,2] Patrick Tenywa[1]
[1] Medical Research Council/Uganda Virus Research Institute and London School of Hygiene & Tropical Medicine (MRC/UVRI and LSHTM) Research Unit, Entebbe Uganda
[2] London School of Hygiene and Tropical Medicine, London, United Kingdom
[3] School of Economics, Makerere University Kampala, Uganda

Background*:* Chronic Disease (CD) management is still neglected in Low Income Countries. In Uganda, though highly prevalent, CDs are characterized by low public knowledge, prevention, screening, and budget spending. Our aim was to demonstrate community outreach as an important and cost-effective tool to bring awareness on Diabetes and Hypertension (DM/HT) to the general population.

Methods*:* Our study was a mixed-methods study nested in the Health System Strengthening for Chronic Diseases (HSS-CD) project, a 4-year collaborative research programme between the MRC/UVRI and LSHTM Uganda Research Unit; Mwanza Intervention Trials Unit; London School of Hygiene and Tropical Medicine and the Ministries of Health of Uganda and Tanzania.

To elicit community perceptions, In-Depth Interviews (IDIs) and Focus Group Discussions (FGDs) evenly distributed into intervention and control arms were carried out across sexes, with purposively-selected participants. IDI participants were selected from a 1-2 KM radius around sampled health facilities while the FGDs participants were selected from a 1KM radius.

To estimate cost-effectiveness, all health facilities randomized under the HSS-CD project were included. We used the *ingredients* approach to estimate the incremental economic cost of providing outreach services towards DM/HT for 1 year, with costs collected from project accounts and interviews with health facility staff. We estimated outcomes as the total number of people screened positive that was registered by the health facilities.

Results*:* Majority of the IDIs and FGDs participants in the intervention arm reported more signs and symptoms of HT/DM than those in the control arm. Almost all intervention and control arm participants reported several important ways of creating awareness, non-specific to DM/HT. They explained that awareness about DM/HT could be created through facility-based health education.

On average, HCIIs and HCIIIs in the intervention arm carried out 19 and 21 outreach visits in the year respectively. 74% of the total outreach costs was salary costs, 21% transport costs, and 5% capital costs. The average unit cost per outreach visit was USD 13 and 16 for HCIIs and HCIIIs respectively. The average annual cost per patient screened was USD 1.3 and 1.1 for HCIIs and HCIIIs respectively. The ICER for providing community outreach services compared to a situation where outreach services were not provided was USD 1.

Conclusion*:* We demonstrated that outlook can be an important and cost-effective way to create awareness on chronic diseases and increase utilization of their services among the general population.

Voices from the Middle belt of Ghana on UHC for all – Participation and Perceptions of Older Persons on Social Health Insurance Program utilizing a mixed method approach.

Doris Ottie-Boakye Sarpong, Regional Institute for Population Studies, University of Ghana-Legon, Accra

Aim: To explore the extent of older persons' participation, perception level and reasons about Ghana's National Health Insurance Scheme(NHIS) in Ashanti region.

Objectives: Social health insurance is an extension to social protection explicitly recognized in the Agenda 2030, though it was missing under the MDGs.There is an increasing focus on health care financing in many developing countries as part of meeting the Sustainable Development Goals, especially Goal 3. Although, many developing countries are gradually experiencing an increasing ageing population, there is much less available evidence of older persons' participation and perceptions related to social health insurance programs. Ghana implemented the pro-poor National Health Insurance Scheme almost a decade and half ago to promote financial access to health care among its citizens. Embedded in the social insurance program is the Exempt policy for the vulnerable including older persons and the indigent. This paper therefore provides insights into the extent of older persons' participation and perceptions related to the NHIS in the Mampong Municipality of the Ashanti Region in Ghana.

Methods: A triangulation mixed-method constituting a cross sectional household survey of 400 older persons(60+ years) and eight focus group discussions were carried out in 2017.Statistical techniques used were descriptive, Exploratory factor analysis and the thematic analysis. Stata and the Atlas-ti softwares were tools used for data analyses.

Key findings: The mean age was 73.7years.More than half were females and rural dwellers respectively. One-third had no formal education. Two-thirds were engaged in agriculture. One-fifth had no form of caregiving. One-third reported to have non-communicable diseases. While 60% were enrollees of NHIS, about 30% were former scheme members and 8% had never been registered. Fifty-nine percent achieved insurance membership as Exempt by age, indigent or as a beneficiary of Livelihood Empowerment Against Poverty program. With Cronbach alpha coefficient of 0.90 and a significant Bartlett's Test of Sphericity generating perception index resulted in 58.5% and 32.0% having moderate and bad perception about NHIS respectively. The provision of unsatisfactory nature of service, technological challenges due to poor internet connectivity, extortions, promoting health care accessibility and utilization but reservations on specific health services offered at the point of health care utilization were cited reasons about the program.

Conclusion: Addressing identified challenges and integrating the views of the elderly in NHIS are crucial in promoting participation, reducing catastrophic health payments and ensuring the provision of satisfactory services from providers in securing UHC for all especially to older persons.

Parallel Session 5-4 Health technology assessments

Health technology assessment capacity at national level in sub-Saharan Africa: a survey of stakeholders

Dr Samantha Hollingworth, School of Pharmacy, University of Queensland, Australia
Hollingworth S, Gad M, Winch A, Fraser J, Ruiz F & Chalkidou K: iDSI, Imperial College London

Background Health technology assessment (HTA) is an effective tool to support priority setting (PS) in health at multiple decision-making levels. Stakeholder groups need to understand HTA appropriate to their role and to interpret and critique the evidence produced. The International Decision Support Initiative (iDSI) has been working in sub-Saharan Africa (SSA) since 2013 to develop local capacity and support countries to implement robust HTA processes

Aim To assess the current health system priorities and policy areas of demand for HTA, and identify gaps in data and skills to improve the targeting of capacity-building in SSA.

Methods We revised an existing iDSI cross-sectional survey and delivered it to 357 recipients through existing networks in SSA (e.g. iDSI, AfHEA). We targeted policy makers and those who inform policy decisions at national and sub-national levels; and also those who have an interest in how HTA can improve priority setting in health, including potential suppliers of HTA-relevant data. We analysed responses and explored key themes.

Key findings There were 51 respondents (response rate 14%) working in mostly universities and ministries of health across 14 countries. HTA was considered an important and valuable PS tool with a key role in the design of health benefits packages (HBP), clinical guideline development, and service improvement. Medicines were the technology most identified as being a critical area for undertaking HTA (followed by vaccines and public health programs). especially because of their high costs and ability to address major disease burdens. The use of HTA to address safety issues (e.g. low quality medicines) and value for money concerns was seen as particularly important, perhaps reflecting problems in SSA relating to service quality and efficiency. The perceived availability and accessibility of suitable local data to support HTA varied widely but in many instances was considered inadequate and limited. Respondents noted a strong need for training support in research methodology and data gathering for HTA evidence. The main limitations were a low response rate (most responses from Ghana and Nigeria) and that respondents were self-selected.

Conclusions The initial survey across the sub-Saharan African region was successful in raising awareness of HTA as a tool for priority setting and identifying key gaps in data and capacity. A more tailored and expansive survey can now be developed by iDSI around the key themes identified in this initial survey to tailor engagement strategies and target capacity building.

The impact of mobile clinics on increasing access to quality health care: the case of mobile vans outreach services in Ghana

Samuel Kaba Akoriyea, Accra Ghana Health Service

The Government of Ghana has adopted the use of mobile clinics to enable transform its health systems with the goal of improving access and promoting equity towards the attainment of Universal Health Coverage and Primary Health Care. Using the Mobile Vans Outreach Service (MVOS) ensure complementary and reliable service delivery of specialized care and routine but targeted services to address epidemics such as cholera, provide routine health checks etc. to

rural, remote, urban slum, economic migrants and other populations with limited access to healthcare and services. This evaluation review the impact of MVOS by the Ghana Health Service to improve access to healthcare and services in Ghana.

This impact assessment is an evaluation of routine data and services provided under the mobile clinic unit at the Ghana Health Service from 2015 to 2017 in five regions. It assessed the records of the patients, van, outreach activities and requests from institutions and the public to draw lessons for improvements.

Preliminary assessment of routine data from the Ghana Health Service Institutional Care Division on the impact of mobile clinics using the mobile van outreaches shows its significance in reaching targeted population facing geographical, financial, structural and cultural barriers to healthcare. Since 2013, the eight mobile clinics have been used to provide specialised services such as Ear Nose and Throat (ENT), eye, dental and general medicine and 10 biomedical maintenance vans used to support several rural clinic.

From 2015, the mobile clinics have attended to 42,514 patients in five regions providing dental, eye, otorhinolaryngology and general medical screening and treatments. The team also conduct health promotion and preventive services while partnering with the National Health Insurance Scheme to register and renew their members. Overall, the mobile van outreach services have improved access to healthcare for hard to reach populations and created rapid response to outbreaks and emergencies as well as support for rural clinics and large group meetings or neglected populations such as schools, prisons, political rallies, football matches, market days and church conventions.

The challenge, however, is the limited number of vans available to meet outreach demands, maintain and stock up the vans. This review concludes by recommending the potential of improving the use of mobile clinics as an alternative to increasing access to general and specialised services in Ghana. It has been significant in meeting the needs of populations that would normally to be reached when using fixed facilities. Hence, the need to improve the use of mobile van outreach services by having a dedicated team of health workers, resources and funding to improve their service in order to achieve the UHC and PHC for a sustainable health system

Strengthening Health Technology Assessment (HTA) Systems for Universal Health Coverage in Africa: How can HTA improve equity, access and quality of healthcare services?

Kim MacQuilkan, Independent Public Health Consultant
Lumbwe Chola, Health Economist, Palo Health Consulting, Johannesburg, South Africa
Tommy Wilkinson, Health Economist, School of Public Health and Family Medicine, University of Cape Town, South Africa

Background Ensuring accessible, good quality health for all, while providing financial protection, especially to the most vulnerable of society, demands strong systems. Difficult decision-making and trade-offs are inevitable in resource-constrained settings, but it is crucial that these are facilitated within well-governed systems encouraging accountability, standardisation and transparency. Amongst the toughest of decisions are those around healthcare benefits. Although explicit rationing of services and entitlements is inherently difficult, the alternative is rationing that occurs passively often impacting access for example. Passive rationing can thus be a critical barrier to the goal of Universal Health Coverage (UHC), for which access is a critical element. A Health Technology Assessment (HTA) system can provide tools, structures and processes to facilitate decision-making for healthcare service provision and facilitate progress towards UHC.

Aims and objectives This research will aim to provide insights for African countries developing or intending to develop HTA systems by presenting: 1) A general overview of HTA and priority-setting; 2) How HTA systems can improve progress towards intermediate objectives and goals for UHC; 3) An overview of the development of HTA systems in Africa; and 4) Key enabling and constraining factors to strengthening HTA systems within the context of UHC.

Methodology A literature review of published and grey literature will be conducted to fulfil all four objectives. In particular, the World Health Organization's healthcare financing description model outlining functions (funding, pooling, purchasing, benefits), intermediate objectives (equity in resource distribution, efficiency, accountability/transparency) and goals of UHC (access, quality and financial protection)[6] will be utilised as a framework to guide the analysis of literature to fulfil the second objective.

Conclusion It is of utmost importance that we protect and endeavour to enshrine health as a human right, UHC is one potential platform for enabling this. Strong integrated HTA systems could facilitate progress towards specific UHC intermediate objectives and goals for countries in Africa, helping to facilitate Health for All.

The Price Impacts of the Introduction of South Africa's Tax on Sugar-Sweetened Beverages

Nicholas Stacey, Ijeoma Edoka Johannesburg, University of the Witwatersrand
Shuwen Ng, University of North Carolina

Background: In response to a severe and growing burden of obesity and diet-related disease, South Africa, as of April 2018, has joined a number of LMIC countries in introducing an excise tax on sugar-sweetened beverages (SSBs). SSBs are linked to the onset of obesity, diabetes, and other metabolic conditions. The primary pathway through which SSB taxes are hypothesized to incentivize decreased SSB intake is through increased retail SSB prices consumers face with a tax in place.

Aims: This study aims to estimate the impact of the introduction of South Africa's tax on the retail prices of taxed and un-taxed soft drinks.

Methods: This study draws on non-alcoholic beverage price data collected by South Africa's national statistical agency on a monthly basis from January 2016 through July 2018 from a panel of retail outlets in urban areas of South Africa (N=36,231). All prices are in South African Rands (ZAR) per litre and are deflated to 2016 ZAR using the consumer price index to account for inflation. A pre-post regression strategy is adopted that includes province- and time-period fixed effects, with regressions estimated separately by beverage category with real prices as the outcome of interest.

Findings: Among taxed beverages we find an average increase in price of 0.97 (0.59 – 1.36) ZAR per litre on carbonated beverages and 2.70 (0.49 – 4.92) ZAR per litre on liquid concentrates. Whilst among untaxed beverages, we see no statistically significant change in price on bottled water (-0.66 – 0.24) and 100% fruit juices (-0.22 – 2.12) post the introduction of the tax.

Conclusion: South Africa's recently introduced tax on sugar-sweetened beverages resulted in an increase in the prices of taxed beverages, while untaxed beverage prices' did not change in a statistically significant sense. This is increase in the price of SSBs and increase in the price of SSBs

[6] Kutzin, J. 2013. Health financing for universal coverage and health system performance: concepts and implications for policy. Available: http://www.who.int/bulletin/volumes/91/8/12-113985/en/

relative to healthier options could incentivize healthier beverage consumption and reduced beverage-sugar intake.

Strengthening Health Technology Assessment Systems in the Global South: A Comparative Analysis of the HTA journeys of China, India and South Africa.

Kim MacQuilkan[1], Peter Baker[2], Laura Downey[2], Francis Ruiz[2], Kalipso Chalkidou[2], Shankar Prinja[3], Kun Zhao[4], Thomas Wilkinson[5], Amanda Glassman[6], Karen Hofman[7]

1. Priority Cost Effective Lessons for System Strengthening South Africa (PRICELESS SA), School of Public Health, University of Witwatersrand, Faculty of Health Sciences, Johannesburg, South Africa.

2. Global Health and Development Group, Institute of Global Health Innovation, Imperial College London, London, United Kingdom.

3. School of Public Health, Post Graduate Institute of Medical Education and Research (PGIMER), Chandigarh, India

4. Division of Health Technology Assessment and Policy Evaluation, China National Health Development Research Center (CHNHDR), Ministry of Health, Beijing, China

5. School of Public Health and Family Medicine, University of Cape Town, South Africa

6. Center for Global Development, Washington DC, United States of America

7. Priority Cost Effective Lessons for System Strengthening South Africa (PRICELESS SA), School of Public Health, University of Witwatersrand, Faculty of Health Sciences, Johannesburg, South Africa.

Background Resource allocation in health is universally challenging, but especially so in resource-constrained contexts in the Global South. Pursuing a strategy of evidence-based decision-making and using tools such as Health Technology Assessment (HTA), can help address issues relating to both affordability and equity when allocating resources. Three BRICS and Global South countries, China, India and South Africa have committed to strengthening HTA capacity and developing their domestic HTA systems, with the goal of getting evidence translated into policy. Through assessing and comparing the HTA journey of each country it may be possible to identify common problems and shareable insights.

Aims and objectives This collaborative paper aimed to share knowledge on strengthening HTA systems in the Global South to promote evidence-based decision-making by: Identifying common barriers and enablers in three BRICS countries in the Global South; and Exploring how South-South collaboration can strengthen HTA capacity and utilisation.

Methodology A descriptive and explorative comparative analysis was conducted comprising a Within-Case analysis to produce a narrative of the HTA journey in each country and an Across-Case analysis to explore both knowledge that could be shared across the Global South and any potential knowledge gaps. All three countries are part of a global network, the International Decision Support Initiative (iDSI), which provides a platform for knowledge sharing and capacity building to support evidence-based priority-setting and decision-making. The development of the paper involved experts from each country in order to provide the most pragmatic and appropriate insights.

Results Analyses revealed that China, India and South Africa share many barriers to strengthening and developing HTA systems such as: 1) Minimal HTA expertise; 2) Weak health data infrastructure; 3) Rising healthcare costs; 4) fragmented healthcare systems; and 5) significant growth in non-communicable diseases. Stakeholder engagement, and institutionalisation of HTA were identified as two conducive factors for strengthening HTA systems.

Conclusion China, India and South Africa have all committed to establishing robust HTA systems to inform evidence-based priority setting and have experienced similar challenges. Engagement

among countries of the Global South can provide a supportive platform to share knowledge on strengthening HTA systems that is more applicable and pragmatic.

This paper was produced as part of iDSI (www.idsihealth.org), a global initiative to support decision makers in priority-setting for UHC. The work received funding from Bill & Melinda Gates Foundation (grant OPP1087363, "Establishing Priority Setting Institutions in Developing Countries"), the UK Department for International Development, and the Rockefeller Foundation. *The funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript.*

Parallel session 5-5 Mental health issues

Promoting Access to Mental Health Care Services using community structures such as Traditional Mental Health Centers in Ghana

**Gina Teddy, **Wendy Abbey, ** George Owoo: *Ghana Institute of Management and Public Administration, ** Human Rights Advocacy Centre*

Access to mental health care and services in Ghana is problematic requiring collaborative action among multiple actors to improve quality of care, reduce inequity, inaccessibility and social exclusion for those in desperate need of the service. It is estimated that 2.8 million people live with mental disability in Ghana, yet less than 2% access mental health services. The systematic challenges in providing mental health services cuts across the country leading to treatment gap of about 98%. There is limited trained human resources, poor budgetary allocation leading to acute financial constraints, acute logistical and drug shortage, huge disparities in the allocation of facilities, congestions at the facilities, high stigma and lack of information for mental health.

The challenge of strengthening mental health services in Ghana require multi-sectoral approach and collective leadership to harness resources to enable innovatively bridge the accessibility gap in service provision. Yet, key stakeholders are not effectively collaborating to harness their limited resources towards service provision or using community systems to mobilize support for mental health service. This study analyze the impact of failed collective leadership in providing mental health services in Ghana.

Using an exploratory approach, a broader study was conducted across six regions in Ghana using both qualitative and quantitative methods to generate primary and secondary information from key stakeholders on promoting access to quality mental health services in Ghana using Traditional Mental Health Centres (TMHCs) and other community systems.

The study's preliminary findings shows that despite the systematic challenges associated with mental health care and services, there is no culture of collective leadership to enable maximize the limited resources, complement each actors efforts or mobilise key actors for collaborative action between the formal and informal sector to improve mental health. The Mental Health Act and other policy frameworks are not also addressing this fundamental challenge of managing multiple actors. Key actors are working still working in silos, duplicating some of their efforts, despite the range of capacities, expertise and motivation available to address the problems related to mental health care and service provision. We are advocating for the Mental Health Authority to provide stewardship towards collective leadership culture to enable pull the efforts of actors such as the Ghana Health Service, Christian Health Association Ghana, NGOs, Donors,

Community Systems like the TMHCs and leaders for strategic implementation to improve mental health in Ghana.

Promoting Access to Mental Health Care Services using community structures such as Traditional Mental Health Centers in Ghana

**Gina Teddy, **Wendy Abbey, ** George Owoo: *Ghana Institute of Management and Public Administration, ** Human Rights Advocacy Centre*

Ghana, like many developing countries is recognized for making significant strides at the end of the Millennium Development Goals. Yet, very little was achieved in mental health to improve access and quality of care leading to inequity, inaccessibility and social exclusion for those in desperate need of mental health services. Despite an estimated 2.8 million people living with mental disorder in Ghana, less than 2% access mental health services. The systematic challenges in providing mental health services cuts across administrative levels of service provision throughout the country leading to treatment gap of about 98%.

Traditional Mental Health Centres (TMHC) are community systems that complements formal mental health services. Yet, there is a general lack of awareness and understanding of the practices, services, management, regulations, rights and responsibilities in Ghana. This study explores the role of TMHCs in providing mental health services to complement the gaps in service delivery and the critical role of community systems in achieving universal health coverage.

This exploratory study is being conducted across six regions in Ghana using both qualitative and quantitative methods to generate primary and secondary information from communities and TMHCs while advocating for mental health improvements and collaborative provision across communities.

The study revealed extraordinary barriers to accessing mental health services in Ghana leading to inequality and social exclusion of person with mental disorder. Challenges associated to the use of mental health services is attributed to lack of information, stigma associated with utilization mental health services, inadequate resources and the perceived inability to meet socio-cultural needs for mental disorders. Preliminary findings revealed the significant role of TMHCs as complementing formal health services in Ghana. TMHCs deals with the perceived spiritual and physical causation of mental disorder led by the prayer camps, traditional healers, herbalists and spiritual treatments centers. Yet, there was little or no regulations for their functions, practices, services and quality of care leading to widespread convictions of abuses and mistreatment of people with mental disorder seeking the services of TMHCs.

This study concludes by advocating for a multi-sectoral approach by communities, researchers, NGOs and the Mental Health Authority to recognize, support, standardize, regulate, develop and improve the work of TMHCs in Ghana. We emphasis improving access and quality of care to make TMHCs responsive in providing dignifying mental health services for improved access to care. Policy lesson from this study will inform knowledge, practices, regulation and policies guiding the practices of TMHCs across communities in Ghana to create a vibrant community health system.

Subjective social inequalities in depression: a decomposition analysis for South Africa

Chipo Mutyambizi, Gauteng, Human Sciences Research Council

Background Inequalities in mental health are a notable and well documented policy concern in many countries, including the developing world. This is the case both for more objective measures of socio-economic status or position but also for subjective social status, which has close ties with health. Yet, researchers to date have not applied the standard analytical tools of concentration indices and decomposition analysis to the study of subjective social status and health, nor have researchers investigated subjective social inequalities in health in a South African context.

Methods This study employed the cross-sectional 2014 South African Social Attitudes Survey (SASAS). Concentration indices (CI) were used to measure subjective social inequalities in the severity and prevalence of depression. A decomposition analysis was conducted in order to determine the factors that contribute to subjective social inequalities in depression. Depression was measured using the CES-D 8-item scale, with analyses disaggregated by sex.

Results More than 35% of the study sample reported having depression (95% CI 33.57 – 36.95) whilst the overall mean score on CES-D 8 was 8.4 (95% CI 8.30 – 8.53). The concentration index for prevalence and severity of depression were -0.2800 and -0.0673, respectively. Both the prevalence and severity of depression was more pronounced in females (36.65 versus 33.77; p=0.0961 and 8.56 versus 8.23; p=0.0021, respectively). The most important contributor to subjective social inequalities in the prevalence and severity of depression, at 48%, is subjective social status itself. Other variables that made large significant contributions to the depression prevalence and depression severity were childhood conflict (11% and 11%) and race (27% and 20%).

Conclusion This study provides evidence that depression in South Africa is concentrated among those with a lower subjective social status. We find that the prevalence and severity of depression was higher in females when compared to males. Policies that address inequalities in SSS and childhood adversity should be adopted to address depression inequalities in South Africa.

Economic burden and mental health of primary caregivers of perinatally HIV exposed and infected adolescents from Kilifi, Kenya

Patrick V. Katana[1], Amina Abubakar[1, 2, 3, 4], Julie Jemutai[1, 5]
[1] KEMRI/Wellcome Trust Research Programme, Centre for Geographic Medicine Research (Coast), Kilifi, Kenya.
[2]Child and Adolescent Studies, Utrecht University, Utrecht, Netherlands
[3]Department of Public Health, Pwani University, Kilifi, Kenya
[4]Department of Psychiatry, University of Oxford, Oxford, UK
[5]Health Economics Research Unit, KEMRI Wellcome Trust Research Programme, Kilifi, Kenya

Background. Eighty percent of perinatally HIV exposed and infected (PHEI) adolescents live in sub-Saharan Africa (SSA), a setting also characterized by huge economic disparities and higher burden of mental health disorders. Navigating adolescence while living with HIV presents specific challenges not only to the affected youth but also to their primary caregiver and/or immediate family. Caregiving is crucial to the management of chronic illness such as HIV/AIDS, but the economic costs and mental disorders borne by caregivers of PHEI adolescents often go unnoticed. In this study, we establish the economic costs and evaluate the mental health of caregivers of PHEI adolescents from rural Kilifi, Kenya.

Methods: We used a cost of illness analysis approach. Mental health was assessed using Patient Health Questionnaire (PHQ-9). Cross-sectional data were collected from 121 primary caregivers

of PHEI adolescents in Kilifi. Economic costs were categorized either as direct costs (costs of medicine, consultation, diagnostic procedures, food and travel in seeking care) and indirect costs (productivity losses to caregivers). Indirect costs were estimated as value of productive days lost by a primary caregiver while caring for a PHEI adolescent. We employed descriptive statistics to assess the economic burden and mental health of primary caregivers in the course of caring for a PHEI adolescent.

Results: Total monthly direct and indirect costs per primary caregiver was Ksh 2773 ($ 27.73), on average. Key drivers of direct costs were transportation (67%) and medications (13.7%). Total monthly costs represented 28.3% of the reported caregiver monthly earnings. About 10.7 % (PHQ>=10) of primary caregivers reported depressive symptoms. Indirect costs (productivity costs) were relatively higher on caregivers with depressive symptoms.

Conclusion: The evaluation shows that HIV/AIDS has caused a significant economic burden and mental health impact on caregivers while caring for PHEI adolescents. Results underscore the need for developing socio-economic programs to improve mental health of caregivers and help them reduce economic burden.

Parallel Session 5-6 Evaluating PHC performance 2

It's not enough to tweak old models: Urban PHC calls for new paradigms and approaches

Dr Rene Loewenson, Training and Research Support Centre/ EQUINET, Box CY651, Harare, 263-4-708835

By 2050, urban populations will increase to 62% in Africa, a growth that UN organisations note to be one of the most important global health issues of the 21st century. In 2016-8, we gathered and analysed diverse forms of evidence and experience on inequalities in urban health, its determinants and responses to it within east and southern African (ESA) countries. This included literature review, analysis of quantitative indicators, content analysis of evidence on practices and participatory review by youth in Lusaka and Harare. The literature on urban health in ESA countries appears to lag behind the rapid, multifactorial changes taking place in urban areas, focusing on negative health outcomes rather than the assets for health, pointing to weak links between primary care services and urban public health and limited collaborative interaction across sectors. Participatory review with urban youth in two cities suggested that 'health' has become narrowly and medically defined in their experience and experience, poorly reflecting the psycho-social, economic and environmental determinants they see as associated with improvements in their health. In other regions globally, the concept of 'wellbeing' better captures this broader lens, and is being accompanied by measurement of its various dimensions as indicators of national progress. Our analysis of the cross country health data collected in the 16 ESA countries found more limited assessment of such measures, with a focus on negative health outcomes, ignoring the many socially-defined dimensions of vulnerability, variations in risk environments and assets that are important for urban health. These findings suggest that meeting the growing challenges in urban health for our region demands new paradigms, new approaches to urban PHC and new indicators to inform analysis and planning. It implies framing urban PHC within a more holistic 'wellbeing' paradigm, encompassing physical, material, psycho-social and ecological dimensions, with space for diverse forms of local knowledge and public

voice; away from an urban PHC that is singularly preoccupied with managing negative outcomes and that sees people as health 'problems', to greater use of asset based approaches. This implies a more organised, continuous relationship between our urban primary care services and their populations than the currently ad hoc one of people presenting to facilities with problems, with proactive measures for family and population health, reaching into community settings, working with and as an entry point for other services that support health and a contributor to processes for meaningful resident participation in urban planning.

Strengthening Primary Health Care for the Proper Management of Tuberculosis in Côte d'Ivoire

Marie-Catherine Barouan, Tania Bissouma-Ledjo, Jean-Marie Vianny Yameogo and Moses Zanga Tuho
World Health Organization, Office of Representation in Côte d'Ivoire, Abidjan
National Independent Consultant, Abidjan

Better progress towards Universal Health Coverage imperatively requires the implementation of targeted interventions, particularly at the level of primary health care aimed at improving equity in access to quality essential health services for the population. they are found.

As part of the fight against tuberculosis in Côte d'Ivoire, the national response developed by the government with its technical and financial partners involved for several decades had allowed the establishment of a network of care for the treatment of tuberculosis. reported cases of tuberculosis. However, the provision of care that can be summarized as 160 tuberculosis diagnostic and treatment centers (CDT) remains unsatisfactory with a ratio of 1/145000 inhabitants for an estimated incidence in 2016 to 91 cases per 100 000 inhabitants and a mortality rate of 23 / 100,000 people making TB one of the major public health concerns in the country.

In order to strengthen the national response and increase the accessibility of TB care services, the government has made a strong commitment to implement WHO's recommendation to implement an intervention aimed at extension of CDTs to many peripheral centers in the country.

The intervention methodology consisted in: (i) identifying new CDT implementation sites based on their real needs in order to bring the services closer to the beneficiaries and (ii) making the structures functional to offer the service package diagnosis and treatment to meet the needs of communities. As a result of the intervention, 62 new sites were created and the capacity of the health staff of 543 primary health facilities was strengthened in the detection and treatment of tuberculosis according to national protocols and guidelines of care in force.

Thus, the number of CDTs increased from 160 in 2015 to 238 at the end of 2017 with a coverage ratio in CDT increased from 1/145000 to 1/93 000 in 2017, thus allowing a reduction of disparities existing in certain health regions, particularly Abidjan.

Nevertheless, the challenge remains the involvement of the community, all civil society actors for a better community engagement in the use of health services and the achievement of better results for the elimination of tuberculosis in the long term. .

Keywords: Universal health coverage, Tuberculosis, primary health care, health services, extension, Ivory Coast

Community health workers in Mali, costs of including their services in the PHC-UHC

SPEAKER: Pascal Saint-Firmin

THEMATIC TRACK: #4 Community Health Systems – Where Community Needs are Located

CO-AUTHORS: Birama Diakite, Seydou Traore, Bakary Diarra, (*Former Secretary General of the MOH who assisted us with data collection, liaising with government officials and development of recommendations)*

Background:Current and future health workforce production worldwide fails to meet the requirements for Universal Health Coverage (UHC). Primary health care (PHC) built around Community Health Workers (CHWs) can serve as the foundation for UHC and play a central role in achieving the health-related targets of the Sustainable Development Goals (SDG). Village-based Community Health Workers (CHWs) in Mali have been a cost-effective alternative to boost access to, demand for, and use of key primary health services by bringing services closer to over three million Malians living in rural areas. However, this highly donor-dependent program is not sustainable in an era of stagnating international development assistance for health. There is an urgent need to support a transition from external to domestic sources of funding to ensure service continuity at community level. To support the Government of Mali (GOM) in understanding the funding and workforce situation, costs of the CHW program and threats to the sustainability of this frontline health workforce, the USAID-funded HP+ conducted expenditure and resource mapping exercises followed by costs analyses.

Methods: HP+ applied computerized cost modeling and mapping methods to look at expenditures, funds available, and CHW service package cost. Information collected included CHW numbers and deployment, expenditures mapped by region and source, funding commitments by source and area of investment, and program input unit costs. Funding needs from cost projections were compared to actual expenditures and funding available to estimate gaps in the next five years.

Results: The average cost of the package of service provided by CHWs is estimated at $6.79 and will decrease to $2.52 by 2020 if benefits of increased workforce productivity, technical and allocative efficiency from compliance to national standards are leveraged. The gap analysis that in 2015, US$8.36 million was needed for the CHW program, and this is expected to rise to $14.15 million by 2020. Meanwhile, funding from donors is expected to fall from $13.01 million in 2015 to $9.71 million in 2020, resulting in a cumulative financial gap of $18.75 million for underfunded areas by 2020 (12.8% of government health expenditures per 2014 National Health Accounts).

Conclusions: To ensure adequate funding for village-level community health services we propose a two- pronged approach:

-Increased domestic resource mobilization and targeted financial support by GOM to the CHW program

-Improved coordination among donors to avoid duplication

Assessing Health Systems Readiness for Primary Health Care Financing: Lessons Learned from Kaduna and Niger State, Nigeria

Rachel Neill (on behalf of Results for Development Institute (R4D)),
co-authors: *Dr. Chris Atim, Tamara Chikhradze, Rachel Neill, Ezinne Ezekwem, Chloe Lanzara, Felix Obi, Oludare Bodunrin, Alexander Nzobiwu, Anam Abdulla, Jack Sullivan, University of Nigeria Nsukka: Dr. Hyacinth Ichoku*

A readiness assessment was conducted in Niger and Kaduna states, Nigeria to evaluate health system status against Universal Health Coverage (UHC) components, as they relate to states'

readiness to launch Primary Healthcare (PHC) centered financing initiatives.[7] The objectives of the study were to: 1) assess the current state of health system; 2) highlight challenges and opportunities for health care financing reform initiatives; 3) present approaches towards the design and implementation of PHC focused financing reforms; and 4) map state stakeholders to assess the feasibility and acceptability of key aspects of UHC reform.

The assessment employed a mixed approach and relied on qualitative and quantitative methods. A combination of primary and secondary data was used. The quantitative component explored fiscal space for health and the qualitative one examined the health system from the perspective of its users and main actors at the federal, state, local government, and community levels.

The analytical framework was developed specifically for this study, drawing on the World Health Organization's Comprehensive Health Systems Assessment Approach (Health Systems 20/20, 2012) and the WHO's Health Financing Policy Objectives (Kutzin, 2008). It captured status of health systems, according to the six health systems building blocks and analyzed those findings against a series of criteria linked to financing functions of resource mobilization, pooling and purchasing. In addition, Management Sciences for Health's Social Insurance Assessment Tool (MSH 2002) was adapted to capture the feasibility and acceptability of components of health financing reforms. A political economy and stakeholder analysis were also conducted to determine perceptions and stances on UHC reform and to map the roles and responsibilities of all stakeholders.

Findings and preliminary recommendations were validated with state stakeholders in a workshop setting, where they identified priority interventions for achieving states' UHC goals.

The study produced findings that highlighted challenges and opportunities on both – demand and supply sides. These included gaps in service availability and readiness, service utilization trends, state funding allocations to the health sector, and fragmentation of pooling, purchasing, and data management arrangements.

The assessments developed evidence-based recommendations to improve the states' capacity for implementing UHC reforms. For example, for Niger state it was recommended that the State reframe advocacy efforts and utilize a proof-of-concept to demonstrate better returns on investment for the health sector, while for Kaduna state it was advised that the State merge existing financing initiatives into the health insurance scheme to reduce pooling fragmentation.

Implementation process and quality of a primary healthcare system improvement initiative in a decentralized context: A retrospective appraisal using the Quality Implementation Framework

Ejemai Eboreime, Nonhlanhla Nxumalo, John Eyles: Abuja National Primary Healthcare Development Agency, Centre for Health Policy, School of Public Health, University of the Witwatersrand

Background: Effective implementation processes are essential in achieving desired outcomes of health initiatives. Whereas many approaches to implementation may seem straightforward, careful advanced planning, multiple stakeholder involvements and addressing other contextual constraints needed for quality implementation are complex. Consequently, there have been recent calls for more theory-informed implementation science in health systems strengthening.

[7] *The assessment in Kaduna was conducted in collaboration with Health Systems Consult Limited*

Aim: This paper applies the Quality Implementation Framework (QIF) developed by Meyers, Durlak and Wandersman to identify and explain observed implementation gaps in a primary healthcare system improvement intervention in Nigeria.

Methods: We conducted a retrospective process appraisal by analysing contents of 39 policy document and 15 key informant interviews. Using the QIF we assessed challenges in the implementation processes and quality of an improvement model across the tiers of Nigeria's decentralized health system.

Results: Significant process gaps were identified which may have affected subnational implementation quality. Key challenges observed include inadequate stakeholder engagements and poor fidelity to planned implementation processes. Although needs and fit assessments, organizational capacity building and development of implementation plans at national level were relatively well carried out, these were not effective in ensuring quality and sustainability of DIVA at the subnational level

Conclusions: Implementing initiatives between levels of governance is more complex than within a tier. Adequate pre-intervention planning, understanding and engaging the various interests across the governance spectrum are key to improving quality.

The PHC policy in Côte d'Ivoire: An assessment at the Bouaflé Health District

MEMON FOFANA, ALLY Yao Lanzali: Abidjan, Korhogo University, Ministry of Planning and Development

An evaluative reading of the implementation of the policy of Primary Health Care (PHC) in the District of Bouaflé, pilot district in Côte d'Ivoire, allows to note the failure of the promotion of primary health as envisaged by the Bamako initiative in 1987 and later in 1978 by the ALMA-ALTA conference.

Indeed, despite the presence of a CHR, two schools and university health centers, 19 rural health centers and 3 urban health centers. The objectives of PHC / IB (PHC, Bamako Initiative) in the health district of Bouaflé, pilot center for the implementation of this initiative is not achieved; some indicators allow us to demonstrate it. The incidence of diarrhea among children under 5 in 1999 is 65% o compared to 53% nationally; the incidence of malaria increased between 1995 and 2000, at the national level from 68.9 per 1000 to 83.6 per 1000 and in the Bouaflé District of 72.6 per cent in 1996; 81.2% in 1997 and 73.1% in 1999 and 68.0 in 2005. The use of health facilities remains the lowest in the health district of Bouaflé from 1997 to the year 2000. It was 24, 1% and 1997, from 21.4 in 1998, to 19.9% in 1999 and 18.3% in 2000. What are the social factors that account for this failure? The look at the phenomenon is thus anchored in the hypothesis that this failure is explained by the mismatch between supply and demand for health.

Parallel Session 5-7 Governance and accountability 2

Population empowerment is one of the strategy for strengthening primary health care in Mauritius.

DR. Laurent MUSANGO[1]; Mr. Premduth BURHOO[2]; Dr. Faisal SHAIKH[1]; DR. Maryam TIMOL[3]
[1] World Health Organisation, Country Office of Mauritius.
[2] Mauritius Institute of Health (MIH)

[3] *Ministry of Health and Quality of Life (MOHQL)*

Introduction: Health promotion is a core component of health intervention programmes and community empowerment is one of the main approaches to promote health. All the different National Action Plans being implemented to improve health and quality of life have strategies defined to increase health literacy. In line with these Action Plans the Ministry of Health and Quality of Life regularly conducts community awareness programmes, health promotion programmes and information campaigns on disease prevention. The Ministry of Health and Quality of Life has dedicated structured units for the planning and implementation of policies, programs, services, and activities to increase levels of health literacy and many activities of health promotion are complemented by other ministries and non-governmental organizations. Despite the various strategies implemented for population empowerment, several indicators show that several problems remain and need to be improved. Reason why an assessment on population empowerment to strengthen primary health care in Mauritius was initiated.

Methodology: The country assessment starts with a thorough analysis of the situation of population empowerment over the past 15 years. Challenges or present opportunities for improving population empowerment were then carried out. A participatory and flexible approach was used for this assessment; a multidisciplinary team was set up to carry out the assessment. A Working Group (WG) of 6 members was constituted to review and to validate the report. The report identified keys opportunities that the country may continue to build on as well as challenges and possible solutions for population empowerment as one of the strategy for strengthening primary health care in Mauritius.

Results: The assessment identified opportunities mentioned above and challenges that need to be mitigated for improving PHC in the countries. The challenges identified are: (i) the population is not adequately empowered to change behaviour towards taking responsibility for their own health; (ii) the population is not engaged actively in decision-making processes both around policy issues as well as individual treatment options/plans; and the high-risk populations, disadvantaged groups including the increasing elderly population are not adequately targeted for more tailored health promotion and health education.

Conclusion and recommendations: The assessment recommended to strengthen community mobilization and participation to promote health literacy including behaviour change in the population, to fully leverage information technology to support health literacy and patient empowerment, to ensure adequate and well-trained human resources to better empower the community and to target high-risk populations and disadvantaged communities including elderly persons for more tailored health promotion and health education. All recommendations are being implemented by the Ministry of Health and Quality of Life to empower population to contribute to strengthen the primary health care in Mauritius.

Strengthening Regulation for Patient Safety: Front line staffs' perceptions of Kenya's regulatory reforms

Eric Tama, MPH, Doctoral Fellow, Strathmore University
Strathmore Business School, Institute of Healthcare Management
Ole Sangale Rd Madaraka Estate, Nairobi, Kenya
Other Authors: Francis Wafula (Strathmore University), Catherine Goodman (LSHTM), Irene Khayoni (Strathmore University), Gilbert Kokwaro (Strathmore University), Njeri Mwaura (The World Bank)

Background: Health systems in low and middle-income countries (LMIC) are increasingly pluralistic, involving a wide mix of public, not-for-profit and for-profit providers. Regulation

should be a key foundation of the Government's stewardship role of these heterogeneous facilities, but performance of this function is generally weak, with serious consequence for patient safety and quality of care. In an effort to improve regulation of health facilities, Kenya introduced a set of innovative regulatory interventions in public and private facilities in 3 Kenyan counties. These comprised the use of the Joint Health Inspections Checklist (JHIC), which synthesises the areas covered by all the regulatory Boards and Councils; increased inspection frequency; risk-based inspections where warnings, sanctions and time to re-inspection depend on inspection scores; and display of regulatory results outside facilities. We aimed to examine the views and perceptions of facility owners on these regulatory reforms.

Methods: The study was conducted in 3 counties using qualitative methods. We conducted 51 in-depth interviews with health facility owners/managers to explore their perceptions and experiences of the implementation of the regulatory reforms. We specifically sought to find out how the inspections were perceived in terms of fairness and legitimacy. We also sought to identify facilitating and impeding factors to implementation and ways in which implementation could be improved. Finally, we explored the differences between the new inspections and the previous regime of inspections in terms of efficiency and incentives & opportunities for corruption. Data was managed using Nvivo software and analysed using a framework approach.

Results: The inspections were generally seen as fair, legitimate, transparent and supportive, and different from previous inspections which were characterised as intimidating and punitive. Facilities had implemented some patient safety measures as a result of the inspections and they felt the quality of services had improved. However, smaller facilities felt that some of the content of the inspections was only relevant to bigger facilities and that it was inappropriate to assess them on these requirements. Most facilities felt that there was need for mechanisms of supporting them to address gaps identified during inspections, especially public facilities that have very little control over their own resources and processes. The display of inspection scores at facilities was supported by better performing facilities but opposed by poor performers. While the scorecards were generally not thought to be well understood by patients, there was evidence that their display motivated health workers to improve. The use of an electronic inspection checklist was perceived to reduce opportunities for bribery but there were still a few unsuccessful cases of bribe solicitation by inspectors.

Conclusion: These new inspections have been received positively by health facilities and should be scaled countrywide. There is need to have a mechanism in place that supports health facilities to implement inspection recommendations to improve quality and patient safety. The general public needs to be educated on the scorecards so that they can understand them better and make informed choices.

Potential conflicts of interest – NONE

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Does Governance Impact Undernutrition: An Integrated Approach to Reducing Underweight in Children Under 5 years

G. Woode R. Birner F Asante

Objectives: To evaluate the effect of governance on nutrition program outcomes for children under 5 years with reference to the human resource capacity required and expenditure for nutrition programs for efficient health care delivery in Ghana.

Methods: A mixed method approach was used including key informants' interviews with experts from nutrition unit of the Ghana Health Service, united nations children's fund (UNICEF)-Ghana, community mother-to-mother support groups as well as anthropometric data from the Ghana Health Service monthly nutrition and child health form, from northern region of Ghana. A four-year panel data (2014-2017) comprising anthropometric measurements of weight and age of children 0-59 months recorded during routine community and facility-based Growth Promotion activities in the northern, central and Greater Accra regions purposively sampled was taken with their Z-score means and proportion underweight calculated using excel. Linear Mixed-Effect modelling in SPSS (Statistical package) was also used to estimate the effect of human resource and expenditure for nutrition program implementations by accounting for the covariates that predict the reduction in underweight

Results: Between the year 2014 – 2017, apart from Greater Accra region, there was an increase in placement of key staff for nutrition programs in the two other regions, complimented by an increased funding for training, supportive supervision, monitoring and for commodities. Nutrition counselling was tailored to the consumption of nutrient-rich value chain products such as legumes, and orange-fleshed sweet potato for complementary feeding and for maternal diet. The results show that, the percent of children less than 5 years of age registered in well-child clinics with global malnutrition (weight-for-age) less than 2 Standard Deviation below the standard mean decreased by between 80% in Northern region to 49% in Greater Accra region .from 20% at the beginning of 2014 in northern region to 4% at the end of 2017(95%CI:-1.2021.25) Cohen's d=3.6, from 11.13% to 4.6% (95% CI: 2.89%-11.98%) in Central region representing a 59% reduction in underweight Cohen's d=4.4 while Greater Accra had a 49% reduction in underweight from 7.21% to 3.71% (95% CI: 2.81%-7.61%) Cohen's d=2.8 over the same period. However, human resource capacity and quantity with requisite expenditure for nutrition programs although important, were not significant predictors of underweight in children under 5 years.

Conclusion: Our results indicate government failure, externalities and rent seeking behaviour, however community factors such as nutrition related behavior change through the promotion of nutrition-sensitive agriculture, consumption of nutrient-rich value chain products as well as community support groups are vital in reducing malnutrition and underweight in children under 5 years in the targeted regions in Ghana. Therefore, improving community governance systems could be associated with improvement in nutritional status of children under 5 years in resource challenged settings

Key word: Governance, Food and Nutrition Security; malnutrition, social support

Process of Selection Improves Membership Composition and Representativeness of Horizontal Accountability Structures for Phc Strengthening: Case Study of Four Health Facility Committees

Chinyere Mbachu, Université du Nigéria Nsukka

Background: Health facility committee (HFC) is a recognized community accountability structure that contributes to strengthening primary healthcare systems. Evidence shows that membership composition of HFCs affects functionality and implementation of roles. In light of the foregoing, the Department for International Development (DFID), through the Partnership for Transforming Health Systems 2 (PATHS 2) project, implemented 'voice and accountability' interventions in selected communities in Nigeria. The health facility committee model was identified as the most viable community accountability structure and an entry point to the interventions. The first phase of the intervention was establishment or reactivation of HFCs through a selection process that would address issues with membership composition and representativeness. This study was

undertaken to determine whether and how these interventions on process of selection of HFC members improved their composition and representativeness.

Method: Case study approach was undertaken. Using information from a previous assessment of functionality of FHCs that was supported by DFID-PATHS 2 project, four HFCs of primary health centres were purposively selected from two LGAs in Enugu state. Qualitative method of data collection was employed through in-depth interviews (IDI) of key stakeholders and Focus Group Discussions (FGDs) with HFCs. A total of 9 IDIs and 4 FGDs were conducted. Data was analysed using thematic content approach.

RESULT: The process of selection involved three stages namely, (1) advocacy to community leaders to introduce the initiative and seek their buy-in, (2) community fora involving all adult members within a PHC catchment area to nominate and deliberate on potential representatives, and (3) selection of FHC members in accordance with a guideline which recommends that, (i) communities would nominate their own representatives, (ii) all catchment areas accessing the same health facility would have at least one representative in the committee, (iii) at least one-third of committee membership would be women, (iv) marginalised groups such as settlers will be represented, (v) health workers and relevant occupational groups will be represented, and (vi) community leaders would only act as patrons in the selection process. Adherence to the guideline for selection was monitored and enforced by technical experts, government officials and community-based organizations. The outcome of the process was that HFCS' membership was representative and effectively averted an elitist capture that may have resulted.

Conclusion: Community voice and accountability interventions on process of selection of HFC members resulted in gender diverse and representative committees that could potentially improve health systems responsiveness to the communities served.

- Contact - Christine Ortiz, Health Policy Plus, Palladium, 202 352 6647, christine.ortiz@thepalladiumgroup.com
- Presenter: Dr. Gerald Manthalu (Ministry of Health Malawi)
- Co-authors: Anne Conroy (Ministry of Finance Malawi-funded through USAID/HP+), Henry Mphwanthe (Health Policy Plus), Christine Ortiz, Palladium Group

- Sub-Theme 2: The effectiveness of aid in the building of health systems

Increasing fiscal space for health in Malawi: More resource mobilization or increased absorption capacity of existing resources?

Christine Ortiz Washington DC The Palladium Group - Health Policy Plus
Dr. Gerald Manthalu , Ministry of Health Malawi, Henry Mphwanthe and Anne Conroy

Background: In Malawi, Multilateral and Bilateral partners contribute about 75 percent of total health care funding. Most of this funding is in form of grants. There is, however, growing concern over low absorption rates in major grants which has constrained the delivery of key health interventions. This happens in a context of limited fiscal space for health and active health sector resource mobilization efforts by Government. Understanding the potential for increased resource mobilization and efficient utilization of existing resources will help Government to focus its efforts.

Objective: The primary objective was to advocate for improving absorption rates of grants in the health sector in Malawi versus increased resource mobilization for health.

Methodology: Existing reports and data were analyzed to assess the effects of funding sources, grant characteristics, type of grant recipients and fiduciary governance mechanisms on absorption. The potential domestic resources that can be mobilized from innovative financing

options were also analyzed and compared with efficiency gains from improved absorptions rates. The grants of focus were Global Fund, African Development Bank and Health Services Joint Fund (HSJF). Key informant interviews focusing on implementation processes were also conducted.

Findings: Initial results showed that if all viable earmarked taxes were introduced, a maximum of US$11.6 million could be raised per annum. This is equivalent to US$0.63 health expenditure per capita. The potential additional revenue is a small fraction of the financing gap for health. The absorption rate under the 2016-2017 Global Fund Grant for Malawi was 81 percent implying that 19% (worth about USD 54 million, USD3 per capita health expenditure) was not absorbed while the absorption of the Health Services Joint Fund for the 2017/18 financial year was 30% meaning 70% (USD 15 million, USD 0.83 per capita health expenditure) was not absorbed.

Conclusions: The potential for raising significant additional revenue for health is limited in Malawi. Improving the absorption of existing resources, for example Global Fund grants and the Health Services Joint Fund, may provide the best option for increasing fiscal space for health in Malawi.

Impact of the regulatory health workforce information system in Zambia

Kalongo Hamusonde1, Elizabeth Jere2, Chinema Chiliboyi3, Astone Chanda4, Suwilanji Mwelwa5*
Jhpiego Zambia, 8 Ngumbo Road, Longacres, Lusaka, Zambia
Health Professional Council of Zambia, Wamulwa Road, Thornpark, Lusaka, Zambia

Introduction: The shortage of health workers has been a growing concern in several African countries worldwide. Not only has HIV/AIDS been a major culprit in the deficit of health workers but also the skill imbalances, geographical and sectorial maldistribution and also the lack of information on the active health practitioners in a country. In order to reach the international health development targets, sub-Saharan countries i.e. Zambia inclusive, will have to scale up its workforce tremendously. It is for this reason that in 2014, Emory University funded a project in Zambia to build a regulatory Human Resource Information System (rHRIS) in which information on all health practitioners was stored. The objective of this paper was to ascertain the impact of data in the rHRIS to strengthen human resource planning, policy and management.

Methods: A mixed method design was used in this study. Qualitative data was obtained from semi-structured interviews with two senior officials at the regulatory bodies. Quantitative data was extracted from the rHRIS database.

Results: Data from the rHRIS showed an increase of over 80% in practitioner registration and over 60% in license renewal of health professionals since the inception of the rHRIS in 2015. Due to the positive response in practitioner registration, practitioners with the right skills have been placed in the rightful locations which has in turn improved the uptake of quality health services. Additionally, there has also been an increase in the registration and accreditation of health facilities country wide resulting to quality health care. Interviews with senior officials cited the usefulness of the rHRIS data particularly in the tracking of license renewal by both health practitioners and health facilities which is one of the revenue streams for the regulatory body. It was also cited that data from the system led to a license renewal amnesty which all practioners where allowed to renewal their practicing licenses for the year 2017 without being charged penalties for arreas. This approach increased lincense renewals by over 50% as compared to the year 2016.

Conclusion: The attained advancements in health workforce planning and management as per the results of this paper might have not been achieved as quickly had there not been a rHRIS with readily available data on the health workforce for the Zambian government. This improvement shows that the Zambian government is determined to strengthen its health system in order to provide quality health care services for its citizens.

Parallel Session 6 – Organized session

OS 13 - Public financial management towards better PHC and health sector outputs: Building and disseminating knowledge for accelerated reforms in Africa

Helene Barroy barroyh@who.int

Countries worldwide are making remarkable progress towards universal health coverage (UHC) by substantially increasing the share of public funds in their total health expenditure. By doing so, they have demonstrated the role of broader public financial management (PFM) as integral to the UHC agenda. A robust and transparent overall PFM system (i.e. budget formulation, execution and accountability) can deliver better sector specific results through enhanced efficiency and equity. Progressing towards UHC with given available resources involves optimizing not just how public funds for health are raised, but also how they are allocated, managed and accounted for through the PFM system.

While many African countries have initiated overall PFM reforms, key weaknesses remain in how public resource allocation for health is planned, implemented and accounted for. Enhanced dialogue between finance and health authorities can strengthen basic PFM foundations in many African countries, while accelerating their reform agenda. Identifying priority action areas to do so requires knowledge sharing and reviewing PFM bottlenecks that jeopardize the realization of UHC. As countries embark on health financing reforms, streamlining these efforts with PFM reforms will improve consistency, alignment and maximize progress.

Within this nexus, WHO has initiated a program of work to support African countries at the global, regional and country levels across top to frontline tiers of health systems. Focusing on heath stakeholders while capturing bottlenecks in implementing PFM reforms, this work includes developing country assessments, policy dialogue activities, as well as producing and disseminating global knowledge and guidance. This organized session will contribute towards setting the agenda for further regional research in this area by sharing recent country evidence on PFM progress in the health sector, and identifying the policy challenges that remain. The specific country experiences shared are based on analytical and policy research (both ongoing or completed) conducted by WHO and local partners in Burkina Faso and Ghana.

In addition, The WHO report *"Building strong public financing systems towards universal health coverage: key bottlenecks and lessons learnt from country reforms in Africa"* is expected to be publically released at the 2019 Afhea conference. Hard and soft copies will be made available.

Agenda Session outline

Paper 1: Building strong public financial management systems towards universal health coverage: Key bottlenecks and lessons learned from country reforms in Africa

Dr Hélène Barroy, WHO Headquarters

Background: Placing public funding at the core of health financing has transformed PFM into a central issue for achieving UHC. In Africa, the PFM challenge is more acute than in other regions worldwide, with bottlenecks hindering UHC progress across all steps of the budget cycle, from preparation to execution, reporting and auditing. With the view to strengthen overall efficient use and accountability of public resources, African countries have initiated reforms of their domestic PFM systems since the late 1990s. In most countries, a relatively standard package of interventions has been introduced, including: multi-year expenditure frameworks, budget formulation reforms, computerized financial management systems, with parallel efforts to strengthen the basic budget processes. While policy interventions were not sector-specific, health has often been a pilot sector for reform implementation. In most African countries, evidence highlights the benefits of these reforms, with some advances in reliability of budgets, resource management and overall accountability of public funds. However, results are heterogonous across countries of the region, and in many instances, fundamental PFM obstacles remain across sectors.

Study objectives: In the absence of easily accessible and consolidated knowledge on PFM issues in health, the main aim of this study is to identify, analyse and summarize the nature, extent and causes of PFM issues affecting the health sector for the African Region, with the view to bring a mutual understanding of the problem. In addition, the report seeks to distil lessons of the effectiveness of existing PFM policy responses for the health sector, so as to enable African countries tailor the PFM response to the health sector's needs to better support progress towards UHC.

Report structure: To organise review findings in a structured and easily-understandable manner, this report follows the budget cycle approach developed by Cashin et al (2017), that maps the three main stages of a budget cycle: budget formation, budget execution, and budget reporting, and then links them with health financing goals. Consequently, the first report chapter is dedicated to highlighting key challenges and lessons from policy responses related to budget formation in the health sector. Chapter II deals with the budget execution phase, looking at challenges first and then reviewing policy responses initiated in countries of the region. Chapter III is dedicated to budget monitoring and accountability issues in the health sector. Chapter IV sets out cross-cutting issues, focusing on the process of PFM reform needed for health and the role of health ministries. Chapter V summarizes key recommendations for policy-makers.

Paper 2: Transitioning from inputs-based budget to program budgets in the health sector: lessons from Burkina Faso

Dr Abdoulaye Nitiema, Ministry of Public Health, Burkina Faso

Background: Since the end of the 1990s, Burkina Faso - a French-speaking West African country - has initiated profound reforms relating to the management of public finances, in line with regulations set by the West African Economic and Monetary Union (WAEMU). One flagship measure within this reform was the introduction of a programme budget, marking a shift away from a purely input based budget. Institutionalizing this reform in Burkina Faso took twenty years, with the adoption by Parliament in 2017 of a budget presented using a programme based approach - the first in the WAEMU region. The Ministry of Health was one of the first ministries to engage in and institutionalize this reform, by consolidating a budget around three major budget programmes that aligned with the National Health Plan (the Plan National de Développement Sanitaire (PNDS)).

Study objectives: The study's specific goals were to analyse the structure of the health budget before and after the reform; to document the process of transition from a line budget to a

programme budget, focusing on specific projects such as immunization; to analyse the initial effects of the reform from a sector perspective; and to identify useful recommendations for any changes to the country's reforms.

Report structure: The report begins with a contextual review of the developments in the WAEMU regulatory framework and its transposition into national law with respect to the programme budget and public financial management more generally. A review is also conducted of the developments in health financing and their links to public finance. The second part of the study report focuses on the budget reform process, analysing the various stages in the transition, including in the health sector, and the various players' roles in the reform. The third part deals more specifically with the structure and content of the Ministry of Health's three budgetary programmes and, at the request of the partners supporting and involved in this study, contains an analysis of the implications of the reform with respect to the inclusion of specific interventions – such as immunization, HIV/AIDS, malaria, tuberculosis – in the new budget formulation. The last section of the report analyses the initial impact of the reform on budget planning, flexibility in managing expenditure and accountability. The study concludes with a summary of the progress and challenges of the reform and highlights some key recommendations on adapting the reform to best address the needs of the sector in Burkina Faso.

Paper 3: Practical realities of implementing program budgeting across the Ghanaian health sector

Mr. Daniel Osei, WHO Consultant, Ghana

Background: Ghana has been gradually implementing Programme Based Budgeting (PBB) since 2010 as a way to "*deliver results in a more efficient, effective and transparent manner*."[8] The new approach was adopted to orient the budgeting process towards performance and flexibility. However, practical implementation realities when transforming input-based budgets for specific health programmes into broader-based budgetary programmes present specific constraints, especially as Ghana's health sector has recently faced increasing fiscal pressures and challenges resulting from donor transition dynamics. The majority of goods and services funding is channeled through the National Health Insurance Scheme, which has its own problems with only 71.4% of budgeted funds received in 2016.

Study objectives: This study has two objectives. First, to document the transition to PBB within the Ghanaian health sector. This is of particular importance given the increasing movement of low- and middle-income countries towards PBB. Second, the analysis will serve as a basis to highlight ways Ghana is working to reduce duplicative activities or inputs across health programmes, as well as key challenges to doing so, as part of the PBB transition process.

Report structure: The study first describes the transition from activity-based to PBB, and explains the structure and content of budget programmes within the health sector and related performance measuring metrics. In the second chapter, the effects of the PBB reforms are analysed in relation to stated objectives as the basis to highlight key lessons and challenges, as well as related recommendations for the way forward in the health sector in Ghana.

[8] Ministry of Finance and Economic Planning, Government of Ghana, 2010 budget guidelines.

OS 14 – An Activist Agenda for Health Policy and Systems (HPS) Research and Practise in Africa

- Session format: Participatory World Cafe
- Session chair: Salma Abdalla
- Session organiser: Leanne Brady
- Session discussants: Okiki-olu Badejo, Kefilath Bello, Leanne Brady, Asha George, Lucy Gilson, Kenneth Munge, Shehnaz Munshi. In addition, we will seek to invite an activist and human rights lawyer based in Accra.

Overview of session

The 5th Global Symposium on Health Systems Research started an important conversation recognising that 'our democracies are under threat, our societies more polarized, our ecosystem undermined, conflict and diseases such as Ebola continue without due political attention, and inequalities, including those related to gender and intersectionality increase. In the face of such massive challenges – social solidarity, breaking down siloes, smart use of scarce resources, and innovation are imperative.' [1]

Other central ideas raised at the conference were the importance of politics in health systems, interrogating power structures in global health, and what a decoloniality lens can offer to the field of Health Policy and Systems (HPS) Research and Practice. The symposium also highlighted that in this field '*we have an activist agenda, seeking to promote equity and speak truth to power*' [1] and that indeed, '*academia is a practical place, that the ivory tower should have no walls, and that we should be open to, and influenced by the world around us*'[2]

Purpose Recognising that this field is an '*important place for social action*' [2] the Emerging Voices (EV) 2018 Africa cohort would like to host an organised session that creates a platform to continue the conversation, take some of these important ideas further, and specifically interrogate what they mean for Africa.

The organised session would also create a platform to have an intergenerational discussion, allowing for learning from those who are already established in the field, and create a space for new ideas from those who have joined the field more recently. It would specifically seek to be a generative space that harvests ideas from all participants in the room as we co-create a set of ideas relevant to HPS research and practise in Africa. These ideas will be pulled together after the session by the organisers, and will be shared with all those in attendance to guide our work moving forward. We will also seek to publish this as an editorial to use as a touchstone to guide the work we do in the future.

Technical content (please see session outline for more detail)

- The Liverpool statement: from ideas to Action— what does an Activist agenda look like?
- Power in HPSR
- Taking stock of HPSR in Africa — what work has already been done, and are the research priorities in Africa moving forward?

While the Emerging Voices 2018 Africa would host this space, we will specifically invite leaders and thinkers in the field to share ideas (see session process below) and will also seek to invite activists working in relevant areas to contribute. The target audience would be all members of the HPS research and practice community at AfHEA, and would also specifically be an opportunity for the Health Systems Global Africa region to re-connect before HSR2020 as we co-create ideas to take forward.

Summary of planned session process

Introduction

- Conceptual starting points of HPS research and practice
- Research as a form of activism
- Objective of the session is to think together, co-produce ideas and discuss possible steps forward.
- This organised session is part of a conversation focusing on how our work can centre equity, address power hierarchies and work towards shifting the agenda and building southern scholarship.

World Café (3 x 20mins)

TABLE TOPICS

KEY IDEAS/SUMMARY (discussant will give a 5 minute input at the beginning of each table discussion)

KEY QUESTIONS FOR PARTICIPANTS DISCUSSANTS

1. The Liverpool statement: from ideas to Action

Kefilath Bello, Asha George Activist/ Human rights lawyer

A summary of the Liverpool statements will be outlined, with a focus on research as activism, and the political nature of HPS research and practise.

a. What points are most relevant in the African context? What does an activist agenda that addresses equity look like?
b. How do we take these ideas forward? What are the next steps?

2. Power in HPS research and practice

Breaking down the "i-sms" (colonialism, racism, sexism, classism, heteronormativism) and how they play out in the field of HPSR with brief overview of intersectionality as a lens.

Unpack some of the mechanisms that maintain unequal power relationships (such as knowledge hierarchies, language, aid, health security, eurocentrism) in HPS research and practice.

a. In your setting, how does power play out in health policy systems research and practice? Please give examples.
b. How do we guard against perpetuating power hierarchies in our research? (for example, how do we do meaningful engaged scholarship, and allow for public participation and "passing the mic" in HPS research and practice?

Kenneth Munge, Shehnaz Munshi, Leanne Brady

3. Taking stock of HPS research and practise in Africa

A brief overview of the work that has been done including highlighting existing gaps.

For example: very little exploratory work, and very little work that looks at the politics of change has been done in HPS research.

a. What are the essential steps towards shifting the research agenda despite existing funding patterns? How do we centre African priorities and co-produce research?
b. What are the research priorities for Africa moving forward?

Okiki-olu Badejo, Lucy Gilson

Plenary closing

Feedback from 3 tables and final inputs from participants

Outline next steps

References

1. Liverpool statement from HSR2018.

2. HSG Lifetime achievers award acceptance speech. Lucy Gilson. Oct 2018

OS 15 – Implementing Bold Reforms towards Financing UHC in a Decentralized Economy: Political Economy, Innovations, and Progress in Nigeria

Background: Nigeria remains the most populous country in Africa with over 200 million population with over 60% living in rural areas. Prior to current reforms, Nigeria was not on track towards Universal Health Coverage (UHC). The sub-optimal performance of Nigeria's health system can be attributed to the poor financing of the required investments for delivery and management of health services. The Total Health Expenditure (THE) as a percentage of GDP in 2016 is 3.8, while per capita health expenditure is $77.

With General Government Health Expenditure (GGHE) as a percentage of the General Government Expenditure (GGE) at 5.9% (Federal), 4.2% (States), and 3.8% (LGAs), Nigeria is still far from Abuja Declaration of 15% spending on health. Since health outcomes are unfortunately intangible, it becomes more difficult to make a case for additional funding to achieve UHC from Policy Makers who apparently would wish to spend more on areas that will give them more political currency. This has placed the most burden of healthcare in Nigeria on households who according the NHA 2016 spend 71.5% out of the Total Health Expenditure (THE).

To demonstrate her strong commitment in fast-tracking progress towards UHC therefore, the Federal Government of Nigeria held the Presidential Summit on UHC in March 2014, which prescribed actions that should be taken for the country to achieve UHC. Later the same year, the National Health Act (NHAct) was enacted and in 2016, the new National Health Policy was developed to provide clear policy directions for health in Nigeria.

A critical part of the reforms was the development and adoption of the National Health Financing Policy and Strategy in 2017 which now provides for mechanisms that are equitable and reflect commitments to increase the proportion of Nigerians in the bottom 2 quintiles that can access affordable healthcare without any financial barriers. It also details strategies for decentralizing health insurance which hitherto covered only 4.3% of the population on a package of health services and the expansion of the Basic Healthcare Provision Fund (BHCPF) of the NHAct 2014 which has been rolled out in the country.

Over the last 5 years, modest gains have been made in implementation of current reforms in Nigeria. This session will showcase the political economy of implementing these reforms in a decentralized country with 37 federating units, innovations adopted to navigate through expected challenges, and current progress made in advancing towards the goals including improving domestic resource mobilization at Federal and sub-national levels.

Session Plan:

1. 60 minutes of short presentations by 6 Panelists.

Topics:

- **i.** Providing decentralized risk protection mechanism for health in Nigeria: Design typologies and status of implementation of State Health Insurance Schemes – 10 Mins
- **ii.** Where are we in earmarking towards Improving Domestic Resource Mobilization in a Decentralized State? The Political Economy of the Nigeria Basic Healthcare Provision Fund (BHCPF) – 10 Mins
- **iii.** Potential for gains in domestic resource mobilization through State Health Insurance Schemes: How wide can we expand the Fiscal Space for Health in Nigeria? – 10 Mins
- **iv.** Innovations in revenue collection among informal sector for Social Health Insurance: Leveraging Adoption to ensure expansion of coverage in the Anambra State Health Insurance Scheme – 10 Mins
- **v.** 5 years of performance based financing experience in Primary Healthcare: What progress has Nigeria made in Strategic Purchasing towards UHC? – 10 Mins
- **vi.** Harnessing and Aligning Legislative Functions towards UHC in Nigeria: Sharing the Success and impact of the Legislative Network for UHC – 10 Mins

2. 10-Minute Panel Discussion Moderated by the Chair
3. 20-Minute Audience Participation session
4. 5-Minute Wrap-up Session

OS 16 – Translating Evidence to Action: Participatory Approaches for Strengthening Maternal Health Interventions

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Implementation process and quality of a primary healthcare system improvement initiative in a decentralized context: A retrospective appraisal using the Quality Implementation Framework

Ejemai Eboreime, West African Network of Emerging Leaders in Health Policy and Systems (WANEL)

Participatory Action Research (PAR) is an approach to research that seeks to collaboratively understand and change real-world situations, thus it emphasizes participation and action. PAR enables action through a reflective cycle whereby participants collect and analyze data in real-world contexts and determine actions to be taken. Further, it blurs the line between researchers and research subjects by empowering participants to become partner researchers as against being mere objects of research (respondents). PAR requires health researchers to work in close partnership with implementers and beneficiaries of health initiatives (e.g. civil society and health policy makers and practitioners). Thus, these actors learn how to harmonize dissimilar and sometimes competing interests, and collaborate effectively towards improving health system performance.

PAR has been used in several interventions in healthcare such as to strengthen health manager's capacity, to improve nutritional practices of pregnant women towards reducing occurrences of

Low Birth Weight neonates, to address poverty and social inclusion in the lives of individuals with mental health challenges, among others. This organized session aims draw lessons from the application of PAR in strengthening health systems in the West African Sub-region.

The session will consist of 3 oral presentations (10 minutes each), one panel session involving the 3 presenters. Thereafter an open "fish-bowl" session will be conducted to elicit discussions from the audience.

Oral presentations include:

1. Adolescent mothers want easy access to antenatal care services in the Hohoe Municipality of Ghana: Findings from a Participatory Action Research

2. A Participatory Action Research for health system bottleneck analyses in a Prevention of Maternal to Child Transmission of HIV programme in Nigeria

3. The midwives service scheme: a qualitative comparison of contextual determinants of the performance of two states in central Nigeria

Adolescent mothers want easy access to antenatal care services in the Hohoe Municipality of Ghana: Findings from a Participatory Action Research

Sitsofe Gbogbo[1,2], Martin Amogre Ayanore[1], Yeetey Enuameh[3], Cornelia Schweppe[2]
[1]School of Public Health, University of Health and Allied Sciences, Ho, Ghana
[2]Institute of Education, Johannes Gutenberg University of Mainz, Germany
[3]School of Public Health, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana

Background: Adolescent pregnancy-related complications are the leading cause of mortality among females 15 to 19-years of age. Adolescent mothers are at a greater risk of, puerperal endometritis, eclampsia and systemic infections as compared to older women. Antenatal care (ANC) offers opportunities to diagnose and treat such complications, improving pregnancy outcomes for both mothers and babies.

To achieve the United Nations Sustainable Development Agenda by 2030, a lot more needs to be done in reducing pregnancy in adolescence and maternal deaths. Deaths during childbirth in developing countries are 14 times higher than their developed counterparts and progress at teenage pregnancy eradication is slow.

Methods: Participatory action research (PAR) is a research approach, that systematically collects empirical data and analyzes it for the purpose of taking action to effect change. Using this approach, we explored adolescent mothers' knowledge, preferences and components of ANC that required improvement to enhance sustainable maternal and child health services.

The study was carried out in the Hohoe Municipality in partnership with the Hohoe Municipal Hospital. Facilitators from 4 communities supported participants recruitment and data collection. Six focused group discussions were held with adolescent mothers, 20 in-depth interviews with pregnant adolescents and 6 midwives were also interviewed. Recorded data was transcribed, coded, analyzed thematically, interpreted and consequently mapped through participant and facilitator evaluation and discussion.

Results: Findings revealed that adolescent mothers experience financial barriers that limited their access to antenatal care. Health care provider's unfriendly attitude and poor resourced

health facilities non-equipped health facilities are some of the barriers noted for accessing health care services among adolescent mothers.

Conclusions: Broad stakeholder consultation and engagements in designing community based antenatal care services can help improve access and limit barriers to adolescent antenatal care services. Improving healthcare professionals' training, access to medication, laboratory services, and enhanced provider-mother focused interaction are vital for improving adolescent motherhood health outcomes. Health facility staff need to prioritize adolescent mothers unmet antenatal care needs in order to ensure continual improvements at the community and facility level.

A Participatory Action Research for health system bottleneck analyses in a Prevention of Maternal to Child Transmission of HIV programme in Nigeria

Ejemai Eboreime[1,2], Lawal Abubakar[3], Usman Garba[3], Nonhlanhla Nxumalo[1], John Eyles[1]*
1 Centre for Health Policy, School of Public Health, University of the Witwatersrand, Johannesburg, South Africa
2 Department of Planning, Research and Statistics; National Primary Health Care Agency, Abuja, Nigeria
3 Kaduna State Primary Health Care Agency, Kaduna, Nigeria

Background: Participatory Action Research (PAR) is an approach to research that enables action through a reflective cycle whereby participants collect and analyse data in real world contexts and determine actions to be taken. It blurs the line between researchers and research subjects by empowering programme implementers become partner researchers as against being objects of research (respondents). This paper describes the use of PAR in identifying health system bottlenecks in PMTCT programme in two Nigerian Local Government Areas (LGAs) in 2016. Nigeria accounts for about 30% MTCT globally.

Methods: Using PAR, we supported programme managers in both LGAs to conduct bottleneck analysis (BNA) on PMTCT interventions using a modified Tanahashi model. The model measures six determinants of "effective coverage" of "tracer" interventions: Availability of essential health commodities and human resources; accessibility, acceptability, continuous utilization, and impact/quality of interventions delivered. Bottlenecks are identified as gaps to optimal coverage of each determinant. Tracer interventions include: HIV Testing and Counselling, ARVs for PMTCT, and Infant HIV Testing.

Programme managers were supported to identify constraints using routine data analysed on a MS-Excel based BNA tool. Techniques like brain storming, "5 Whys", affinity and driver diagrams, were used to perform root cause analysis.

Results: We found that effective coverage across all tracer interventions was very poor. This was largely due to poor demand for services as well as poor geographical distribution of intervention facilities. Generally, health facilities providing PMTCT services had relatively good supply of commodities and trained human resources to deliver services. On the demand side, there was more acceptability and continuity of T&C services by women attending ANC when compared to other interventions. Despite availability of commodities and human resources, 39% and 100% HIV positive pregnant women were not receiving ARVs in both LGAs respectively. Contrary to policy and programme guidelines, 78-100% of HIV-exposed children did not have blood samples taken for PCR tests within two months of birth. Further, 82-100% of HIV-exposed children whose blood samples were taken for PCR test within two months were positive, indicating high vertical transmission rates. Action plans were developed by the managers to address and follow-up on these bottlenecks. Detailed findings are presented tables and figures.

Conclusions: Our study demonstrates that BNA using a PAR approach is effective in identifying health systems constraints. Thus, it may be very helpful in aiding local health managers address programme constraints quickly, within the confines of available resources.

The midwives service scheme: a qualitative comparison of contextual determinants of the performance of two states in central Nigeria Background

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Background: The federal government of Nigeria started the Midwives Service Scheme in 2009 to address the scarcity of skilled health workers in rural communities by temporarily redistributing midwives from urban to rural communities. The scheme was designed as a collaboration among federal, state and local governments. Six years on, this study examines the contextual factors that account for the differences in performance of the scheme in Benue and Kogi, two contiguous states in central Nigeria.

Methods: We obtained qualitative data through 14 in-depth interviews and 2 focus group discussions: 14 government officials at the federal, state and local government levels were interviewed to explore their perceptions on the design, implementation and sustainability of the Midwives Service Scheme. In addition, mothers in rural communities participated in 2 focus group discussions (one in each state) to elicit their views on Midwives Service Scheme services. The qualitative data were analysed for themes.

Results: The inability of the federal government to substantially influence the health care agenda of sub-national governments was a significant impediment to the achievement of the objectives of the Midwives Service Scheme. Participants identified differences in government prioritisation of primary health care between Benue and Kogi as relevant to maternal and child health outcomes in those states: Kogi was far more supportive of the Midwives Service Scheme and primary health care more broadly. High user fees in Benue were a significant barrier to the uptake of available maternal and child health services.

Conclusion: Differential levels of political support and prioritisation, alongside financial barriers, contribute substantially to the uptake of maternal and child health services. For collaborative health sector strategies to gain sufficient traction, where federating units determine their health care priorities, they must be accompanied by strong and enforceable commitment by sub-national governments.

OS 17 – The effect of human resources management on performance in hospitals in Sub-Saharan Arica

**Philipos Gile, **Professor Joris van de klundert, *Martina Buljac*
**Higher Education Institutions Partnership; and Erasmus University Rotterdam*
*** Prince Mohammad Bin Salman College for Business & Entrepreneurship King Abdullah Economic City Kingdom of Saudi Arabia*

Healthcare systems, particularly hospitals in low income countries (LICs) mainly in Sub-Saharan Africa (SSA) face major health work force labor issue challenges while having to deal with extraordinary high burdens of disease. The effectiveness of Human Resource Management (HRM) is therefore of particular interest for these SSA hospitals. While, in general the

relationship between HRM and hospital performance is extensively investigated, most of the underlying empirical evidence is from western countries, and may have limited validity in SSA. Evidence on this relationship for SSA hospitals is scarce and scattered. We present a systematic review of empirical studies investigating the relationship between HRM and performance in SSA hospitals. Following the PRISMA protocol and searching in seven data bases (i.e. Embase, Medline, Web of science, Cochrane, PubMed, Cinahl, Google scholar) yielded 2252 hits, and a total of 111 included studies which represent 19 out of 45 SSA countries.

From an HR perspective, most studies researched HRM bundles that combined practices from the practices domains motivation enhancing, skills enhancing, and empowerment enhancing. Motivation-enhancing practices were most frequently researched, followed by skills enhancing practices and empowerment-enhancing practices. Few studies focused on single HRM practices (instead of bundles). Training and education were the most researched single practices, followed by task shifting.

From a performance perspective, our review reveals that employee(nurses, physicians, midwives) outcomes and organizational outcomes are frequently researched, whereas team outcomes and patient outcomes are significantly less researched.

Most studies report HR interventions to have positively impacted performance in one way or another. As researchers have studied a wide variety of (bundled) interventions and outcomes, our analysis doesn't allow to present a structured set of effective one-to-one relationships between specific HR interventions and performance measures. Instead, we find that specific outcome improvements can be accomplished by different HR interventions, and conversely that similar HR interventions are reported to affect different outcome measures.

In view of the high burden of disease, our review identified remarkable little evidence on the relationship between HR and patient outcomes. Moreover, the presented evidence often fails to provide contextual characteristics which are likely to induce variety in the performance effects HR interventions. Coordinated research efforts to advance the evidence base are called for.

Key words: HRM, SSA, employee outcome, team performance, patient outcome, hospital, health workforce, healthcare system low-income countries, systematic review

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OS 18 – Promoting access to quality and responsive mental health care and services in Ghana

Dr. Gina Teddy, Centre for Health Systems and Policy Research, Ghana Institute of Management and Public Administration.
James Duah, Christian Health Association of Ghana
Wendy Abbey, Human Rights Advocacy Center
Francis Acquah, Mental Health and Well-being Foundation
Dr. Cynthia Sotie, Ghana Health Service, Mental Health Unit

Mental illness is considered an epidemic throughout Africa due to systematic financial, structural and policy constraints. Historically, mental illness has been neglected in Africa due to limited, allocated resources, lack of infrastructures, inaccessibility to health services, profound stigmatisation, poor quality of care and superstitious beliefs around the cause of mental illness. In Ghana, access to mental health services continues to be challenged despite recent improvement in policy and legal frameworks. Mental health disorders affect over 2.8 million people in Ghana, but only 2% of them have access to basic mental health services. Meanwhile, the country has only three specialist psychiatric hospitals, 16 psychiatrists and 1,558 psychiatric

nurses in the country. Despite recent efforts to integrate mental health and general health services, systematic constraints have led to treatment, quality and support gaps in both mental and general health services.

This organized session aims to create a platform for deliberation and collaboration for mental health development in Ghana by bringing together key actors to deliberate on their role, functions and capacities towards improving and sustaining mental healthcare and services in Ghana. Engaging these session participants will demonstrate how collaboration can enable organisations to identify concrete proposals and strategies for improved mental health services accessible to all in Ghana.

The main objective of the session is to present different organizational potential contributions to improving access to mental health services, engage the organizations in in a useful debate/discussion (with other session participants) to identify possible and practical strategic responses to challenges by governments, NGOs and others actors in the mental health field towards attaining universal health coverage and improved primary mental health services.

Several interventions are being undertaken to address some of the challenges associated with mental healthcare and service provision in Ghana.

- The Christian Health Association of Ghana (CHAG) in collaboration with UKAID introduced several interventions to improve access to mental health services.
- The Human Rights Advocacy Centre (HRAC) and the Mental Health and Well-being Foundation (MHWF) are providing evidence generation and advocacy toward improving quality mental health services within both the formal and informal sector.
- The Ghana Health Service is a strategic partner towards promoting the integrated mental health services across the country, yet it is faced with severe challenges creating gaps in their practices and policy mandates.
- The Centre for Health Systems and Policy Research is advocating to promote and improve access to mental healthcare and services with support from formal institutions such as workplaces and schools. These social institutions have moral mandates towards supporting the wellness and mental health of their employees and students respectively.

Each of these institutions are addressing factors affecting access to mental healthcare and how to improve individual and community participation in healthcare and services.

The institutions are addressing issues ranging from allocation of resources, efficiency in service provision, engaging neglected populations and using community structures as innovative ways of promoting access to mental healthcare.

This organised session provides two different kinds of 'main findings'; (a) the individual presentations demonstrate the outstanding organizational capabilities that are already available in Ghana that can work collaboratively to achieve improved access to mental health services; (b) the panelists' discussion and concurrent engagement with session participants will generate options for ongoing collaboration after the session – options to present to government and others, and to encourage ongoing collaboration.

This session is organised by the Centre for Health Systems and Policy Research, to create a platform to promote access to quality mental health services across institutions in Ghana through collaboration among policy makers, advocates, researchers and implementers of policies, in order to respond to institutional challenges associated with access to mental health services.

Abstract #1

Improving the Lives of Persons Suffering from Mental Illnesses in Ghana: An Impact Assessment of the Christian Health Association of Ghana's (CHAG) Integrated Mental Health Services

Dr. James Duah, Christian Health Association of Ghana

Introduction and Aim: Like most developing countries, the mental health needs of Ghana is highly unmet with limited resources, poorly allocated health expenditure and multiple barriers to health services. CHAG in collaboration with UKAID have introduced several interventions under the Health Sector Support Programme for Government of Ghana (HSSP) to reduce these gaps in mental health care access and promotion. This impact assessment evaluates the project's outcome in terms of reducing stigma associated with mental health; re-integrating persons treated from mental illness back into the community; and increasing access through the integration of mental health services to primary healthcare.

Methods: This evaluation study investigated nine facilities in three regions: Ashanti, Brong Ahafo and Northern Regions. A mixed methodological approach purposively combined primary and secondary. Surveys, interviews, documentary analysis and focus group discussions (FGDs) enabled an in-depth qualitative and quantitative data to inform the evaluation. All the data was appropriately analysed.

Findings: The study revealed that despite 90% of respondents being aware of mental health, stigmatization towards persons with mental disorders (PMD) is still high (70%), due to the perception towards it. A third of respondents (35%) thoughts that PMD are treated poorly and 45% perceived their relationship with the community as poor. However, integrated services have enabled an understanding of mental disorders through sensitization by health workers. 73% of the respondents understood mental health as sickness of the brain compared to 16% and 11% who thought of it as curses and spiritual attacks, and resulting from drugs use respectively. There have been dramatic improvement in access to mental health services by over 96% since mental health was integrated. Patients are able to access healthcare at their local or regional facilities while 30% reported of being supported by community health workers in their communities as compared to when they depended only on specialized psychiatric services outside of their communities. Access to information, medication, transportation, alternative medicines were still a major concern. Survivors of mental noted that community integration is still very low and their major concern relates to funding for care, quality and responsiveness of mental healthcare.

Discussion and Conclusion: The study showed how relevant integrated services must be coupled with responsiveness, availability of resources and continued sensitization of community members about mental health. We concluded the government can learn from the experience on implementing the integrated mental health services from the CHAG experience to avert some of the listed challenges especially improving quality of mental services and reduce the levels of stigmatization.

Abstract #2

Promoting Quality Access to Mental Health Care Services using community structures such as Traditional Mental Health Centers in Ghana

Wendy Abbey & George Owoo, Human Rights Advocacy Center

Introduction & Aim: Ghana like many developing countries is recognized for making significant strides at the end of the Millennium Development Goals. Yet, very little was achieved in mental

health, improved access and quality of care leading to inequity, inaccessibility and social exclusion for those in desperate need of mental health services. It is estimated that 2.8 million people live with mental disability in Ghana, yet less than 2% access mental health services. The systematic challenges in providing mental health services cuts across the country leading to treatment gap of about 98%. The Traditional Mental Health Centres (TMHC) are community systems that complements formal mental health services. Yet, there is a general lack of awareness and understanding of the practices, services, management, regulations, rights and responsibilities of TMHCs in Ghana. This study explores the role of TMHCs in providing mental health services, quality of care, while generating an understanding of their practices, regulations and adherence to quality standards.

Methods: Using an exploratory approach, this study is being conducted across all regions in Ghana using both qualitative and quantitative methods to solicit for primary and secondary information from communities and TMHCs while advocating on mental health improvements at the community levels.

Findings: The study revealed extraordinary barriers to accessing mental health services in Ghana leading to inequality and social exclusion of people living mental disability from basic health services attributed to lack of services and socio-cultural factors. Preliminary findings revealed the significant role of TMHCs in complementing formal mental health services in Ghana. TMHCs deals with the perceived spiritual and physical causation of mental disability led by the prayer camps, traditional healers, herbalists and spiritual treatments centres. Yet, there was little or no regulations for their functions, practices, services and quality of care leading to widespread convictions of abuses and mistreatment of people with mental disability seeking the services of TMHCs.

Discussion & Conclusion: This study concludes by advocating for a multi-sectoral approach by communities, researchers, NGOs and the Mental Health Authority to standardize, regulate, develop and improve the work of TMHCs in Ghana. We emphasis improving access and quality of care to make TMHCs responsive in providing dignifying mental health services to clients. Policy lesson from this study will inform knowledge, practices, regulation and policies guiding the practices of TMHCs across communities in Ghana to create a vibrant community health system.

Abstract #3

The Role of the Ghana Health Service in achieving Universal Health Coverage through Integrated Mental Health Services in Ghana

Dr. Cynthia Sottie, Ghana Health Service, Mental Health Unit

Introduction & Aim: The Ghana Health Service is a strategic partner towards promoting integrated mental health services across the Ghana. The Mental Health Department at the Institutional (Clinical) Care Division of the Ghana Health Service is mandated to coordinate, supervise, monitor and develop both facility and community based mental health services to improve accessibility, availability and integrate mental health services into Primary Health Care. This mandate directly overlaps with that of the Mental Health Authority whose primary mandate is to propose, promote and implement mental health policies while providing culturally appropriate integrated mental healthcare. These mandates intends collaboration of the two institutions towards improving mental health care and services in the public sector. However, it has created duplications and conflicts in terms of funding, accountability and resource allocation. This presentation seeks to discuss the effect of the integrated mental health policy on the Ghana Health Service and advocate for an effective collaborative effort towards achieving the policy mandates.

Methods: This study draws largely from routine quantitative data, documentary analysis and institutional policies on mental health across the health sector. Psychiatric OPD services is provided across all the 10 regions in Ghana, however the cases of the Regional hospitals with specialized psychiatric wings are explored.

Findings: The preliminary review of the data showed that despite the provision psychiatric OPD services across all the 10 regions and 216 districts in Ghana, only three regional hospitals are equipped to provide both OPD and in-patience mental health services. Otherwise, the remaining regional admit and manage some cases of mental disorders in the general wards. At the districts, services are limited to OPD and community care activities by Community Psychiatric Nurses and Community Mental Health Officers or Physician Assistants in Psychiatry. Meanwhile due to the limited human resources, logistical and financial resources and capacity for the general health providers, mental health services are still running parallel to primary health care and are poorly integrated.

There is also an acute shortage of psychotropic medicines due to the erratic supply system. Funding to support for community mental health services is another challenge as is treatment of mental health workers. They are highly stigmatised as much as their patients and carers.

Discussion & Conclusion: We suggest that while government policies on promoting Integrated Mental Health in Ghana have been targeted towards different institutions and actors in the health sector, implementing these polices have been constraints due to lack of clarity of roles and responsibilities, poor communication and lack of resources creating a practice gap. This has impacted on health workers, service users and service provision overall as a result of lack of coordination and clarity in the Mental Health Act as well as other policies.

Abstract #4

The Impact of Organizational Support in dealing with Mental Health Issues in the Workplace and at School in Ghana – An Advocacy Call

Dr. Gina Teddy, Centre for Health Systems and Policy Research, GIMPA

Introduction and Aim: Mental health problems cause distress to individuals and their families. In Ghana, one out of every five people suffer from mental health illness. It is one of the greatest social and health challenges across the country yet very limited support is available for sufferers. Most people with mental disorders take solace in work and from their social network because of the sense of identity and purpose it creates. Work provide wellbeing for our mental health because it provides a source of income, sense of identity, contact and friendship with others, a steady or routine structure and opportunities to gain achievements and contribute to a goal. On the contrary, work or schooling may also have a negative impact on our mental health due to workplace stress and anxiety, poor relations with your colleagues, the type of work roles and exposure to the elements. If work is causing one to experience hypomania, it becomes a stressor. Meanwhile, persons with mental disorder are likely to face stigma or be treated unfairly because of their mental health problem. And this is causing anxiety for PMD. This advocacy call is to create awareness around the issue and get key stakeholders to engage on providing support for mental health at the workplace and in schools.

Methods: An open forum debate through stakeholder engagement to the general public was the main method for data gathering. A group of panelist led the discussion which was later opened to the participants to respond to with questions informed by a litereature review. The feedback was recorded and analysed to draw out the key message for the set the advocacy agenda. Similar platform will be used to advocate for inclusiveness in mental health at work and schools.

Findings: The discussion revealed that despite employers' duty to support the wellbeing of their employees, very little or no protection and support is being provided for the wellness and mental of employees. Legislations are week or not properly controlled, and return to work after mental illness is virtually non-existent making the lives of survivors difficult. Also, most young people are experiencing mental health issues. Some of these young people are struggling with mental illnesses that many adults deal with, like depression, anxiety, substance abuse, etc. Whether treated or not, young people go to school. And the problems they face turn into major problems found in schools. They start with chronic absence, low achievement, disruptive behavior, dropping out and suicide. In 2017, suicide rates in our university increased dramatically and they were mostly attributed to mental illness. Schools play a role in identifying students with mental health problems and help them succeed. But most educators do not have the capacity and resources to tackle mental health. Those trained to do so are often drowning in huge caseloads with poor resources.

Discussion & Conclusion: Provision of mental health services in the workplace highlights the importance of work and inclusiveness. Work institutions are hardly supporting their employees and most schools are neglecting their responsibilities towards their students. Since most people spend a large majority of their time at the workplace or in schools, these institutions must be mandated to provide wellness and mental health support to their employees and students respectively. As pseudo social systems and networks, their role in promoting mental wellbeing and good health cannot be overlooked.

OS 19 – Securing PHC for all in a voluntary health insurance: lessons from the NHIA-KOFIH collaboration in Ghana

The Ghana National Health Insurance Scheme aims to assure Universal Health Coverage to Primary Health Care for all Ghanaians. It has however struggled since passage of the first law in 2003 and commencement of implementation in 2004 to attain Universal population coverage with financial protection to its defined primary care package for all Ghanaians. As part of the collaboration with Korean Foundation for International Healthcare, the NHIA conducted a qualitative and quantitative baseline assessment in the Volta region of Ghana to explore, describe and analyse the what, why and how of the challenges with universal population and financial coverage. The voluntary enrolment system was identified as one of the barriers to universal population coverage. It worked in synergy with other barriers such as service access and quality as well as the financing gap of the NHIS. Following the baseline study, an intervention to stimulate higher levels of voluntary enrolment was put in place. This panel presents the findings of the baseline assessment, the intervention to stimulate voluntary enrolment and the outcomes of the intervention in three presentations of 15 to 20 minutes each. It is followed by a discussion with a panel of experts on what the way forward is for Ghana. The discussion explores how to effectively make enrolment compulsory given the lessons we have learned about the challenges of voluntary enrolment. South Korea has managed to attain compulsory enrolment and universal health coverage, and lessons from the South Korean experience are presented as part of the panel discussion. The session structure is summarised as follows:

1. Introductory comments /remarks by the session chair
2. Three initial presentations of 10 minutes each (abstracts attached)

3. Interactions with presenters and a multi-stakeholder panel on ways the increase enrolment and enforce mandatory household enrolment to be able to achieve UHC.
4. Contributions, questions, discussion and interaction with the audience (25 minutes).
5. Closing summary /conclusions and comments by Session Chair (5 minutes)

Abstract 1 Title: The "Universal" in UHC and Ghana's National Health Insurance Scheme: policy and implementation challenges and dilemmas of a lower middle income country.

Abstract 2 Title: Enhancing enrolment onto the NHIS to achieve UHC: A survey to explore barriers and enablers to enrolment among NHIS members in the Volta Region.

Abstract 3 Title: The experiment to stimulate voluntary enrolment through expansion of registration units and intensifying education of members at the district office.

Presenters:

1. Mariam Musah, Senior Research Manager, National Health Insurance Authority
2. Eric Nsiah-Boateng, Senior Policy Manager, National Health Insurance Authority

Panel discussion members:

3. Dr. Baaba Selby, Deputy CEO, Operations, National Health Insurance Authority,
4. Professor Irene Agyepong, Ghana Health Service, Research and Development Division, Dodowa Health Research Center
5. Prof. Soonman Kwon, Professor, School of Public Health, Seoul National University/President, Korean Health Economic Association
6. Mr. Chibum Shin, Director, Africa-Latin American Team, KOFIH
7. Dr. Yanghee Kim, Deputy Director of Global Cooperation, NHIS Korea

Enhancing enrolment onto the NHIS to achieve Universal Health Coverage: A survey to explore barriers and enablers to enrolment among NHIS members in the Volta Region

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Background: Low enrolment is one of the key challenges for many Social Health Insurance Systems with voluntary enrolment and Ghana is no exception. UHC requires full population coverage. Moreover, if UHC is to be efficiently financed through SHI, the risk pool needs to be large enough to spread risk sufficiently and avoid adverse selection. It is therefore important to understand the barriers and enablers to enrolment and staying enrolled in the Ghana NHIS.

Study Objectives: The objective of this study was to describe and quantify the extent of barriers and enablers to enrolling and renewing enrolment onto the NHIS.

Methods: The study design was a cross sectional survey of a probability sample of households in all (17) districts of the Volta region of Ghana. 918 households were sampled. We adopted the Ghana Living Standards Survey's (GLSS6) two-stage stratified sampling design. The sampling frame for the household-based sample was the list of all delineated 1200 Enumeration Areas (EAs) from the GLSS6 of which 117 EAs were from the Volta region with corresponding data on number of households. The regionally representative sample of households for the survey in the region was based on a two-stage stratified cluster design. In the survey, we collected information

on health service utilization, general health and health seeking behaviour, knowledge of the NHIS, willingness to pay for the NHIS premiums, anthropometry, demographic and household characteristics.

Key Findings: 50% of household respondents were active (valid card bearing members) and the rest were inactive (unenrolled and non-renewed). Active members were more likely to have higher formal education (P=0.000), more knowledge on NHIS processes/benefits package (P= 0.000) and live closer to the NHIS district office than their inactive counterparts (P= 0.000). These factors facilitated enrolment and staying enrolled. Active members also rated their health status and selected self –reported health conditions to be much poorer than the unenrolled population pointing to the phenomenon of adverse selection. 95% of the inactive respondents were willing to enroll while 99% of the active membership were willing to continue with their enrolment.

Conclusions: The results suggest that for the NHIS to increase enrolment and ultimately achieve UHC, it must review its enrolment and education processes to enable easier access to the district scheme offices and a better understanding of enrolment processes. Mandatory household registration will also be needed to curb adverse selection.

The "Universal" in UHC and Ghana's National Health Insurance Scheme: policy and implementation challenges and dilemmas of a lower middle income country

Agyepong I.A., Abankwah D.N.Y, Abroso A., ChangBae Chun, Joseph Nii Otoe Dodoo, Shinye Lee, Sylvester A. Mensah, Mariam Musah, Adwoa Twum, Juwhan Oh, Jinha Park, DoogHoon Yang, Kijong Yoon, Nathaniel Otoo and Francis Asenso-Boadi (2016) BMC Health Services Research.

Background: Despite universal population coverage and equity being a stated policy goal of its NHIS, over a decade since passage of the first law in 2003, Ghana continues to struggle with how to attain it. The predominantly (about 70 %) tax funded NHIS currently has active enrolment hovering around 40 % of the population. This study explored in-depth enablers and barriers to enrolment in the NHIS to provide lessons and insights for Ghana and other low and middle income countries (LMIC) into attaining the goal of universality in Universal Health Coverage (UHC).

Methods: We conducted a cross sectional mixed methods study of an urban and a rural district in one region of Southern Ghana. Data came from document review, analysis of routine data on enrolment, key informant in-depth interviews with local government, regional and district insurance scheme and provider staff and community member in-depth interviews and focus group discussions.

Results: Population coverage in the NHIS in the study districts was not growing towards near universal because of failure of many of those who had ever enrolled to regularly renew annually as required by the NHIS policy. Factors facilitating and enabling enrolment were driven by the design details of the scheme that emanate from national level policy and program formulation, frontline purchaser and provider staff implementation arrangements and contextual factors. The factors inter-related and worked together to affect client experience of the scheme, which were not always the same as the declared policy intent. This then also affected the decision to enroll and stay enrolled.

Conclusions: UHC policy and program design needs to be such that enrolment is effectively compulsory in practice. It also requires careful attention and responsiveness to actual and potential subscriber, purchaser and provider (stakeholder) incentives and related behaviour generated at implementation levels.

Keywords: Universal Health Coverage, Policy, Implementation, National Health Insurance Scheme, Ghana, Low and middle income countries.

The experiment to stimulate voluntary enrolment through expansion of registration units and intensifying education of members at the district office

Background: The findings from both the qualitative and quantitative studies informed development and evaluation of a two component intervention for increasing voluntary enrolment. The two components of the intervention were Registration Unit Expansion and NHIS Information and Education. The ultimate objective of the two interventions was to increase enrolment among residents in the intervention districts through:

1. Increased knowledge about the NHIS, its enrolment processes and the benefits package through education and communication.
2. Encouragement of 'group registration' and discouraging individual registration.
3. Taking registration closer to the people

Study Objectives: The objective of the study was to evaluate the impact of the interventions on voluntary enrolment in the NHIS.

Methods: The study design was a quasi-experimental pre-test post-test control group design. Two districts were randomly selected out of the 17 districts in the Volta Region to pilot each of the interventions respectively and one district was selected as a control for comparison. Kadjebi district implemented the Registration Unit Expansion intervention while Ketu North district implemented the NHIS Information and Education intervention. North Tongu was selected as the control district.In each of the three districts, before and after routine enrolment data was collected and analyzed for comparison. The interventions were run concurrently for 9 months (25th October 2016-31st July 2017) after which enrolment numbers from the three districts were analysed. Administrative data (routine enrolment data) during the intervention period was compared enrolment data 9 months pre intervention (25th October 2015- 31st July 2016).

Key Findings: Analysis revealed decreases in enrolment rates across all the three districts reflective of the national trend since 2012. The rates of decrease in the intervention districts was slower than in the control district (P< 0.001). This means that due to the interventions, Kadjebi's enrolment rate was 7% less than North Tongu's while Ketu North's enrolment rate was 5% less than that of North Tongu, implying that in the absence of the two interventions, enrolment rates in both Kadjebi and Ketu North districts would have declined at a rate similar to that of North Tongu.

District	Before	After	Difference
North Tongu	40.1%	28.6%	11.4%
Ketu North	35.7%	29.4%	6.4%
Kadjebi	44.2%	39.7%	4.4%

Conclusions: Although there was a general decrease in enrolment, the intervention "Registration Unit Expansion" performed better than the intervention on 'NHIS Information and Education'. However it still did not bring enrolment close to the desired levels of universal. It will be important to find interventions that effectively make enrolment compulsory rather than voluntary.

Economics of Public Health: Implications for research practice in Africa

*Nana Anokye, ** Dr Justice Nonvignon: *Brunel University London, HERG - ** Department of Health Policy, Planning and Management, School of Public Health, University of Ghana, Legon*

Current worldwide health trends present an alarming picture of widening disparity in health globally. In low and middle income countries (LMIC), healthcare systems are now faced with increasing burden of NCDs in addition to addressing a high burden of communicable diseases. Non communicable diseases (NCDs), as the result of lifestyle behaviour, are on the rise in high-income countries. Globally, average life expectancy at birth has increased from 67 in 2000 to 72 years in 2016. However, there exists a significant variation in life expectancy between regions, for example, 62 years in Africa and 78 years in Europe (WHO 2018).

These trends present complex challenges for global and national health systems. In particular, this necessitates innovative but policy and context relevant approaches to 'describe health problems, identify and help decision makers set priorities' (WHO 2017). However, such evidence base in global health, particularly in economics, is scarce and fragmented. This is partially attributable to methodological challenges associated with economic research in public health.

In this proposed session, a collection of three papers that present various policy relevant methodological approaches to dealing with challenges in the economics of physical activity. The session will highlight current research practices and new findings to inform research practice in Africa and the formulation of cost-effective programmes and policies. It will provide an international platform to share views and debate complex research challenges facing global health.

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Incorporating demand in economic evaluation of public health interventions: case study of an augmented exercise referral scheme using web-based behavioural support

Anokye N[1] [1]Health Economics Research Group, Department of Clinical Sciences, Brunel University London.

Reflecting the diversity in a population is essential to maximising the efficiency gainable from public health interventions. However, to date, economic evaluation methods of public health interventions rarely account for characteristics that influence the uptake and sustainability of interventions (e.g. age, gender, health status). Building on the methods of a cost-effectiveness analysis of an augmented exercise referral scheme, the presentation uses an innovative individual level simulation approach to model cost effectiveness and demonstrates how demand could be merged with economic evaluation as part of a multicentre RCT.

The analyses were two-fold – short term (within-trial) cost-effectiveness analysis (from baseline to 12 months post randomisation) and long term cost-effectiveness analysis (individual level simulation modelling of long term expectations for cost-effectiveness), for augmented exercise referral scheme using web-based behavioural support against standard exercise referral scheme. Health care provider, personal social services, and patient perspectives were used. The simulation model allows individuals' to experience events (e.g. uptake of PA intervention, onset of heart disease, diabetes, depression) at times in their lifetime that are influenced by their

characteristics and activity levels. Data used to populate the model parameters were derived from best evidence reviews. The model is based on an existing policy relevant analytical model (has informed 3 public health guidelines in UK). The short term cost-effectiveness analysis uses resource use data for development of training for LifeGuide coach, and technician; web and exercise support (e.g. duration and frequency) provided by technician; LifeGuide coach and health professionals respectively; provision and running of the exercise sessions at leisure centres; and health and personal social service use.

The main outcome of the economic analysis is an incremental cost per Quality-Adjusted Life-Year (QALY - based on EQ5D5L). The cases of CVD/diabetes/depression avoided is also reported. Costs are presented separately, for different perspectives (e.g. health care providers and participants) and broken down into three categories: programme-level costs of augmented exercise referral scheme; patient-level costs of the scheme; and savings from avoided treatment. The uncertainty around results is presented using the cost effectiveness: plane and acceptability curve. The discussion highlights the considerations for adapting the economic model to analyse the value for money of interventions in Africa.

Assessing cost effectiveness of multinational and factorial trials: internet-based training for primary care clinicians on antibiotic prescribing for acute respiratory-tract infections

Oppong R[22] Health Economics Unit, Institute of Applied Health Research, University of Birmingham.

This study highlights some of the challenges associated with the economic analysis of multinational and factorial trials as well as those associated with the economic evaluation of interventions that consider antibiotic use.

Overprescribing of antibiotics by general practitioners is seen as a major driver of antibiotic resistance. Training general practitioners in communication skills and C-reactive protein (CRP) testing both appear effective in reducing such prescribing. However, the cost-effectiveness has not been determined. This study assesses the cost-effectiveness of (i) training general practitioners (GPs) in the use of CRP testing, (ii) training GPs in communication skills and (iii) training GPs in *both* CRP testing and communication skills compared to usual care.

Economic analyses (cost-utility analysis (CUA) accounting for the cost of antibiotic resistance and cost-effectiveness analysis (CEA)) were both conducted from a health care perspective with a time horizon of 28 days alongside a multinational, cluster, randomised, factorial controlled trial in patients with respiratory tract infections in five European countries. The primary outcome measures were QALYs and percentage reductions in antibiotic prescribing. Hierarchical modelling was used to estimate an incremental cost-per-QALY-gained and an incremental cost-per-percentage-reduction in antibiotic prescribing.

Overall, the results of both the CUA and CEA showed that training in communication skills is the most cost-effective. However, excluding the cost of antibiotic resistance in the CUA resulted in usual care being the most cost-effective option. Country-specific results are also presented. Internet-based training in communication skills is a cost-effective intervention to reduce antibiotic prescribing for respiratory tract infections in primary care if the cost of antibiotic resistance is accounted for.

Evidence synthesis for decision making: The methods or methodological issues? The case for willingness-to-pay criterion validity assessments

Kanya L[33] Department of Health Policy, London School of Economics and Political Science

The importance of evidence syntheses in highlighting and quantifying the magnitude of the benefits and costs of varied interventions is acknowledged. This aids decision-making relating to the acceptability, affordability and feasibility of interventions and policies and ultimately, resource allocation decisions. Despite its limited application in health, cost benefit analysis using willingness to pay (WTP) techniques is a powerful tool for assessing directly both the costs and benefits of interventions, summarising both metrics in monetary terms. WTP estimates could provide credible price signals useful for decision making on investment and subsidy levels, depending on the health system context. In an environment of dwindling resources for health care, those who are willing to pay for services should be accorded the opportunity to pay at a price that is affordable to them with adequate protection mechanisms in place for those who need them.

The uptake of WTP surveys in CBA analysis is often met with the concerns around the criterion validity of estimates. This presentation presents an exhaustive synthesis of WTP studies across different sectors. While standard database search methods were employed to retrieve articles, the majority were obtained through reference list and author searches. A random-effects meta-analysis was possible only for a proportion of the articles. Challenges with the remaining articles included incomplete, mixed reporting of estimates hindering comparisons and in some cases, non-standardised reporting of estimates.

While critics of the method cite the potential lack of criterion validity of WTP estimates, the reviews highlight methodological issues with the conduct and reporting of such assessments. This includes variety in the terms used to describe criterion validity assessments and, the data collected and reported for a range of important attributes that could inform the synthesis of estimates from such analyses and conclusions thereof. Several empirical assessments have been done since the last synthesis of criterion validity assessments was conducted more than a decade ago. However, there does not seem to have been notable growth in the methods used to conduct both WTP and criterion validity assessments, and in the reporting of such findings.

Based on the findings of this review, a case is made for the development of guidelines for the conduct and reporting of criterion validity assessments in health. A guided skills building session involving participants at the organised session will be used to deliberate on what these may look like for criterion validity assessments, with broad applications for other empirical studies.

Parallel Session 7 – Organized session

OS 21 – Sexual reproductive health and rights: a smart investment towards achieving SDGs by 2030

Session Chair: *Chinwe Ogbonna, Head Middle Income Country Hub, UNFPA East and Southern Africa Regional Office.*

Session Objectives:

- Global, continental, regional and national investments for effective coverage of a comprehensive minimum benefit package of care, financing SRHR, financial risk protection for vulnerable population groups through pro-equity type schemes and promoting client satisfaction.
- Secure interest for participation of African health economists on SRHR related work streams in 2019 and beyond

Methodology: The plenary session will adopt a moderated panel discussion in plenary and interactive session with interventions from the audience.

Structure of session:

Part I: The session is planned for one and half hrs:

- (5 mins) administrative announcements
- (5 mins) Introduction by Session Chair
- (50 mins) each for Panelists
    - Costing, Investment cases and financing SRHR Transformative results: A global and country approach; Dr Howard Friedman, UNFPA Technical Specialist, UNFPA Headquarters
    - Inclusion of FP and ASRH in the benefit package of Ghana's National Health Insurance; rationale, methodology and expected results, Ghana Health Service
    - A Country Investment case towards securing Universal access to SRHR
- (25 mins), facilitated discussions with the audience, featuring question and answer, comments, contributions, etc.
- (5 mins), Closing statement by the Session Chair

Parallel Session 7 – Oral Presentations

Parallel Session 7-1 Resource allocation, efficiency and management 1

Assessing the Effect of Performance-Based Financing (PBF) on Health Care Quality in Nigeria: Experiences from Nigeria State Health Investment Project (NSHIP) Implementing States

Mashin Muhammad[1]
Michael C. Ajuluchuku, Senior Medical Officer[1]
Muhammad Mashin, Principal Planning Officer[1]
Binta Ismail, National Project Coordinator[1]
Ismail N. Salihu, Senior Medical Officer[1]
Ndidi F. Ijeh, Senior Planning Officer (SPO) [1]
Chidinma Paul-Iyaji, Senior Planning Officer (SPO) [1]
[1]*National Primary Health Care Development Agency (NPHCDA)*

Introduction: Health systems are measured by the population health indices as well as quality of care provided. Between 2000 and 2010, the Nigerian health system occupied third to the worst performed health systems in the World. These poor health indices resulted to the country missing the MNCH MDGs targets. The diagnostic of the Nigerian health system revealed series of systemic problems including high fragmentation/poor coordination, low incentives, low technical efficiency, chronic stock-outs of essential drugs, dilapidated infrastructure/equipment and lack of systematic measure of health care quality and system performance. As a step to address these systemic problems, Nigeria is using a credit from the World Bank to implement Nigeria State Health Investment Project (NSHIP) with focus on performance-based financing (PBF) in three States which has introduced series of measures including quantified systematic measure of quality/project performance review, institutional coordination, autonomy at all levels of implementation, and strengthening of existing systems. This study therefore assessed the effects NSHIP on quality of health care in Nigeria and evaluating the role of PBF principles in enhancing coordination mechanisms.

Material and Methods: The study used mixed research methods in which primary and secondary data sources were collected for analysis. The secondary data were obtained from the NSHIP portal while the primary data include interviews with stakeholders involved in the NSHIP implementation. Simple descriptive statistics and qualitative methods were used for data analysis.

Results: The study found a positive influence of NSHIP on the coordination mechanisms in the implementing States. The understanding of quality of care concept spread across frontline health workers and data analysis also revealed improved quality of care from average of 25% to about 70%. The low discordance from community client satisfaction survey (CCSS) results also showed consistency in quality of health care and improved provider-patient relationships.

Discussions/Conclusion: The introduction of NSHIP has influenced the implementing States in several ways. The NSHIP States adopted PBF data verification model for verifying health facility

register information before uploading into national data instance. The three States were found to be well informed about quality of care. Consequently, patient care/respect and tracking has improved. More so, the PBF has enhanced clear separations of functions among key stakeholders at all levels of implementation. The study recommended that there is need for expansion of PBF to more States in order to turn around population health indices in Nigeria.

Can performance scorecards promote community involvement in regulatory enforcement? A process evaluation of an innovative regulatory intervention in Kenya

Irene Khayoni, Strathmore University Nairobi

Background: Many low- and middle-income countries recognize the limitations of traditional command and control approaches to facility regulation, leading to the emergence of innovative models, including responsive regulatory strategies, and increased use of information technology. However, the focus of regulatory innovations largely remains the providers. Little effort has gone towards devising models that incorporate service users. In Kenya, the Ministry of Health and the regulatory agencies developed and piloted a risk-based regulatory regime called the Kenya Patient Safety Impact Evaluation (KePSIE), which involved intensified inspections using a single comprehensive checklist. A key innovation was the display of performance scorecards at healthcare facilities. These scorecards gave facilities a rating on inspection performance of A (highest), B, C or D, and provided guidance on interpreting these scores. We conducted a qualitative study to explore the implementation and perceived impact of the publicly displayed scorecards.

Methods: The study was conducted in the three KePSIE pilot counties (Kakamega, Kilifi and Meru) using a qualitative approach. We conducted in depth interviews with health facility workers, inspectors, patients, community representatives from health facility and community health committees to obtain a broad community perspective. Interviews were recorded, transcribed and analysed using the Framework Approach in NVIVO.

Results: Majority of community representatives, patient and health facility committee members had not seen or understood the score card despite them being nearly always displayed at facilities. The scorecard failed to reach the target audience, but most health facility workers were bothered by them and felt motivated to comply with the basic minimum standards.

While some felt that the scorecards can influence patients' choice of facility, majority felt that facility scores would not influence patients' facility choice due to geographical access challenges.

Conclusion: Scorecards are an important tool that can be used to encourage health facilities to comply to the basic minimum safety standards. In this case, the clear majority of patients and community representatives we interviewed had not seen the cards and couldn't interpret them correctly even when we showed them. As such it would be beneficial to involve community health volunteers a bit more in educating the public about the scorecards as they appeared to be more enthusiastic.

Patterns and appropriateness of surgical referrals in Malawi

Pittalis C, Mwapasa G, Gajewski J

Background: Conditions amenable to surgery are a growing health burden in Malawi, particularly in rural areas where access to surgical care continues to be greatly inequitable. Quality district

level health services and well-functioning referral networks for advanced care at higher level facilities are critical to ensure adequate access to life-saving surgery for rural populations. However, the current referral services in Malawi are weak and not well streamlined, leading to a sub-optimal utilisation of public resources.

Aims and objectives: The aim of this study was to examine surgical cases commonly referred to Queen Elizabeth Central Hospital (QECH) in Blantyre, the largest hospital in Malawi, to capture referral patterns and to identify inefficiencies in the referral system.

Methodology: Data on inter-hospital surgical referrals to QECH was collected prospectively during the period January 2014-December 2015, using patient charts in surgical wards. Referrals from all level hospitals were included. Self-referrals and patients sent by first line health services (i.e. health centres and community hospitals) were excluded. Descriptive statistics were calculated using SPSS. A representative sub-sample of 257 referrals (20% of the full study sample) was assessed for appropriateness and quality.

Results: QECH received a total of 1380 surgical referrals during the study period, with an average of 58 per month. 59% were male patients. 80% were referred by government district hospitals. The top three surgical conditions received were tumours (24%), gastrointestinal conditions (22%) and congenital abnormalities (11%). The analysis of appropriateness done on a sub-sample of cases (n=257) revealed that approx. 1 in 3 cases were referred unnecessarily. In the majority of these cases (n=85) the type and severity of the conditions could have been managed locally at the district hospitals and the referrals were not justified by special circumstances affecting service provision (e.g. lack of essential equipment, supplies or personnel). In over 80% of cases there was no communication with QECH prior to referral, and 41% of cases were misdiagnosed or had incomplete diagnoses by the referring clinicians. 40% of cases were not referred timely.

Conclusion: Referral process improvements, including better communication between referring and referral hospitals, are urgently required to improve access to timely surgical care for rural populations. This will lead to better utilisation of public resources and, ultimately, effectiveness and responsiveness of the wider health care system.

Street level bureaucrats: malaria in pregnancy policy implementation in nine Ghanaian health facilities

Matilda Aberese-Ako, University of Health and Allied Sciences

Introduction: Malaria in pregnancy continues to be a debilitating disease and governments in sub Saharan Africa continue to make efforts to prevent and manage it in order to reduce the negative outcomes. Currently interventions such as ITNs, IPTp and treatment of malaria in pregnancy have been implemented in Ghana. Using ethnographic study methods, this study sought to understand dynamics of health care provision and response from pregnant women utilizing malaria interventions in nine health care facilities in Ghana.

Methods: The study employed ethnography through in depth interviews, case studies and observations in antenatal clinics in five government health facilities and three Christian Health Association facilities for a period of nine months in two Ghanaian regions. Observations were also conducted in pharmacies and laboratories in the health facilities. Additionally, interviews were held with health providers, administrators, pregnant women and community gate keepers to understand how health care is organized. All ethical procedures were followed. Data was triangulated and analyzed using grounded theory approach. The results are based on the outcome of the analysis.

Results: The results suggest that health facilities coped with failure of government to reimburse them for cost incurred in treating clients and frequent stock outs of drugs and medical supplies by passing them to clients, through charging fees for fee-free health services. Insured pregnant women paid 50% of cost of ANC services, routine drugs, malaria treatment and lab tests. Uninsured women paid full cost of all health services. Both insured and uninsured pregnant women paid full cost of sulphadoxine-pyrimethamine (SP) for the prevention of malaria in pregnancy in seven of the facilities. The consequences was that the health facilities were able to maintain their stocks and to keep their facilities running. However, a good number of clients who could not pay for services were not unable to access health care. For such clients this challenge contributed to defaults and inability to pay for laboratory test such as malaria in pregnancy test, which sometimes frustrated health care providers, as it impeded their ability to make good clinical diagnoses.

Conclusion: Political interest needs to be backed by continued support from the government to government and CHAG facilities ensure that resources are adequately provided to health facilities to enable them provide critical care to pregnant women, if malaria in pregnancy and the negative consequences is to be controlled. Other lessons are also drawn from this study.

Towards primary health care for all in Ghana: mapping and assessing the capacity of health facilities in Central region

Francis M. Asenso-Boadi[1], Augustina Koduah[2], Yoriko Nakamura[3], Lydia Baaba Dsane-Selby[1], Titus Sorey[1], Emmanuel Baah-Dankwah[1], Habakkuk Tarezina[1], Chris Atim[3], Daniel A. Arias[4]*
[1] *National Health Insurance Authority, Ghana*
[2] *School of Pharmacy, University of Ghana*
[3] *Results for Development*
[4] *The Johns Hopkins Bloomberg School of Public Health*

Introduction: The Government of Ghana is working to ensure equitable access to quality primary health care (PHC) services to all Ghanaians. To achieve this, it is important to find answers to questions such as where provider are, what services they provide and potential gaps in their capacity to provide clinical and non-clinical services. Since 2014, the National Health Insurance Authority (NHIA), in collaboration with Ghana Health Service (GHS) and a consultant has conducted provider-mapping exercises to answer these questions, in the Upper East, Upper West, Volta, Ashanti and Central regions. We will focus on findings from the provider mapping exercise conducted in the Central region between May and August 2018.

Methods: A multi-stakeholder technical steering committee revised an existing data collection instrument looking at the composition of a basic PHC package and set of criteria around staffing, equipment, catchment area and hours of operation to deliver this package. A team of district health information officers, NHIA officers and an HFG consultant undertook the exercise.

Results: The exercise mapped 1,093 clinical and non-clinical health facilities in Central region. Community-based Health Planning and Services (CHPS) made up the majority of clinical providers (63 percent) followed by health centres (15 percent) and these are a critical part of the population's access to PHC. There are however, gaps in human resources capacity to deliver PHC because when Level 1 staffing capacity criteria (i.e. presence of at least a medical assistant, nurse, dispensing assistant and community health officer) are applied, only 6 percent of clinical providers meet the criteria and could serve as stand-alone PHC providers. No CHPS compound meets these criteria. Similarly, when Level 2 staffing capacity criteria (i.e. presence of at least a medical assistant and community health officer) are applied, 46 percent of clinical providers meet the criteria and could serve as stand-alone PHC providers. Essential equipment needed for

primary health care is lacking as only 18 percent of clinical health facilities have the full set of equipment considered necessary to deliver PHC services.

Conclusion: The provider mapping exercise in the Central region provide an important baseline set of evidence to inform PHC services and efforts towards universal health coverage. This information is likely to be dynamic and critical for services delivery policymaking processes, and therefore needs to be updated regularly to track investments made in the health sector and in geographic areas with the greatest need and most severe deficits.

Making supervision Supportive and Sustainable in Primary Health Care Services in Nigeria

Ezinna Enwereji, Abia State University

Introduction: The benefit of supervision in managing human resources in Primary Health Care is often not achieved in developing countries including Nigeria. Supervision services have traditionally emphasized on administrative issues such as inspection of facilities , use of resources , supply of logistics , review of records and communication of information from higher to lower levels without regard to facilitation. Supervisors usually blame individuals rather than look for root causes in deficient processes. For this reason, traditional supervision systems have not sufficiently 'empowered staff to engage in problem solving or to take initiative in improving service quality and access to clients.

Objective: The paper aims to identify gaps and limitations militating against supervision in primary health care.

Materials and method: The study observed and documented gaps in supervision styles in primary health care centres in Abia State. Data were generated by review of relevant literature and work experiences. A two-day on the job training was provided for the supervisees. Training emphasized self-assessment, peer assessment, community input to change supervision from inspecting facilities and gathering service statistics to concentrating on the performance of clinical tasks and resolution of problems. Analysis of findings was qualitatively.

Result: The followings were identified as the systemic problems that plagued effective supervision in primary health care centres . These include:

- lack of planning and /or training of staff
- failure to define priorities in services provided
- shortage of resources (man, materials and finance)
- episodic visits of supervisors
- staff non-adherence to work ethics
- diversion of resources
- lack of financial stability
- lack of accountability and
- low morale among health workers due to punitive measures

The study found that facilitating on the job learning promoted quality health care services, high standard teamwork and increased the health workers' problem –solving techniques.

Conclusion: On the job training both formal and informal whether in one-on-one meeting, in peer discussion, and in meetings outside the work place will enhance supportive supervision and enable health workers to review their performances against standards.

Parallel Session 7-2 Non Communicable diseases

Barriers and opportunities for NCD management in Primary Health Care: Lessons from a clinical workflow analysis in diabetes and hypertension clinics

Caroline Gitonga[1], Sarah Kedenge[1], Alice Tarus[1,] Albert Orwa[1], Caroline Kyalo[1], Eddine Sarroukh[1].
[1]Philips Research Africa

Non-communicable diseases (NCDs) are the leading cause of death globally. In 2015, NCDs accounted for 39.8 million (71.3%) of the 55.8 million deaths reported globally. In recent decades, low and middle income countries (LMICs) have experienced an epidemiological transition from majority of deaths and disability being caused by communicable diseases to an increase in NCD deaths. The inability of the health systems in the LMICs to cope with the NCD burden is evident as higher rates of premature deaths from NCDs. Response to the NCD epidemic in LMICs will need structured NCD services at the primary health care (PHC) level.

To examine the readiness of the PHC facilities to offer NCD services and identify opportunities for NCD management in PHC facilities, we undertook an assessment of the clinical practices and clinical workflows in the outpatient clinics for diabetes and hypertension in 3 PHC facilities and 3 higher levels facilities in Kiambu County in Kenya. Results from the analysis showed the facilities lacked policies on NCD management at the PHC level, experienced frequent drug stock-outs, lacked information on management of the conditions at the PHC level and the health information systems were insufficient or absent for the documentation of the NCD data. Additionally the facilities were understaffed with high workload in the NCD clinics and the staff lacked specialized training in NCD management. The study identified barriers and opportunities in improving diabetes and hypertension management at PHC level.

Socio-economic correlates with the prevalence and onset of diabetes in South Africa: Evidence from the first four waves of the National Income Dynamics Study

Velenkosini Matsebula, Vimal Ranchhod
SALDRU, UCT

We make use of multiple waves of National Income Dynamics Study data to investigate the socio-economic factors that correlate with the prevalence and onset of diabetes. Our analysis follows a cohort of 3470 older adults aged forty and above, who are interviewed four times over a six year period. We use linear probability models and estimate the likelihood of diabetes as a function of age, race, gender, education, income, exercise and obesity. Our primary findings are that age and obesity correlate strongly with diabetes, while income does not have a statistically significant effect, conditional on the other covariates. Our regression estimates indicate that of individuals who reported not being diabetic in Wave 1, those who were obese and morbidly obese were 12.9 and 16.7 percentage points more likely to have experienced the onset of diabetes respectively, relative to those with a BMI in the healthy range. In addition, frequent exercise does appear to have a slight protective effect against the onset of diabetes, and there is some evidence that better educated people have a lower risk of onset of the disease.

Cost of accessing diabetic care services in Iganga district, Eastern Uganda.

Elizabeth Ekirapa-Kiracho, David Guwatudde, Birger Forsberg
**Makerere University School of Public health, ** Karolinska Institute*

Introduction: Patients in low income countries often incur high costs when accessing health services. This may influence adherence to treatment among diabetic pateints leading to poor blood glucose control.

Aim: This study aimed at estimating the economic cost of diabetic care from the patient's perspective.

Methods: An ingredients approach was used to estimate direct and indirect costs. The data was collected through exit interviews with 130 diabetic patients during 10 clinic visits. A cost analysis was undertaken using descriptive statistics.

Results. The average annual cost of diabetic care per pateint was 280 USD. The main cost driver was medication. Eighty six percent (113) of the respondents reported to have paid some money at the diabetic clinic mainly for blood glucose tests (84%). Mean distance to the clinic was 12.6 km. Seventy three percent of the respondents regularly purchase additional medication for their diabetic treatment from pharmacies. The main source of funding for meeting diabetic care costs were mainly personal savings (47.7%) and family members (66%). Sixty two percent reported that they had ever failed to take their diabetic medication in the past three months.

Conclusions. Patients incur high costs in the process of seeking diabetic care. The main factors that hinder access to care include the high cost of diabetic medication and long distances to the diabetic clinic.

Recommendations. Government should reduce out of pocket expenditure on diabetes by increasing the quantity of diabetic drugs and blood glucose test kits to health facilities and providing diabetic medication at lower level facilities.

Evidence-based Priority Setting for NTDs: How Return on Investment Analysis Supports Sustainability of Lymphatic Filariasis programme in Ghana.

Kingley Addai Frimpong, School of Public Health -University of Ghana

Background: Lymphatic filariasis (LF) is a disease found in the tropical and subtropical regions of the world, where it is a major public health problem. It is caused by the helminth parasites *Wuchereria Bancroft*, *Brugia malayi*, and *B. timori*, and is transmitted by mosquitoes. The Ghana LF programme has made significant progress towards the 2020 elimination goal. However, the end of the programme requires financial resources to sustain the gains and even support surveys and studies that are needed to demonstrate elimination.

Aims & Objectives: The objective of the study was to estimate the return on investment of LF elimination program in Ghana over the period 2001 -2017.

Methods: This study adopted an economic evaluation to retrospectively estimate the return on investment of LF intervention in the 83 districts that have interrupted transmission in Ghana. Data used were gathered from secondary sources.

The returns associated with disease prevention was analyzed from two perspectives – direct costs averted and indirect costs averted. Direct costs averted were estimated using direct economic costs of seeking care (medicines and consultations). Indirect costs averted were estimated as the time (in hours) of productive time lost to LF clinical patients multiplied by the

daily wage of informal workers. Programme cost was estimated using the WHO-Tool for Integrated Planning and Costing (TIPAC) and published studies in 2002.

Key Findings: The study estimated that for every US $1 invested in LF treatment there is an economic return of US$9. The total programme costs for implementation was estimated at US$13,832,084. It has also been estimated that individuals in the benefit cohort would avoid losing GHS 2,693,821,978.80 (USD63,627,585.74), mainly from prevented patient medical expenses, health system costs savings and potential income loss. Approximately 98% of the projected total economic benefit was attributed to the prevention of reduced productivity and subsequent income loss. The total direct cost was US$10, 992,612.14.

Main Conclusion: This study has provided economic returns data relevant for advocating continued investment in Ghana's LF programme, improving sustainability.

The effects of lifestyle risk factors and non-communicable diseases on labour force participation in South Africa

Nosuko Lawana, Human Sciences Research Council
Frederik Booysen, School of Economics and Business Science, University of Witwatersrand
Tsegaye Asrat, Department of Economics, University of Fort Hare

Background: The burden of lifestyle risk factors and non-communicable diseases in South Africa has been high and rising. The available research on the labour market has highlighted that chronic diseases are likely to prevent individuals from participating in the labour market. However little is known about the impact of lifestyle risk factors and non-communicable diseases on labour force participation in developing countries. The aim of this study was to examine the indirect effects of lifestyle risk factors associated with non-communicable diseases on labour force participation in South Africa.

Methods: Data used in this study was obtained from the National Income Dynamics Study. The study employed endogenous multivariate probit models with a recursive simultaneous structure as a method of analysis. The effects of lifestyle risk factors on labour force participation were assessed indirectly using marginal effects from simultaneous equations.

Results: The evidence suggested that non-communicable diseases and associated risk factors have detrimental impact on labour force participation. The analysis was also carried out taking into account the effect of gender differences considering that NCDs may have a greater effect on one gender that the other. The results revealed that the effect of stroke and heart diseases were only significant for men, while diabetes and high blood pressure were only significant for women. The results also emphasised the significant indirect impact of obesity, physical activity and alcohol consumption on labour force participation through NCDs, especially for men.

Conclusion: This paper provide evidence that lifestyle risk factors affect society and economy not only by causing non-communicable diseases but also by reducing labour force participation rates. The policy implication of this study are gender specific, the results highlight the necessity for instituting active policies designed to support the labour force participation of males diagnosed with stroke and/or heart disease. In addition, policies designed to support labour force participation of females with diabetes and high blood pressure or interventions to prevent the onset of diseases itself should be a priority. This may include embarking massive awareness of how to prevent and control NCDs on specific female health programmes such as maternal health programmes. To a greater extent, the findings from the study imply that calls for gender responsive health approaches which takes into account gender specific needs and priorities should be promoted as compared to a blanket approach.

Incidence, socio-economic inequalities and determinants of catastrophic health expenditure for diabetes care in South Africa

Chipo Mutyambizi[1], Milena Pavlova[2], Charles Hongoro[1], Wim Groot[2],*
[1]Population Health, Health Systems and Innovation, Human Sciences Research Council, Pretoria, South Africa
[2]Department of Health Services Research; CAPHRI, Maastricht University Medical Centre, Faculty of Health, Medicine and Life Sciences, Maastricht University, Maastricht, The Netherlands

Background: Direct out of pocket (OOP) payments for healthcare may cause financial hardship. For diabetic patients who require frequent visits to health centres, this is of concern as OOP payments may also limit access to healthcare. However, little is known about the extent of OOP payments and the incidence of catastrophic health expenditure for diabetic patients in a setting with subsidised healthcare in South Africa. This study assesses the incidence, inequalities and determinants of catastrophic health expenditure amongst diabetic patients in South Africa

Methods: Our study makes use of data from a unique cross-sectional survey that was conducted in 2017 at two tertiary public hospitals in Pretoria, South Africa. We estimate catastrophic health expenditure and impoverishment effects among diabetic patients using data collected from 396 randomly selected consenting patients. Healthcare costs related to diabetes care were classified as catastrophic if they exceeded a predefined threshold. Erreygers concentration indices (CI) were used to assess socio-economic inequalities in catastrophic expenditure and impoverishment among diabetic patients. A multivariate logistic regression was applied to identify the determinants of catastrophic health expenditure.

Results: The mean OOP health expenditure for diabetes care was 53 South African rands per patients per hospital visit. Depending on the threshold and method used, the incidence of catastrophic health expenditure due to diabetes care varied from 2% to 26%. Catastrophic health expenditure was concentrated amongst poor diabetic patients as indicated by the negative CIs. Being female, not having children and a household size of 5 people increases the risk of catastrophic health expenditure for diabetes care. Being non-African reduced the risk of catastrophic health expenditure.

Conclusion: Our study shows that financial protection of diabetic patients by public hospitals is limited. This observation suggests health financing interventions amongst diabetic patients should further target the poor and other determinants of catastrophic health expenditure. This is particularly important for the achievement of universal health coverage in South Africa.

Keywords: diabetes, catastrophic, impoverishment, determinants, South Africa

THE HOUSEHOLD ECONOMIC IMPACT OF RHEUMATIC HEART DISEASE (RHD) IN SOUTH AFRICA

Oyeleke O, University of Cape Town, Cape Town, South Africa

Objectives: Due to the paucity of data describing Rheumatic Heart Disease (RHD) economic impact, we conducted a survey to investigate the household's economic consequences of RHD in South Africa.

Methods: A cost-of-illness study was undertaken among 100 households affected by RHD in Cape Town. Healthcare costs, including direct and indirect costs, were estimated from a patient

(household) perspective. The prevalence of coping strategies was also assessed, including both cost prevention and cost management strategies.

Economic costs were valued in United State dollar (USD).

Results: One hundred index patients with RHD were included; supplementary socioeconomic data on household members (n = 479) were also collected. Healthcare costs totalled USD 9400 (USD 91 per patient per year), comprising USD 4285 in direct costs (all of which were direct non-medical costs) and USD 5126 in indirect costs. Total inpatient (52% of direct costs and 39% of indirect costs) and outpatient (48% of direct costs and 61% of indirect costs) costs were estimated at USD 4200 and USD 5200 respectively. At 10% and 40% threshold, 4 and 8 percent of households incurred catastrophic health expenditure. Coping behaviours were frequent and included taking out loans (17% of households), receiving gifts from others (15%). The estimated economic value of these behaviours was estimated at USD 3000. The total cost of RHD to the average affected household is valued at about USD 120 annually

Conclusions: The economic impact of RHD in South Africa is substantial despite government efforts to provide subsidized health care. A broader and more robust range of social policies is required to mitigate non-medical and indirect costs and reduce distortions in household economic activity.

NCD's and economic outcomes in South Africa: a cohort study for the period of 2008-2016 at individual and household level

Odwa Mfolozi, Dr O Alaba
Health Economics Unit, School of Public Health and Family Medicine,Faculty of Health Sciences, University of Cape Town

The total number of people living with non-communicable diseases in South Africa currently is unknown. According to the WHO, (2014), non-communicable diseases are accountable for 43% of all deaths in South Africa. In 2011 they were accountable for 23% of years of life lost and 33% of disability life years, (Ataguba, Akazili, & McIntyre, 2011). Non-communicable diseases were underlying or accountable for 60% of the top ten causes of death in South Africa for the year 2015, (STATS SA, 2017). Government total expenditure is also unknown but is estimated at more than one billion rands per annum for low to middle income countries such as South Africa, (WHO, 2011), (Huffman et al., 2011). UHC and Upscaled prioritisation at PHC level is needed as NCD's accounted for half the global burden of disease but only received 2% of international donations compared to HIV that accounted for 4% of the global burden of disease receiving 29% of international donation grants, (Allen, 2017).

NCD's negatively impact the labour market by decreasing labour productivity, increasing employee turnover and early retraction from the labour market. This future decreases individual income and household income especially for the urban poor who carry the heaviest non-communicable disease burden in South Africa. This further contributes to the medical poverty trap and worsens income inequality in South Africa.

Using panel data from the national income dynamics study in South Africa, this paper investigates the association between non-communicable diseases and labour market participation and the effect it has on household income. We examine these associations using statistical regression models for NCD exposed households and non NCD exposed households, comparing the two for differences.

We hypothesis that NCD's decrease household income and labour force participation through decreasing individual and household productivity and by increasing dependency both for the

individual and the household. Therefore as recommended by the WHO; individual specific interventions will be more effective than population based interventions to alleviate the ripple effects of the non-communicable disease burden on the South African economy (National Department of Health, 2013).

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Parallel Session 7-3 New trends and debates in international health financing

Evaluation of Performance of the African Union Support to Ebola Outbreak in West Africa (ASEOWA) Mission in Controlling Ebola Virus Disease (EVD) and Restoring Health Services in Guinea, Liberia and Sierra Leone.

Ifeanyi Nsofor, Chikwe Ihekweazu, Ada Ezeokoli: ABUJA EpiAFRIC

Background: In September 2014, the African Union announced the deployment of health workers and other specialists to tackle the Ebola Virus Disease outbreak in West Africa under its operation “African Union Support to Ebola Outbreak in West Africa” (ASEOWA). The EVD outbreak response was complicated, with lots of moving parts involving thousands of national and international staff.

Aims and Objectives: The aim was to evaluate the performance of ASEOWA mission in supporting the control of the Ebola outbreak and restoring health services in Guinea, Liberia and Sierra Leone and to document areas of new learning. It was important to understand how best to deploy healthcare workers on this scale in response to a public health emergency, to inform decisions on future missions. The outputs could enable the African Union to identify its strengths, respond to its weaknesses and use the lessons learnt to continuously improve the way it serves and relates to its host countries.

Methods: We used both qualitative and quantitative methods to address the project objectives. Purposive sampling was employed in selecting “key informant interview (KII)” and “focus group

discussion (FGD)" participants. An online questionnaire was field-tested and administered to all the volunteers

Key Findings: 80% of participants were under 40 years, mostly early career professionals, and most described their experience as either very good or excellent. About 60% had jobs to go back to in their home countries. Case management, capacity building and surveillance were areas where ASEOWA added particular value. In infection prevention and control ASEOWA provided expertise and human resources that made the successful "Ring Approach" possible. Officials from host countries appreciated the insistence of ASEOWA on harmonisation of response activities and as ASEOWA volunteers were all deployed for long periods, exceeding the length of stay of colleagues from other partner organisations, they were well recognised and often became those with the longest institutional memory.

Main Conclusions: Our evaluation indicated that the ASEOWA mission played a unique vital role in outbreak control with expertise from a large number of African professionals deployed, whose ability to blend in was recognised. The commonest criticism of the mission from the volunteers & other stakeholders related mostly to the management of the mission, arrangements for logistics, transport, processes and payments.

UHC through PHC: Piloting Preferred Primary Care Provider Networks in Ghana

**Koku Awoonor, **Elizabeth Hammah, ***Chris Atim*
**Ghana Health Service,*
*** University Research Co.,LLC,*
**** Results for Development*

Background: Provider mapping study conducted in 2014 indicated a wide variability in the capacity (often inadequate) of health providers to deliver the package of services defined for PHC. Formation of provider networks is one innovative approach to catalyze individual providers with variable capacity to form robust primary health organizations that can deliver the complete package of PHC services. In September 2017, the Ministry of Health, in collaboration with Ghana Health Service and National Health Insurance Authority with support from USAID Systems for Health and R4D, launched an 18-month pilot in 2 districts in the Volta Region of Ghana to test how network arrangements can impact the delivery of high-quality PHC.

Aims and objectives: Test network models and referral arrangements that enable Community-Based Health Planning & Services (CHPS) to thrive and make policy and operational recommendations.

Method used: "Hub-and-Spoke model" to form 10 networks. In this model, a group of CHPS clinics (spokes) are connected to one health centre (hub) to receive technical and operational support including access to higher cadre providers, laboratory services, mentoring and supervision. Network facilities received physical upgrades (infrastructure and equipment) and training in network operations and management.

Key findings: Preliminary observations show positive results:

- A network comprised of a health centre with satellite CHPS compounds can work together and share resources as an effective and efficient team unit. Network members share knowledge, expertise and logistical resources.
- Networks undertake joint planning to address common problems such as reviewing health Insurance claims to minimize the number of rejections.

- An early and consistent observation is a stronger referral system, including established processes and documentation for referrals that leads to better-informed providers and patients on referral cases.
- Community mobilisation and support is variable, but the presence of higher cadre staff (PA or midwife) during community outreach reportedly boosts community acceptance and confidence in the Community Health Officers (CHOs).

Main conclusion: Formation and strengthening of networks at the primary care level could be a key strategy towards achieving universal health care. As demonstrated by the early phases of the pilot, the networks could play a key role in building individual provider capacity, strengthening referral systems, and enhancing equitable access to key PHC services.

An analysis of donor financing of human resources for health activities and health worker migration in Sub-Saharan African countries

Angela Micah, Institute for Health Metrics and Evaluation/University of Washington

Background: In 2016, sub-Saharan Africa had 21% of the global burden of disease, yet only 5% of the global health workforce. One of the drivers of the global health workforce imbalance is the migration of health workers. Recognizing the challenges associated with the ethical recruitment of health professionals globally, the WHO Global Code of Practice on the International Recruitment of Health Personnel was instituted in 2010. The code encourages high-income countries to provide financial and technical assistance to low-income countries to mitigate the impact of health personnel emigration. Whereas the issue of emigration of health workers and its associated impact on the health system has been well described in the literature, there is limited evidence on the issue of emigration and the transfer of development assistance for health resources.

Aims and objectives: The objective of this study is to examine the relationship between the flow of development assistance for human resources for health (DAHRH) and the emigration of health workers.

Methods: The study uses data from the Institute for Health Metrics and Evaluation's 2017 Development Assistance for Health database. This data tracks development assistance for health from 1990 through 2017. DAHRH estimates is linked to data on physician migration to the United States, United Kingdom, Canada and Australia. We use regression analysis to assess the association between the change in the number of foreign trained physicians practicing in these four high-income countries and change in the amount of DAHRH received by sub-Saharan countries.

Key findings: Preliminary results suggest there is a positive association between the flow of development assistance for human resources for health and the emigration of health workers. A 10% increase in development assistance for human resources for health is associated with a 2.4% increase in the number of physicians migrating out of the country (0.24 – 95% CI 0.14 – 0.35). Additional analysis will explore alternative models to examine the robustness of the finding.

Conclusion: Health worker emigration presents significant challenges for health systems in sub-Saharan Africa. The preliminary results suggest that other interventions besides additional investment in training and other human resource activities may be necessary to stem the flow of health workers out of sub-Saharan Africa.

Towards achieving the health-related SDGs: the role of unconditional cash transfers in Africa

Jacob Novignon, Kwame Nkrumah University of Science and Technology, Kumasi-Ghana

Improving health care access and outcomes continue to dominate global development agenda. In the SDGs various targets have been set to ensure significant progress by the year 2030. This is particularly relevant in Africa where several countries lag behind in health outcomes. In recent years many governments in the region have turned to cash transfer programmes with the aim of improving poverty, education and health outcomes. However, while unconditional cash transfers have demonstrated widespread, positive impacts on consumption, food security, productive activities, and schooling, the evidence to date on health seeking behaviors and morbidity in the context of unconditional cash transfers in Africa is more limited.

Against this backdrop, we investigate the impact of unconditional cash transfers on morbidity and health seeking behavior using data from experimental and quasi-experimental study designs in Kenya, Malawi, Zambia and Zimbabwe. Programme impacts were estimated using Difference-in-Differences (DiD) estimation technique with longitudinal data.

The results indicate favourable programme impacts on selected health indicators (incidence of illness) and health seeking behaviours. There was also protective impact on health expenditure. The findings were, however not consistent across countries. We also found that, in some countries, programme impact worked through supply side factors, including improved health care quality.

The findings suggest that while unconditional cash transfers could improve health and health seeking, simultaneous improvements in supply side infrastructure, or facilitation of linkages between existing facilities and cash transfer households, is likely needed for more widespread impacts on morbidity and health seeking to materialize.

Keywords: Morbidity, health-seeking, health care utilization, Cash transfers, social protection, Africa

The role of NGOs in health systems strengthening to achieve UHC – Botswana's experience with Global Fund to Fight AIDS, Tuberculosis and Malaria

Dintle Molosiwa, Gaborone Boitekanelo College

Background: Non-governmental Organizations (NGOs) are critical actors and State partners, especially for healthcare service delivery at the community platform to advance universal health coverage (UHC) and to achieve sustainable development goals. However, NGOs are challenged by issues of capacity and sustainability, diminishing State confidence to form strategic partnerships with them. To build and sustain stronger health systems for UHC, meaningful and effective engagement of NGOs is needed. Situated in Botswana's context of commitment to achieving UHC and taking on a higher share for HIV funding, this study explored the institutional management of the Global Fund to fight AIDS, Tudercolosis and Malaria.

Methods: In-depth interviews (16), with policy makers; all GFATM principal and sub-recipients (PR & SR); Country Coordinating Mechanism officers (CCM); and NGOs directors/employees were conducted in October – December, 2017. Process-tracing and observations were also used to explore governance and accountability across GFATM stakeholders. All interviews were tape recorded, transcribed, coded and analysed thematically.

Results: There are two PRs for the current GFATM, Ministry of Health and Wellness (MOHW) which does not have SR and the African Comprehensive HIV/AIDS Partnership (ACHAP) which has four SRs (being NGOs). The 'big brother' relationship of the State over NGOs poses a significant challenge. State actors view NGOs as a threat to good governance and leadership. Issues of quality of care; geographic scope and perceptions of NGOs' capacity to deliver are impeding the essential role of NGOs. The CCM as an oversight mechanism has created an effective platform for meaningful forms of accountability to communities; also creating shared vision and a platform through which NGOs are able to coordinate their work and create synergies. However, the CCM has not been effective (forthcoming) in holding the State (as PR) accountable for performing poorly under the current GFATM grant – the impact of which is 'crowding out' donor funding due to inefficiency to utilize availed funds.

Conclusion: NGOs in Botswana remain a poorly used actor for strengthening health systems and advancing UHC, including reaching key populations which remain marginalised. The GFTAM represent an opportunity for creating a vibrant civil society whose local activities will not be seen as being led covertly by the State.

Parallel Session 7-4 Human Resources for Health - country experiences

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Cost effectiveness analysis of fully time paid community health worker in three rural districts – Tanzania: Rufiji, Kilombero and Ulanga

Kassimu Tani, Ifakara Health Institute

Background: Community health workers (CHW) have been in place for a number of years. The WHO advocates the use of CHW to expand health services coverage, as one of the method to tackle health workers shortages mostly in developing countries health systems. Many studies have depicted the importance CHW in improving community health especially in maternal and child health but few looked on cost effectiveness, mostly with full time paid CHW working in health systems.

Objective: To assess the cost effectiveness of deploying fully time paid CHW with multitasks in rural health system of Tanzania.

Method: The cost detailed was prospectively collected throughout the implementation of the program. Life years gained was estimated based on the number of under five death aviated resulted from health services coverage after introducing full time CHWs to the villages. Incremental cost effectiveness of deploying a paid CHW was estimated from the provider perspective. Data on cost of training, deployment and running were collected from July 2010 to June 2015. Gross domestic product was used as the reference for the willingness-to-pay threshold value.

Result: The estimated incremental cost effective ratio (ICER) per life year gain was 20.22 USD. And the country gross domestic product (GDP) per person for year 2013 is 694.7. With this scenario, that the ICER is less than the GDP, for the under five child mortality rate of 151.4 for

the control and 144.8 for the intervention area per 1000 life birth, the full time deployed CHWs intervention considered cost effective. The result was most sensitive to uncertainty in the estimate of life year gained.

Conclusion: The full time paid CHWs appeared to be cost effective when serving rural community especially those with insufficient health professions. The use of these CHWs to expand health coverage, mostly in rural and under saved communities facilitates the available health facility workers to concentrate fully at health facility and just set few hours to supervise CHW working within their facility catchment area.

Pushing back Universal Health Coverage: Causes and consequences of absenteeism of health workers at the PHC level in Nigeria

Prince Agwu[1,5], Obinna Onwujekwe[2,5], Odii Aloysius[3,5], Orjiakor Tochukwu[4,5], Pamela Ogbozor[5]
Department of Social Work, University of Nigeria, Nsukka[1]
Department of Health Administration and Management, University of Nigeria, Enugu, Nigeria[2]
Department of Sociology, University of Nigeria, Nsukka[3]
Department of Psychology, University of Nigeria, Nsukka[5]
Health Policy Research Group, Department of Pharmacology and Therapeutics, College of Medicine, University of Nigeria, Enugu-Campus, Enugu, Nigeria[4,5]

Background: Primary healthcare centers **(**PHCs) are the closest source of formal healthcare services to healthcare consumers, especially for rural dwellers. PHCs are widely spread across the 774 Local Government Areas of Nigeria, and statutorily within the direct control of local government areas. However, there is inefficiency of health workers at the PHC level, with absenteeism a major cause of the problem. Hence, it is important to deeply examine the issue of absenteeism of health workers across PHCs in Nigeria.

Aims and Objectives: The study assessed the causes and consequences of absenteeism amongst frontline health workers at the PHC level on health outcomes, and also solutions. Other objectives were to examine the influence of gender, political economy, social events, marital responsibilities, distance, work equipment, and remuneration on absenteeism. The study also investigated the possible effectiveness of different interventions already in place at these PHCs to curb absenteeism and their likely effects on health workers' presence and efficiency at work.

Methodology: The publication by Belita et al (2013) on developing typology for absenteeism helped provide a conceptual framework were we considered categories of absenteeism that are corruption laden from those that are not. The study relied on qualitative methods of data collection and analysis. The population was concentrated in the South-East of Nigeria. Purposive sampling was used to select the PHC facilities and respondents. Data was collected using 20 in-depth interviews (IDIs) with frontline health workers and health sector administrators. While 6 Focus Group Discussion (FGD) was adopted to elicit responses from patients

Findings and Conclusion: Absenteeism was common amongst health workers in PHCs in Nigeria. Influence of gender, political economy, marital responsibilities, work welfare including remuneration and security, as well as poorly equipped facilities were frequently mentioned as causes of health workers' absenteeism. Existing interventions were found not to be adequate to check absenteeism. Political influences should be addressed in order for sanctions on absenteeism to work. As all these when addressed would amount to speedy realization of the 2030 Universal Health Coverage.

A systematic review: interventions for improving the retention of physicians working in rural areas to strengthen Primary Health Care.

Dr Atsushi SAMURA, World Health Organization Country Office, Mauritius
Dr Faisal SHAIKH, Dr Laurent MUSANGO

Background: The imbalance of health workforce within a country is regarded as a major challenge of improving health equity and strengthening Primary Health Care (PHC). For instance, a half of global population live in rural communities and are served by only 24% of physicians worldwide. A lot of governments have implemented interventions in four categories (education, regulation, financing and professional supports) in accordance with the WHO Global Policy Recommendations. However, no country has yet achieved the equal distribution of health workforce.

Objectives: To establish the existing evidence about interventions for improving the retention of physicians serving rural communities.

Methods: Cochrane's EPOC approach was employed to conduct this systematic review.

[Search methods] I searched MEDLINE, Embase, Cochrane Central Register of Controlled Trials, Global Health and Web of Science. We also searched the reference lists of all included literature and conducted a citation search in Web of Science.

[Selection criteria] Randomised controlled trials, non-randomised trials; controlled before-after studies, interrupted time series (ITS) studies and cohort studies investigating the impacts of any interventions amongst four categories on rural retention of physicians.

[Data collection and analysis] One review author independently screened all potentially eligible records, extracted data and assessed risk of bias for each of the included article. Narrative synthesis was conducted due to substantial heterogeneity across the included studies.

Key findings: After 1646 records were screened, 10 studies were identified for data synthesis (four from the US; two from Japan; and one from Canada, Thailand and Turkey). Two cohort studies involving 2784 physicians compared rural deployment not linked to education with control. Four cohort studies comprising 7548 physicians compared mandatory service linked to funded education with control. Four ITS studies involving 274130 and 337864 physicians at pre- and post-intervention period compared equity of geographical distribution of physicians within the country between before and after the implementation of nationwide policies. We judged the certainty of the evidence for retention and distribution was all very low mainly due to high risk of bias, low generalisability and imprecision of the effect.

Conclusions: There is limited certainty of the evidence due to high risk of bias. Governments should collect comprehensive data (including potential confounders) where researchers can conduct well-designed studies. As for identified interventions, Taiwan's lesson is noteworthy because it showed that implementation of national health insurance triggered physicians to relocate to rural areas.

Key words: health workforce, physicians, retention, rural health, universal health coverage, systematic review

Investment in health human resources and economic growth in Ivory Coast

Auguste K. KOUAKOU [(1)]; Romuald GUEDE [(1)]; Appolinaire Yapi [(2)]
[(1)]University of Jean Lorougnon Guede (Daloa, Ivory Coast)
[(2)]National Institute of Public Health-Abidjan (Ivory Coast)

The work of High-Level Commission of the United Nations on Employment and Economic Growth since 2016 has placed at the heart of the international agenda, the benefits of investing in health human resources (HHR) for both the health of population and the economic gain for society. This paper aims to determine the impacts of investment in health workers and economic growth. The Social Accounting Matrix approach highlights the mechanisms for transmitting this effect on employment, the productive sector and GDP.

Based on the multipliers of the 2013 social accounting matrix, this research analyses the nature of sectoral linkages and assesses the impact of HHR expenditures on the Ivorian productive structure and institutional units. The methodology used is one of an Esther-type social accounting matrix in an open economy.

Results: The study shows that the mining (AMININ), construction (ACONST) and health (ASANTE) sectors are key sectors of Ivorian economy because indicators $B_j^n > 1$ et $F_j^n > 1$.

- The costs of personnel (1.1) and health investments (1.1) have priority over current health expenditures (0.9).
- An increase in health personnel costs leads to:
    - A production effects
        - → An increase of 0.01% in agriculture, 0.12% in mining, etc., i.e. an increase in GDP of 0.56%;
        - → A return effect of 0.14%;
    - An income effects
        - → An increase in average household income of 0.14%;
        - → An increase in corporate income of 0.17%;
        - → An increase in income in the Rest of the World of 0.29%;
    - An employment effects
        - → According to gender, the policy leads to an improvement in female (FEMLAB) employment of 0.27% and for male (MALELAB) of 0.37%.

Conclusion: The objective of the study was to determine the contribution of health personnel costs to economic growth in Ivory Coast. Indeed, a 1% increase in human resources expenditure on health leads to 0.56% increase in national production (GDP), 0.14% increase in average household income and 0.32% increase in employment.

The study therefore shows that the importance of increasing investment in HHR has a positive impact on wealth creation and job creation.

Motivation of community-based health agents in Burkina Faso: sustainable strategies implemented, and learnt lessons

Awa Ouedraogo[1], Ermel Johnson[2]
[1]Ministry of Health, Burkina Faso
[2]West African Health Organization

Background information: Like countries that have adopted primary health care, Burkina Faso uses community actors to provide health services. Among these actors are the two community-based health agents (CBHAs) per village. A study conducted in 2012 showed low motivation of

CBHAs, and a desire for financial treatment as the first type of motivation (80.2%). A new profile has been defined and Burkina Faso has committed itself to a monthly motivation of the CBHAs.

Objective: The purpose of this study was to describe the sustainable motivational strategies of the CBHAs developed and the lessons learned.

Methodologies: Working meetings based on the results of the situational analysis were organized. They involved representatives of the Ministry of Health, local authorities, management committees, non-governmental organizations and associations, community of leaders, CBHAs, technical and financial partners. The final document was amended and validated at a cabinet meeting of the Ministry of Health, adopted by the Council of Ministers and then distributed.

Results: Three motivational strategies have been selected:

- material incentives: identification vests, bags, megaphones, …;
- intangible incentives: official installation, certificates of training, honorary awards, etc;
- financial motivation: profits from the sale of medicines, training fees, monthly bonus from the State budget with the contribution of partners; paid through electronic portfolio services.

From the implementation of these motivational strategies, several lessons have been learnt. Indeed, the motivation mechanism must be defined through a participatory, consensual process involving all stakeholders and the role of each governmental and non-governmental actor must be specified. The CBHA mapping must be established before the process begins and regularly updated. Remuneration must be secured by a payment plan. A system must be identified to ensure that activities are effectively implemented before payment is made. The mobile payment system must be available nationally.

Conclusion: The motivation of CBHAs is a prerequisite for community health care. A multisectoral vision of a health intervention in a participatory, consensual and clear stakeholder engagement process is indispensable for its success and especially for its sustainability.

Parallel Session 7-5 Preferences and willingness to pay

Assessment of the acceptability of Community Based Health Insurance as a health financing mechanism and maximum willingness to pay amongst urban slum dwellers in Abuja, Nigeria.

[1]Ewelike, Uchenna Eugenes; [2]Onwujekwe, Obinna; [3]Okoronkwo, Ijeoma; [4]Obikeze, Eric
Department of Health Administration and Management, Faculty of Health Sciences and Technology, University of Nigeria, Enugu Campus

Introduction: Lack of financial risk protection especially for households within the informal sector has been the bane of the Nigerian Health System. Many of the citizens pay for their healthcare needs through the regressive out-of-pocket payment method. Community Based Health Insurance is one of the non-mandatory ways of raising revenue to finance health. Being a non-mandatory method, it's important to scientifically elicit acceptability and stated preferences amongst households. Willingness to pay which is a contingent valuation method was used in this study to elicit maximum amount urban slum dwellers in Abuja were willing to pay and the

acceptability of CBHI. The study was a quantitative study involving five urban slums in Abuja. The quantitative was a cross sectional descriptive study using a multi-stage systematic sampling to determine pricing, willingness and acceptability by application of well-structured questionnaires as an interview tool. Quantitative data was analyzed using descriptive statistics, statistical test and presented in charts and tables. The study revealed very high acceptability for CBHI 81.4%, willingness to enroll for self (78.2%) and (74.8%) for other household members. The study also showed that at premium N500.00 only, 59% of the urban slum dwellers were willing to pay for CBHI while 72.2% were willing to pay a premium of N400. The maximum amount they were willing to pay was N613.77, N554.65 and N456.65 for self, household members and altruistic respectively. Urban slum dwellers in Abuja accepted CBHI and are willing to utilize the social solidarity inherent in community financing and contribute for their healthcare needs through CBHI. These slum dwellers can willingly contribute N500 per person per month using the median price of this study. It is recommended that owning to the high acceptability and willingness to pay findings of this study, the Federal Capital Territory Health and Human Services Secretariat should immediately commence the process of activating CBHI pools across the slums in Abuja to ease their access to healthcare.

Key Words: Acceptability, Willingness to pay, (WTP), Community Based Health Insurance (CBHI), Urban Slums and Abuja.

Willingness to pay for health insurance among commercial motorcyclists in Nakawa division, Kampala capital city authority, Uganda

Judith Hope Kiconco, Prof Robert Basaza, Elizabeth Patience Kyasiimire

Background & Objectives: Willingness to pay (WTP) is the maximum amount an individual is willing to sacrifice to procure a good or avoid something undesirable. One of the citizen groups that require health insurance are the commercial motorcyclists , given that they are considered to be low income earners and yet they concurrently face high risks of getting involved in road traffic accidents.

Methods: This study used a descriptive cross sectional research design. Nakawa Division was purposively sampled. To sample out the study parishes in the Division, simple random sampling was used. Given that BodaBoda stages do not have specific stage points mapped out or zoned out in each of the parishes in the Division, they were sampled conveniently given that there were between 15 - 10 riders at each sampled stage. Simple random sampling was used to sample the respondents.

Results: The level of willingness to pay for commercial motorcyclists' health insurance was found to be 70%, basing on the proportion of cyclists who were really willing to pay an amount greater than or equal to UGX 70,000, the current average premium for all available commercial motorcyclists health insurance schemes in Uganda.

Conclusion: Willingness to pay for health insurance is fairly high among commercial motorcyclists in Nakawa Division; however.

Recommendation: Government to consider rolling out and/or expanding the motorcycle loan scheme in which riders can personally own a motorcycle as a loan and clear the payments in installments. This creates more riders who are self-employed and hence more willing to pay for insurance.

Willingness to pay for contributory health insurance: Findings from an exploratory study in the state of Kaduna, Nigeria

Yewande Ogundeji, Kelechi Ohiri, Babatunde Akomolafe: Abuja, Health Strategy and Delivery Foundation

Many states in Nigeria are towing the path of the global and national drive of designing and implementing social health insurance schemes (SHIS). This study assesses the willingness-to-pay (WTP) for SHIS in Nigeria to provide information about the relationship between the premium that is required to cover the costs of the scheme and expected insurance enrollment levels.

The study took place in 6 local government areas in Kaduna state, North-west Nigeria. Data were collected from a household survey using a three-stage cluster sampling approach, with each household having the same probability of being selected. Interviews were conducted with 4000 individuals in 1020 households. Contingent valuation was used to elicit the willing to pay (WTP) for the household using the bidding game technique. The relationship between socioeconomic status and WTP was also examined using logistic regression models.

About 82% of the household heads were willing to pay insurance premiums for their households, which came to an average of 513Naira (1.68 USD) per month per person. The average amount individuals were willing to pay was lower in rural areas (611 Naira) compared to urban areas (463 Naira). These results were influenced by household size, level of education, occupation and household income. In addition, only 65% of the households had the ability to pay the average premium.

Socioeconomic factors influence individuals' WTP for contributory health insurance schemes. It is important to create awareness about the benefits of the insurance scheme, especially in rural areas, and in both the formal and informal sectors in Nigeria. WTP information can also be used for setting insurance premium. However, it is important to consider differences between the WTP and the cost of benefits package to be offered, as the premium amount may need to be subsidized with public financing.

Caregivers' willingness to accept and pay for HIV and Sickle Cell Screening at Immunization Centers in Nigeria

Maduka Donatus Ughasoro[1], Somkene Chinwe Okpala[2], Alexandra Chinenye Nwosu[3]
[1]Department of Paediatrics, University of Nigeria Enugu Campus, Enugu, Nigeria.
[2]Department of Paediatrics, University of Nigeria Teaching Hospital, Ituku/Ozalla, Enugu, Nigeria
[3]Department of Paediatrics, Federal Medical Centre, Umuahia, Abia State, Nigeria

Background: Early detection of HIV and sickle cell diseases will enable timely care and treatment. However, many apparently health children remain unaware of their HIV and Heamoglobin genotype status. Their status are only known when they developed symptoms and visit healthcare facilities. This is a challenge in places where there is poor access to health care. Fortunately, access to immunization at the well-child clinics has remain high in Nigeria. Thus the need to evaluate the willingness to test and pay for HIV and Heamoglobin genotype screening among mothers that present at the well-child clinic.

Methods: A cross-sectional study was conducted in two states. Data were collected by interviewer administered questionnaire. The Likert scale was used to determine their willingness, while the contingent evaluation method was used to determine the amount there were willing to pay. The amount calculated in Nigerian naira and converted to United States Dollars using 2017 exchange rate of 360 naira for one US$.

Results: Of the 197 mothers that participated in the survey, 142 (72.1%) and 121 (61.5%) knew their HIV and Heamoglobin genotype respectively. Those willing to screen for HIV and Sickle cell were 191 (97%) and 188 (95.4%) respectively. Majority 159 (83.1%) and 160 (85.1%) were extremely willing for their children to be screened for HIV and Sickle cell respectively. Among those who expressed willingness to be screened, the median amount they were willing to pay was 500 naira (US$1.38) for HIV and Sickle cell each. Among the participants 76 (38.2%) expressed concern that inclusion of HIV screening in immunization visits may discourage mothers from bringing their children for immunization at such facilities.

Conclusion: The acceptance of parents to screen their children for HIV and Heamoglobin genotype was high, even at if they have to pay for it. Thus integration of such programme along with immunization is feasible but should remain voluntary and on opt-out bases.

Patients' willingness to pay for the treatment of tuberculosis in Nigeria: exploring own use and altruism.

Ogbonnia G. Ochonma, Obinna E. Onwujekwe
Department of Health Administration and Management, Faculty of Health Sciences and Technology, College of Medicine, Enugu Campus University of Nigeria

Background Aim and Objective: Although, current treatment services for Tuberculosis (TB) in Nigeria are provided free of charge in public facilities, the benefits (value) that patients attach to such service is not known. In addition, the prices that could be charged for treatment in case government and its partners withdraw from the provision of free services or inclusion of the services in health insurance plans are not known. Hence, there is a need to elicit the maximum amounts that patients are willing to pay for TB treatment services, both for themselves and for the very poor patients that may not be able to pay if some user fees are introduced (altruistic willingness to pay).

Methods: A pretested interviewer-administered questionnaire was used to elicit the maximum willingness to pay (WTP) for TB treatment services from TB patients in a tertiary hospital in southeast Nigeria. WTP was elicited using the bidding game question format after a scenario was presented to the respondents. Data was analysed using tabulations. Tobit regression models were used to examine the validity of the elicited WTP for own use and altruistic WTP.

Results: The results show that those aged 30 years and below constituted more than two-fifth (43.2%) of the respondents. More than half of the respondents (52.8%) were not employed. Eighty percent 100 (80.0%) of the respondents were willing to pay for their own use of TB treatment services while 78(62.4%) of the respondents were willing to make altruistic contributions so that the very poor could benefit from the TB services. A Tobit regression analysis of maximum WTP for TB for own use shows that respondents were willing to pay maximum amounts at different statistically significant levels. The results equally show that altruistic WTP was positively and statistically significantly related to the employment status, distance from UNTH and global seriousness of TB. Conclusions: Most patients positively valued the provision of free TB services and were willing to pay for TB treatment for own use. The better-off ones were also willing to make altruistic contributions. Free provision of TB treatment services is potentially worthwhile, but there is potential scope for continuation of universal provision of TB treatment services, even if the government and donors scale down their financing of the services.

Determining preferences for different Benefit Packages and Willingness to Pay for Community-Based Health Insurance among the urban slum dwellers in Abuja, Nigeria

[1]Ewelike, Uchenna Eugenes; [2]Onwujekwe, Obinna; [3]Okoronkwo, Ijeoma; [4]Obikeze, Eric
Department of Health Administration and Management, Faculty of Health Sciences and Technology. University of Nigeria, Enugu Campus

Introduction: Lack of financial risk protection especially for households within the informal sector has been the bane of the Nigerian health system. Many of the citizens pay for their healthcare needs through the regressive out-of-pocket payment method. Being a non-mandatory method, it's important to scientifically elicit the stated preferences amongst households. Willingness to pay which as a contingent valuation method was used in this study to elicit maximum amount urban slum dwellers in Abuja were willing to pay and the preferred benefit package.

Method: The study was a mixed design of qualitative and quantitative study involving five urban slums in Abuja. Quantitative data was analyzed using descriptive statistics, statistical test and presented in charts and tables while qualitative data was analyzed and presented in themes.

Result: The study revealed very high willingness to enroll for self (78.2%) and (74.8%) for other household members. The study also showed that at premium N500.00 only, 59% of the urban slum dwellers were willing to pay for CBHI while 72.2% were willing to pay a premium of N400. The maximum amount they were willing to pay was N613.77, N554.65 and N456.65 for self, household members and altruistic respectively. The preferred benefit package was the one that covered all diseases without any form of exclusion.

Conclusion: Urban slum dwellers in Abuja are willing to utilize the social solidarity inherent in community financing and contribute for their healthcare needs through CBHI. These slum dwellers can willingly contribute N500 per person per month using the median price of this study. Their knowledge and experiences in health insurance contributed to the decision to have a benefit package that is devoid of any exclusion.

Recommendation: It is recommended that owning to the high willingness to pay findings of this study, the Federal Capital Territory Health and Human Services Secretariat should immediately commence the process of activating CBHI pools across the slums in Abuja to ease their access to healthcare.

Key Words: Willingness to pay (WTP), Community Based Health Insurance (CBHI), Benefit package, Urban Slums and Abuja.

Parallel Session 7-6 Health economics tools and approaches 1

Health Economics analysis in Africa: A systematic review

Iris Mosweu [1]Janet Boadu[1], Paul McCrone[1]
[1]King's Health Economics, Institute of Psychiatry, Psychology and Neuroscience, King's College London

Background: There is an increasing need for the use of economic analyses in setting priorities in health care systems. However, it remains unclear how countries in Africa use economic evidence

to inform policy decisions in health care, and more importantly the availability and quality of such evidence.

Aims and objectives: To review evidence of economic analysis undertaken in Africa since the year 2000.

Methods: Three main electronic databases (EMBASE, MEDLINE, PsychINFO, via the OvidSP interface) were searched using a pre-defined search strategy which included all African countries and search terms related to economic analyses of health care. We used a free web-based application; Rayyan, for the initial screening of titles and abstracts. Studies were selected if they were conducted in any African country, published in English, after the year 2000, and undertaken any economic analyses. The CHEERS checklist was used to guide in assessing the quality of selected and PRISMA guidelines were followed to report our systematic review.

Key findings: 9,865 articles were identified from the searches, after the removal of duplicates. The review and identification of studies is still ongoing.

Main conclusion(s): Review still ongoing

Assessing the Technical Efficiency of health Expenditures in Low and Middle-Income Countries: New Approach through the Partial Frontier Analysis

Yann Tapsoba, Ouagadougou - Center for studies and researches on international development (CERDI)

The paper investigates the technical efficiency of health expenditures in 87 low- and middle income countries over the period 1995-2012. The partial frontier analysis is used to assess the efficiency scores in output and input orientations by assuming the Variable Returns-to-Scale. Two traditional inputs, such as public and private health expenditures per capita and two environment inputs such as the urbanization rate and the GDP per capita are used. The output is a composite index computed through a Principal Component Analysis. The findings reveal the presence of potential efficiency gains for the improvement of health status and for the enlargement of fiscal space of health. It appears that efforts are made in favor of health enhancement in view of used health expenditures. The potential efficiency gains for the enlargement of fiscal space for health declined over these last years. Furthermore, despite the needs to enlarge the fiscal space for health, we find more interesting for the countries to aim for greater health outcomes in view of health expenditures. The evidences suggest promoting the improvement of health expenditures efficiency.

Is enrolment into Ghana's National Health Insurance Scheme pro-poor or pro-rich? Evidence from secondary analysis of Ghana Living Standard Survey round six

**Eric Nsiah-Boateng, ** Jennifer Prah Ruger, * Justice Nong*
**School of Public Health, College of Health Sciences, University of Ghana, Accra*
*** School of Social Policy & Practice and Perelman School of Medicine, University of Pennsylvania, USA*

Background: Earlier studies have found enrolment into Ghana's National Health Insurance Scheme (NHIS) as pro-rich. In recent years, the NHIS has embarked on aggressive enrolment of the poor and vulnerable to reverse the tide.

Objective: This paper seeks to examine equity in enrolment in the scheme to inform policy decisions on realisation of universal health coverage (UHC).

Methods: A secondary analysis of data from the sixth round of the Ghana Living Standards Survey (GLSS 6). The survey was conducted between 18 October 2012 and 17 October 2013 with 16,774 household heads. Equity in enrolment was assessed using concentration curves and bivariate analysis to determine factors associated with equity.

Findings: Participants in the survey had a mean age of 46 years and mean household size of four persons. About 71% of the households interviewed had at least one person enrolled in the NHIS. Households in the poorest welfare quintile (73%) had enrolled significantly (p0.001) more than those in the richest quintile (67%). The concentration curves further showed that enrolment was slightly disproportionally concentrated among the poor households, particularly those headed by males. Factors including age, sex, education, household size, region and location of residence were significantly associated with enrolment.

Conclusions: Enrolment in the NHIS favours poor households but is more pro-poor in male-headed households. Policy makers would have to ensure equity within and across gender as they strive to achieve UHC.

Keywords: Enrolment, Equity, National Health Insurance Scheme, Ghana

Exploring the Usefulness of Discrete Choice Experiments to Explain Preferences: The Case of HIV Testing Preferences Among Truck Drivers in Kenya

Michael Strauss, Gavin George: Health Economics and HIV and AIDS Research Division (HEARD), University of KwaZulu-Natal

Background: Understanding the demand for healthcare is a vital part of effective scale-up of interventions. However, the underlying preference structures of patients and clients are often unknown or poorly understood. Discrete choice experiments provide a tool for researchers to better understand these preference structures in relation to health seeking behaviour. This paper examines the usefulness of this tool in the context of a randomised controlled trial among long distance truck drivers in Kenya – a particularly difficult to reach population – and their preferences regarding HIV testing and counselling. Oral self-testing has been found to be broadly acceptable in Kenya, but it is unclear whether acceptability leads to higher uptake, and which characteristics of self-testing drive demand.

Methods: Using data from 150 truck drivers recruited into the intervention arm of a randomised control trial, this paper examines whether the stated preferences regarding HIV testing in a discrete choice experiment can help to explain actual test selected when offered HIV testing choices in the context of a research study. Key characteristics of HIV testing and counselling included the type of test; type of counselling; who administers the test; location; cost and time.

Results: The strongest driver of choice was cost, with participants preferring free, provider-administered HIV testing at a roadside clinic, using a finger-prick test, with in-person counselling, undertaken in the shortest possible time. Preferences diverged in two testing characteristics, between those who actually chose self-testing and those who did not: the type of test (p0.001) and the type of counselling (p=0.003). Self-testers preferred oral-testing to finger-prick testing (OR 1.26 p=0.005), while those choosing not to self-test preferred finger-prick testing (OR 0.56 p0.001). Those who chose not to self-test preferred in-person counselling to telephonic counselling (OR 0.64 p0.001), while self-testers were indifferent regarding the type of counselling. There were no preferences in either group regarding who administered the test.

Conclusions: We found stated preference structures helped explain the actual choices participants made regarding the type of HIV testing they accepted. Offering oral-testing may be

an effective strategy for increasing willingness to test among certain groups of truck drivers. However, the importance of in-person counselling and support, and a lack of knowledge of, and trust in new diagnostic technologies may mean that continuing to offer provider-administered testing at roadside wellness centres will best align with the preferences of those who already attend these facilities.

South african multiple deprivation-concentration index quantiles differentiated by components of success and impediment to tuberculosis control programme using mathematical modelling in rural o.r. tambo district health facilities

Ntandazo Dlatu[1,2], Benjamin Longo-Mbenza[2], Andre Renzaho[3] Ruffin Appalata[4], Yolande Yvonne Valeria Matoumona Mavoungou[5], Mbenza Ben Longo[6], Kenneth Ekoru[7], Blaise Makoso[8], Gedeon Longo Longo[9]

1. *University of KwaZulu Natal, School of Nursing, Division of Public Health, Durban*
2. *Corresponding author: Walter Sisulu University, Faculty of Health Sciences, Nelson Mandela Drive, Mthatha, Eastern Cape*
3. *Western Sydney University, Australia*
4. *Walter Sisulu University, Faculty of Health Sciences, Nelson Mandela Drive, Mthatha, Eastern Cape*
5. *University of Marien Ngoungou, Brazzaville, Republic of Congo*
6. *University of President Kasa Vubu, Boma, DRC*
7. *University of Cambridge*
8. *Faculty of Medicine, University President Kasa Vubu, Boma, Dr Congo*
9. *Faculty of Medicine, President Kasa Vubu, Boma, Dr Congo*

Background: The gap between complexities related to integration of Tuberculosis /HIV control and evidence-based knowledge motivated the initiation of the study. Therefore, the objective of this study was to explore correlations between national TB management guidelines, multiple deprivation concentration index quantiles components and level of Tuberculosis control programme using mathematical modelling in rural O.R. Tambo District Health Facilities, South Africa.

Methods: The study design used mixed secondary data analysis and cross-sectional analysis between 2009 and 2013 across O.R Tambo District, Eastern Cape, South Africa using univariate/ bivariate analysis, linear multiple regression model, and multivariate discriminant analysis. Health inequalities indicators and component of impediment to tuberculosis control programme were evaluated. Results: In total, 62 400 records for TB notification were analyzed for the period 2009-2013. There was a significant but negative between Financial Year Expenditure (r= -0.894; P= 0.041) Seropositive HIV status(r= -0.979; P= 0.004), Population Density (r = -0.881; P= 0.048) and the number of TB defaulter in all TB cases. It was shown unsuccessful control of TB management program through correlations between numbers of new PTB smear positive, TB defaulter new smear positive, TB failure all TB, Pulmonary Tuberculosis case finding index and deprivation-concentration-dispersion index. It was shown successful TB program control through significant and negative associations between declining numbers of death in co-infection of HIV and TB, TB deaths all TB and SMIAD gradient/ deprivation-concentration-dispersion index. The multivariate linear model was summarized by unadjusted r of 96%, adjusted R2 of 95 %, Standard Error of estimate of 0.110, R2 changed for 0.959 and significance for variance change for P=0.004 to explain the prediction of TB defaulter in all TB with equation y= 8.558-0.979 x number of HIV seropositive. After adjusting for confounding factors (PTB case finding index, TB defaulter new smear positive, TB death in all TB, TB defaulter all TB, and TB failure in all TB), only HIV and TB death and new PTB smear positive were identified as the most important, significant, and independent indicator to discriminate most deprived deprivation-concentration-dispersion index far from other deprivation-concentration-dispersion quintiles 2-5 using discriminant analysis.

Conclusion: Elimination of poverty such as overcrowding, lack of sanitation and environment of highest burden of HIV might end the TB threat in O.R Tambo District, Eastern Cape, South Africa. Furthermore, ongoing adequate budget comprehensive, holistic and collaborative initiative towards Sustainable Developmental Goals (SDGs) is necessary for complete elimination of TB in poor O.R Tambo District.

Keywords: Tuberculosis, HIV/AIDS, Success, Failure, Control program, Health inequalities, South Africa

The nigerian health economist's unplayed role in securing primary health care for all

Emmanuel Ndenor Sambo[1], Hyeladzira Garnvwa-Pam[2], Dr Fanen Verinumbe[2]
[1]Nigeria State Health Investment Project, Taraba State Primary Health Care Development Agency
[2]National Primary Health Care Development Agency

Background: As most African countries and the rest of the world continue to spend more on health, corresponding increase in the intended general health outcomes cannot be confidently said to have been achieved. There is a general consensus on the need to rejig the health financing strategies that have been employed by various governments in the developing world.

There exists a chasm, a sort of systemic vagueness in the guidance of health financing policy. This in effect has allowed policy makers to make rather misguided decisions that suggest an absolute absence at worse and an irrelevance at the least of health economists on the decision-making table to inform policies.

Objectives: This paper aims primarily to simulate thinking around how health economists in African countries can take a front row seat in guiding an evidence driven decision making process in keeping with global best practices as the world steers towards Universal Health Coverage.

This study aimed to assess the quantity, quality and targeting of economic evaluation studies conducted in the Nigerian context and the extent to which they translate to effective health policies.

It further points out some areas that the health economist in Africa has left unattended to at the detriment of the whole health system.

Methods: A comparative review of Nigeria's health systems' institutionalized policy making processes was employed as well as a systematic review of full economic evaluation studies published between 1998 and 2018 in international and local journals. where information regarding global best practices that are not practiced in the African setup were elicited and brought to bare.

Key Findings: Even though most African countries have pockets of Health Economists with technical capacity to provide the much required guidance to policy makers, the institutional platform for such technocrats is unavailable or at best weak.

Conclusion: For the African Health System to reach set targets, in this case Universal Health Coverage, the Health Economist must take up the responsibility of providing the health policy maker and implementer with empirical evidence informed guidance.

Using the EquityTool to Determine Socio-Economic Status in the Kintampo Health Demographic Surveillance Area: A Feasibility Study

Kwame Adjei[1], Irene Azindow[1], Felix Boakye Oppong[1], Andrea Sprockett[2], Nirali Chakraborty[2], Yeetey Enuameh[1&2], Kwaku Poku Asante[1], Seth Owusu-Agyei[1&4]
[1]Kintampo Health Research Centre
[2]Kwame Nkrumah University of Science and Technology
[3]Metrics for Management
[4]University of Health and Allied Sciences

Background: Wealth is a known household characteristic that largely affects health particularly in Sub-Saharan Africa. The wealth index was developed in 2001 as a reliable way to capture Socio-economic Status (SES) based on asset ownership and household characteristics using principal component analysis (PCA).

However, the Wealth Index questions are lengthy (25-50 questions), time-consuming, and often difficult to analyse. To address these challenges, the EquityTool was created by Metrics for Management (M4M) and partners. The Ghana Equity Tool simplifies the full DHS Wealth Index to collect 13 highly significant country-specific questions. It also offers automated calculations on Stata and SPSS. It benchmarks results to national population

The Kintampo Health Research Centre is one of three research centres in Ghana. The centre has a Health and Demographic Surveillance System (KHDSS) which captures vital including SES. The SES questionnaire is however lengthy and calculated using the regular PCA method with its challenges. It is also not benchmarked to national population. To address these challenges and achieve universal health coverage, KHRC in collaboration with M4M piloted the EquityTool under the Continuum of Care (CoC) project. The CoC project was a family planning (FP) implementation research which made use of a card and stars to encourage women (15-49) to use FP

Objective: To pilot the EquityTool and compare with the standard KHDSS questionnaire under the CoC project

Methods: This was a cross sectional survey carried out between February to March 2018 using Research Electronic Data Capture (REDCap) as part of project endline. Women of reproductive health age were sampled using the KHDSS which covers predominantly rural communities in Kintampo North and South districts where the CoC tudy was implemented. Wealth index for participants was measured using the equity tool and the standard KHDSS questions which were both incorporated into REDcap. Two measures of agreement namely, percent agreement and Cohen's Kappa was used to assess the agreement between the two set of items

Results: The percent agreement between the equity tool and the KHDSS questionnaire was 43.84%. A fair Cohen's kappa of 0.298 was obtained. Kappa >0.75 is excellent

Conclusion: The EquityTool was effectively used to measure wealth index. The fair Kappa could be attributed to the fact that the KHDSS questions are targeted primarily towards rural communities and not benchmarked to the national population.

Although the agreement between the KHRC questions and the EquityTool questions was fair, the latter is preferred since it is benchmarked to the national population.

Estimating the direct medical costs of Helicobacter pylori eradication therapy for outpatient primary care in Cameroon: implications for quality care and universal health coverage

Jeannine Aminde, Leopold Aminde

Background: Almost half the world's population is infected with Helicobacter pylori (*H. pylori)* with the highest reported prevalence from Africa. This infection is associated with several morbid gastrointestinal conditions and the World Gastroenterology Organization (WGO) recommends testing for dyspeptic persons and the treatment of positive cases. Despite the high prevalence and related burden of this infection, the cost of treatment in patients with dyspepsia in primary care settings in Cameroon is unknown.

Methods: This was a retrospective review of outpatient records from January 2012 to December 2016 at the Wum District Hospital, in the Northwest region of Cameroon. We reviewed records of all patients for whom *H. pylori* serology test was requested. Cost of illness was estimated from the patient's perspective based on hospital stipulated charges.

Results: We included 451 patients, 63.6% (n = 287) females and mean age was 40.7 years.Overall *H. pylori* seroprevalence was 51.5% (95%CI: 47% – 56%). The most used eradication regimen was; omeprazole + amoxicillin + metronidazole (53.9% of seropositive persons). The use of first line clarithromycin-based therapy was low (18.5%) and declining across the years. The mean cost of eradication therapy was 11,415 ± 5,507 FCFA; this ranged 8,200 FCFA (for omeprazole + amoxicillin + metronidazole therapy) to 21,000 FCFA (for clarithromycin triple therapy). The average total cost of treatment for dyspeptic outpatients was 8,357 ± 4,211 FCFA, (range: 5,900 to 21,510 FCFA).

Conclusion: Our study shows that one in every two dyspeptic people have *H. pylori* infection. Well over a third of Cameroonians live below the national poverty line (44.8% below the lower middle income class poverty line), and the average cost of outpatient treatment for *H. pylori* infection in primary care accounts for a third of minimum wage in Cameroon (36,270 FCFA). In the absence of universal health coverage, this has significant implications for Cameroon, as healthcare costs are reliant on out-of-pocket payments with potential to exert catastrophic health expenditure if broader perspectives, hospitalization and disease complication costs are taken into account.

Key words: Helicobacter pylori, seroprevalence, cost, primary care, Cameroon

Parallel Session 8 – Oral Presentations

Parallel Session 8-1 Resource allocation, efficiency and management 2

Setting up an adequate information solution to strengthen primary health care in Mauritius.

DR. Laurent MUSANGO[1]; Mr. Premduth BURHOO[2]; Dr. Faisal SHAIKH[1]; DR. Maryam TIMOL[3]
[1] World Health Organisation, Country Office of Mauritius.
[2] Mauritius Institute of Health (MIH)
[3] Ministry of Health and Quality of Life (MOHQL)

Introduction: Mauritius has one of the best civil registration systems in Africa with almost 100% births and deaths recorded. Morbidity conditions and mortality causes are coded according to the 10th Revision of the WHO International Classification of Diseases (ICD-10). The Health Statistics Report published annually contains information on population and vital statistics, infrastructure and personnel, morbidity, mortality and the activities of almost all health services pertaining to the Republic of Mauritius. Health Services Statistics Reports are compiled yearly. At the PHC level, a registry is maintained which contains demographic and clinical information on patients attending health facilities. However, it was noted that the information collected are not designed to provide data for detailed analysis and are not made public for appropriate use by decision makers. Reason why an assessment on an adequate information solution to strengthen primary health care in Mauritius was initiated.

Methodology: The country assessment starts with a thorough analysis of the situation of health information system over the past 15 years. Challenges or present opportunities for improving health information system were then carried out. A participatory and flexible approach was used for this assessment; a multidisciplinary team was set up to carry out the assessment. A Working Group (WG) of 5 members was constituted to review and to validate the report. The report identified keys opportunities that the country may continue to build on as well as challenges and possible solutions for adequate information solution to strengthen primary health care in Mauritius.

Results: The assessment identified opportunities mentioned above and challenges that need to be mitigated for improving PHC in the countries. The challenges identified are: data generated by the health system is not exploited to its full potential, there is inadequate monitoring and evaluation of health interventions, modern information solutions are not available for better analysis of the existing information, and the quality control measures have not been designed to measure the outcomes at individual and facility levels.

Conclusion and recommendations: The assessment recommended to implement strong integrated Health Management Information Systems by introducing e-health whereby all health information systems are integrated with an effective interoperable patient data transfer system, considering introduction of a smart health card concerning all personal health information at the

different levels of the health system including peripheral level and setting up a strong monitoring and evaluation systems to strengthen primary health care.

Identifying priority health system strengthening actions through a participatory approach for addressing non-communicable disease crisis in Mauritius

Dr Faisal Shaikh, Mr Premduth Burhoo
World Health Organization

Background: Non-communicable diseases (NCDs) are the leading cause of death, disease and disability in Mauritius. The four major NCDs (cardiovascular disease mainly heart disease and stroke, cancer, chronic obstructive pulmonary diseases and diabetes), account for nearly 81% of all deaths1 and 85% of the disease burden and trends in pre mature mortality and risk factors are putting increasing strain on health systems, economic development and the well-being of the population.

Aims and Objectives: The aim of this assessment was to identify health system challenges and opportunities

1. To assess the coverage of key population and individual NCD interventions and identify the health system challenges responsible for status of coverage.
2. To produce national policy recommendations for strengthening the health system

Methods used: An adapted version of the structured health system assessment guide developed by WHO-EURO was used. The tool identified fifteen health systems features and semi structured questions is used to assess the health system performance. This approach also gives a clear understanding of core interventions and services coverage and finally identifying those features which most significantly impact the coverage of these interventions Participatory approaches and deliberative engagement methods were used for qualitative assessment. Secondary data was used for quantitative analysis National stakeholders were engaged through participation in working groups and National consultations.

Key Findings: Progress has been made in scaling up a number of core NCD interventions and services. Despite the progress increasing trend is noted in mortality due to NCD. The risk of premature mortality due to NCDs is 22.5% is high as compared to other developed countries. The coverage of many core population interventions was found to range from limited to moderate and current population exposure to risk factors for NCDs remains a major concern. The coverage of individual services is much better although risk stratification for CVD, and early detection, management and follow-up of NCD patients need further improvements.

The health system features identified as major challenges for population interventions are “interagency cooperation**”** and “explicit priority setting approaches” For core individual services, “integration of evidence into practice” is the greatest challenge. Other bottlenecks for both are “population empowerment”, “adequate information solutions”, “ensuring access and financial protection” and “human resources”.

Main conclusions: Seven health system action areas are identified to accelerate the gains for better NCD outcomes. This will feed into the development of HSSP. Assessment also opened new window for better participatory approach for policy development.

Who Are We? The Role of Team, Professional and Managerial Relationships in Collective Leadership Practices in District Hospitals, Cape Town, South Africa

*Dickson R O Okello, **Gerry McGivern, *Lucy Gilson
*University of Cape Town
**Warwick Business School

Background: Effective healthcare leadership is necessary in engaging with other stakeholders in moving towards universal health coverage (UHC) in Low-and-Middle-Countries (LMICs). To achieve UHC, hospitals are important in the provision of quality people-centred healthcare. Hospitals are complex social systems, where leadership is a collective phenomenon, practiced by different healthcare cadres. In such environments professional, work and social identities at group, relational and organisational levels are likely to influence how leadership is practiced. A rich evidence base, and relevant theorisation, is needed to understand the nature and consequences of leadership practices in LMICs. Yet, hospital leadership has rarely been studied in South Africa. This paper presents findings from a qualitative study on healthcare organisational context, leadership practices and effective leadership in district hospitals in Cape Town.

Methods: We used qualitative approaches to data collection in two case study district hospitals. We had a total of 42 in-depth interviews and two focus group discussions. We also attended management meetings, made observations in different areas, and reviewed internal memos and letters of relevance to the leadership practices within the hospitals. Our respondents included clinicians, nurses, allied health workers, frontline workers and administrators at various levels of management. Our analysis was both inductive and deductive to explore and explain emerging issues about collective leadership practices in hospitals.

Results: Our study revealed that respondents emphasised their roles as clinicians and nurses first and as leaders, second; and that work team, professional and managerial identity and relationships are critical to leadership practices, and their likely influence on staff motivation. Respondents linked collective leadership practices and relationships to the common goal of providing healthcare services. Senior clinicians were aware of their professional identity and had loyalty to, and collegial relationships with junior clinicians. Professional identity and pride among clinicians allowed them to exercise their leadership practices in a collective manner and they considered themselves more motivated as compared to their nursing colleagues. Nurses in management positions also viewed the transfer of leadership and professional skills to colleagues as an important way of sharing professional experiences. However, junior nurses viewed the professional hierarchies in nursing as giving them fewer opportunities to participate in collective leadership and saw this as undermining their motivation. In addition, the structuring of management into junior, middle, and senior levels depicted management identities within the hospital that created barriers to relationship building and collective leadership practices.

Conclusion: Clinicians and nurses hold dual professional identities in hospitals and this influences their leadership practices. Collective leadership practices have influences over healthcare worker motivation. To build leadership practices that are inclusive, policymakers and practitioners should aim at deliberate efforts to consider team, professional and managerial differences when designing and implementing leadership development programmes within the hospital as both a physical and enacted context where leadership practices are situated.

Tanzanian's revision of Standard Treatment Guidelines and National Essential Medicines List

Gavin Surgey, PRICELESS/Wits School of Public Health

Objective: The Ministry of Health in Tanzania undertook a systematic process to revise their Standard Treatment Guidelines and National Essential Medicines List (STG/NEMLIT) led by the Pharmaceutical Services Unit (PSU) under the Tanzanian Ministry of Health. Listed essential medicines are considered to be one of the most cost-effective elements in healthcare and are used as tools to promote health equity. These need to be regularly updated to ensure they contain key commodities and that they reflect up to date evidence on effectiveness and safety.

Methods: The revision process of the STG/NEMLIT was structured around capacity building activities such that the Tanzanian team could undertake the majority of the work themselves and this could be a product developed in-country. Training and support in health economics was provided on evidence based medicine and costing for priority setting in medicines. The process involved capacity building workshops and on-going engagement between the Tanzanian expert review team and continuous technical support from HTA experts contracted to PRICELESS SA. Such engagement enabled in-country stakeholders to gain an in-depth understanding and practical experience of evidence-based selection of medicines while simultaneously developing their knowledge base on the principles of HTA. This linked to the HTA process, again providing the affirmation that HTA has a critical role to play in decision making.

Outcomes: Beyond the revised STG/NEMLIT which was completed at the beginning of 2018, a guidance document in the form of a Standard Operating Procedure (SOP), was developed by a group of national and international experts aimed at providing systematic guidance for developing and reviewing the STGs, vertical program treatment guidelines and associated medicine lists (NEMLIT inclusive), that could be reproduced for another review process. The revision process and capacity building improved skills relating to HTA which in turn helped precipitate Tanzania in establishing an HTA committee.

Discussion and conclusions: The guidelines outline the approach to the review and how to prioritise topics focused on for review. A notable aspect to the guidance is the incorporation of cost-effectiveness in considering medicines or treatment options. While there is no direct reference on how to establish thresholds for inclusion or exclusion of medicines, this is the first time that the guidance for the development of the STG/NEMLIT has incorporated in cost-effectiveness. It also precipitated the establishment of the HTA committee which was formed in 2017.

Service delivery planning in resource constrained settings: evidence from Nigeria

Kelechi Ohiri, Musleehat Hamadu, Yewande Ogundeji : Abuja Health Strategy and Delivery Foundation

Background: Many states in Nigeria develop yearly minimum service package (MSP), which is intended to improve access by ensuring uniformity in resource availability by facility type and standardization in quality of care provision for its citizens. Despite this, service delivery in Nigeria is still below par because many of these MSPs are neither feasible nor efficient due to the input focused approach (costs per service delivery points) that stretches resources beyond fiscal realities. There is a need to shift from an input based MSP to an output focused model that considers tradeoffs of resources and potential impact to allow states to offer to their citizens, access to basic health services despite fiscal constraints. This proposed model would be a novel

approach, which would need to be developed and tested with respect to its acceptability and utility with decision makers.

Aims: This study had 2 aims:

- To develop and design realistic output focused service delivery plan (SDP) which consider needs, resources, priorities, and a realistically achievable time frame in Kaduna state.
- To integrate the approach into the state's planning process.

Methods: The study was conducted jointly with the state. The overall approach is summarized in 3 key steps:

1. The fiscal space was projected across 3 resource scenarios, a low case, base case and high case, to determine the extent of resources available
2. A comprehensive model was designed using Microsoft Excel, which allowed us to determine the efficient combination of inputs (e.g. maximum allowable number of facilities, HRH numbers) necessary to achieve desired service access.
3. The range of allowable model options that fit within the determined constraints based on financial projections were presented to the policy makers and State decision makers to co-select the most viable service delivery plan.

Findings: Our findings demonstrate the efficiency of the SDP. One of the SDP models was projected to increase access to 69% at a cost of N7.9b (US$25m), which was within the state's resource limit compared to MSP which offered increase in access to 80% at a cost of N60b. Policy makers showed strong support for the SDP by integrating into key strategic documents such as the state strategic health development plan. The Executive Governor of Kaduna state also approved the implementation of one of the models by issuing a directive to the State Primary Healthcare Agency (SPHCA) to recruit 1 Medical Officer per Local Government into the system, one of the cornerstone recommendations from the SDP models.

Conclusion: This study demonstrates the need to shift from input driven models to output focused models when designing healthcare service delivery models. It provides an analytical approach towards resource allocation for PHC service delivery. In the context of resource constrained settings, it provides decision makers options to optimize health systems service delivery.

The role of efficiency gains in expanding fiscal space for health in Nigeria

Yewande Ogundeji, Kelechi Ohiri, Babatunde Akomolafe: Health Strategy and Delivery Foundation

A major component of achieving universal health coverage in many developing countries is reducing out-of-pocket (OOP) expenditure which is a critical demand side barrier to accessing care. Nigeria has the highest OOP expenditure in Africa and government health spending is below par compared to recommended benchmarks. Given the correlation between government spending and improvement in health outcomes, its importance cannot be overemphasized. This study sought to explore and identify viable options to increase health spending in Kaduna state, Nigeria.

Our study involved qualitative and quantitative approaches. First, we developed a conceptual framework to explore fiscal space for health. This included a comprehensive review of literature and theoretical frameworks. Our framework consisted of 6 thematic areas: macroeconomic growth, reprioritization of health, health sector specific sources, developmental assistance/grants, public private partnerships and efficiency gains. Second, we conducted key

informant interviews with 13 participants including public expenditure experts and senior program managers and policy makers. Third, we conducted a quantitative desk review to inform our revenue projections and the feasibility of the identified fiscal space options. Data sources included audited reports, government budget and expenditure data, household surveys, health account surveys, annual expenditure reports, and economic growth data.

Building on previous analysis of the health needs in the state, in addition to the current health spending, ₦16bn is required to fund the health system. We found that the health sector can obtain a ₦5.2bn if 80% of budget performance is achieved; premium payments from a planned social health insurance scheme could generate an additional ₦2bn; and earmarked taxes could potentially generate ₦1.5bn. However, health budget performance has been poor (an average of about 50% over the past 5 years) and implementing health insurance or earmarking taxes require legal frameworks and careful design that are time and resource consuming. Efficiency gains in terms of improving health budget performance appears to be the most feasible, sustainable, and cost effective fiscal space option for the State. To obtain potential revenue from this option, the state ministry of health (SMOH) and other health agencies would need to liaise and frequently engage with the ministry of budget and planning and finance to effectively communicate the need to prioritize health in terms of budget release for the sector, which can be achieved by providing measurable evidence of impact, value for money, and accountability for previously disbursed funds.

Parallel Session 8-2 Public health research issues

Limited health status awareness and biased equity estimates in LMIC

Igna Bonfrer, Prof. Eddy van Doorslaer, Erasmus School of Health Policy & Management

Background Equity in primary health care delivery is an important step on the path towards UHC and is a pivotal research topic for health economists. A common approach to quantify equity is to measure the extent to which health care utilization is related to the measure of interest, such as income, education, age or gender after controlling for differences in needs. Health economists rely heavily on self-reported measures of general health status or specific conditions to proxy these needs. However, the validity of this technique depends largely on the adequacy of this self-reported health.

Aim This study aims in the first place to determine the extent to which respondents are aware of their own ill health status, second to identify the potential bias in self-reported health status and finally to indicate whether the bias in self-reported health status differs systematically by age, gender, income or education level.

Methods Using three unique datasets from the Health Insurance Fund collected in Nigeria (Kwara State, n = 2325 households), Tanzania (Dar es Salaam, n = 674 households) and Kenya (Nandi district, n = 1242 households). We match self-reported with objective measures (anthropometrics and/or biomarkers) for five conditions: hypertension, diabetes, underweight, overweight and malaria. We use the associated household survey data to measure age, gender, consumption expenditure as a proxy for income and education level.

Key findings Preliminary results show that respondents significantly underestimated their own ill health, with regard to hypertension (15% was hypertensive but did not report this) and

overweight (20% did not report this), while they overestimated the prevalence of malaria (8% incorrectly reported) and underweight (5% incorrectly reported). We find that people above 40 years of age, males and those with no or only primary education are more likely to incorrectly report no ill health. Preliminary results suggest further that there is no significant income gradient in false negatives.

Conclusion With eighty percent of mortality caused by cardiovascular diseases occurring in low and middle income countries and hypertension and overweight among the main risk factors of this disease, these findings show the importance of improve primary health care access. This is also a cautionary tale for health economists, using self-reported health status as a proxy for health, which may lead to an underestimation of inequity in the health care system, especially towards men, the elderly and those with limited levels of education.

Risky Sexual Behaviour of Youth in Rural Areas of Nigeria: Implications for Primary Health Centres

Juliana C. Onuh, Aloysius Odii, Chukwuedozie K. Ajaero & Chimezie Atama
Department of Geography, University of Nigeria Nsukka

Background Young people residing in both urban and rural areas of Nigeria are known to indulge in risky sexual behaviour. Meanwhile, interventions aimed at curbing these behaviours easily reach urban areas thereby leaving Primary Health Centres (PHCs) in rural areas with the important responsibility of health promotion and disease prevention. However, PHCs would find the delivery of this duty more tasking without evidenced knowledge about the categories of youth prone to risky sexual behaviour.

Objective The objective of this study is therefore to examine the spatial risky sexual behaviour of youth residing in rural areas of Nigeria and the sociodemographic factors affecting them.

Method Data from Nigerian Demographic and Health Survey of 2013 conducted in all 36 states of Nigeria and Abuja were used. With a sample of 8788 young people aged 15-24 years. Risky sexual behaviour was measured using three items; none condom use at first sexual intercourse, none consistent condom use and multiple sexual partners. The data was analysed using descriptive statistics, chi-Square, hot spot and binary logistic regression analyses.

Results Based on the chi-square analyse, result from this study recorded significant variations in risky sexual behaviours across rural areas with major hotspot in North West Nigeria. Highest prevalence of multiple sexual partnerships, none condom use and than 15 years age at first sex were found in South South, North West and North West Nigeria respectively. Finally, binary logistic regression identified education, marital status, region and age as dominant risk factors of risky sexual behaviours across regions.

Conclusion These results therefore suggest that since Primary Health Centres in rural areas have the primary duty of health promotion and disease prevention, region specific programmes meant to create awareness on the importance of safe sex and condom use should be targeted at youths with low educational status and those within poor wealth category with major emphases on vulnerable regions.

Utilization of primary health care in Nigeria: A quantile regression analysis using the Service Delivery Indicators Survey Data

Opeyemi Abiola Fadeyibi, World Bank, Nigeria

The paper used quantile regression analysis to explain factors that affect utilization of primary health care services at different points on the conditional distribution of the dependent variable. Health facility data from the Service Delivery Indicators (SDI) survey for Nigeria was analyzed, measuring utilization as the number of outpatient visits in the 3 months preceding the survey. The paper used both ordinary least square (OLS) regression and quantile regression analyses at the 10th, 25th, 50th, 75th and 90th quantiles to see if there are differences in the estimates produced by both approaches. Quantile regression (QR) was used to estimate the effect of explanatory variables on the dependent variable at different points of the dependent variable's conditional distribution

Results showed that health facility type, region, provision of family planning services and availability of electricity significantly increases utilization of health facilities across all quantiles. The effects of these factors on utilization are however higher in the upper quantile than in the lower quantile. In addition, availability of infrastructure such as toilet and water, as well as frequency of facility operations (opening daily or not) significantly increases utilization in the upper quantile. Understanding the pattern of effects of factors at different points of the conditional distribution of utilization of primary health care is key to strengthening primary health care system in Nigeria.

Characterization of 331G/A polymorphism of RP gene and identification of viral oncogene HMTV virus as genetic markers for the improvement of breast cancer management in Cameroon.

NIELS NGUEDIA KAZE[1], N.N.K., *JEAN PAUL CHEDJOU[1],J.P.C., WILFRED MBACHAM[1,2], W.M.*
University of Yaoundé I (Department of Biochemistry / Biotechnology Center, Yaounde, Cameroon)
Faculty of medicine and Biomedical Sciences

Background: Breast cancer is a real public health problem in Cameroon, where more patients with this cancer usually die a year after diagnosis, as it is still based on histological examination, mortality due to cancer is far from decreasing. Since cancer is an accumulation of molecular changes, the +331 G/A polymorphism of PgR gene (progesterone receptor) and viral oncogene HMTV (Human Mammary Tumor Virus) has been recently considered as a molecular markers associated with breast cancer. Due to that we fixed our objectives to characterize these markers.

Aim and objectives: characterization of +331 G/A polymorphism of PgR gene (progesterone receptor) and viral oncogene HMTV (Human Mammary Tumor Virus) by semi-nested PCR to understand etiological factor of that cancer in Cameroon.

Method: We carried out a case control study, in which 26 cases diagnosed positive for breast cancer at the CHU of Yaounde were recruited through the identification of archived biopsies. Blood samples were also collected from 20 women recruited using a questionnaire and a inform concern sign by each of them. +331 G/A polymorphism in the PgR gene was identified using NIaIV endonuclease by PCR-RFLP, and HMTV viral oncogene by hemi-nested PCR. The data were analyzed using Microsoft Excel and SPSS v20.

Results: We got a mean age of 57,73 +/- 9,87 in our cancerous group with the predominance of infiltrant duct carcinoma at grade II of SBR. An Odd Ratio of 1.268 with Confident Interval of 95% 1.004-1.664 proving that there is a significant association between 331G/A mutation and breast cancer with P-value of 0.026, obtained by comparing the mutant group (AA) 28,5% and wild genotype (GG). In addition, 3 cases were detected with the HMTV virus, one was found in the cancer group and two in the control group.

Conclusion: These results indicate that, HMTV is considered as viral cause and can predispose to breast cancer, beside 331 G/A polymorphism is an associated risk factor of that cancer.

Evaluating the Impact of South Africa's Ideal Clinic Realisation Programme using Quasi-Experimental Methods

Ijeoma Edoka, Nicholas Stacey and Karen Hofman: PRICELESS SA, School of Public Health, University of Witwatersrand, Johannesburg, South Africa,

Background: South Africa is at present re-structuring its healthcare system with the aim of achieving universal healthcare coverage through a single-payer National Health Insurance (NHI) scheme. The NHI was introduced as one solution to inequalities within the South African health care system by creating 'a unitary system, financed through a central fund, where patients can select from a package of care offered by accredited health facilities'. In preparation for the NHI, a number of reforms have been introduced to improve both access and quality of health care services in public health facilities. Given the importance of having a well-functioning primary healthcare system, these reforms have also targeted improvements and restructuring of the primary healthcare system. An important component of the primary healthcare reforms was the phased introduction of the Ideal Clinic Realisation Programme (ICRP) in 2014. This programme was accompanied by a wide range of initiatives aimed at improving the quality of primary healthcare services, particularly in more deprived areas. The ICRP targeted improvements in PHC administrative process; health service delivery; human resources for health; and infrastructure.

Aim: This aim of this study is to assess the impact of the ICRP on the quality of primary healthcare services.

Method: We use administrative data – the South African District Health Information System and apply quasi-experimental methods to assess the impact of the programme on amenable causes of death (a proxy for quality of health care services) and process indicators (including essential medication stock-out rate and patient safety incident cases). These quasi-experimental methods (difference-in-difference combined with propensity score matching) allow for the identification of causal effects of the programme on both population-level outcomes (amenable causes of mortality) and process indicators. This will provide useful insights to decision-makers on improvements to be made prior to full scale-up of the programme.

Health state utility values among children and adolescents with disabilities: A systematic Review and Metaanalysis of the evidence

**Lucy Kanya, **Dr. Nana Anokye: *London School of Economics and Political Science, ** Brunel University London*

The assessment of healthcare technologies and interventions requires the assessment of both costs and utilities. Health state utility values (HSUVs) are measured using a range of generic and conditions specific measures. While reviews have identified that generic measures of HSUVs may lack validity in adults with conditions that result in physical disability, there is little information available on the methods used to obtain HSUVs in children and adolescents with disabilities. The objectives of this systematic review are to describe the methods used to obtain HSUVs, including mode of administration and psychometric properties, and provide summary statistics for HSUVs among children and adolescents with disabilities. A narrative summary of the available literature is provided. In addition, using a random effects model, the costs and utilities are pooled separately for combined measures of effect. A network meta-analysis of the different measures and the values thereof is also conducted. The results of these analysis will inform an econometric model on the costs and utilities of healthcare technologies and interventions for children and adolescents with disabilities. The results further question the generalisability of valuation methods across population groups, diseases and settings.

Outcomes and associated factors of integrated community case management of childhood illnesses in dawro zone, South West Ethiopia

**Tesfaye Dagne Weldemarium, ** Sisay Dejene, * Waju Beyene: *Jimma University, ** Dawuro Health Office*

Background: After its scale up in March 2011 integrated community case management (ICCM) was provided in about 86% national geographic coverage; 88% health extension workers (HEWs) were trained; and care seeking for under-five children at health posts was increased. However, under-five children health outcomes following management of common childhood illnesses by HEWs using ICCM protocol and its associated factors were not studied yet.

Objective: The aim of this study was to assess outcomes and associated factors of integrated community case management of childhood illnesses service in Dawro zone, southwest Ethiopia, 2017

Methods: Community based cross-sectional study design was employed in this study. The study was conducted from March 15 to April 12, 2017 in Dawro zone, southwest Ethiopia. Caregivers of 791 randomly selected under-five children treated by using ICCM protocol from July 2016 to January 2017 in sampled kebeles were study participants. Multinomial logistic regression analysis was used to fit a model and identify variables associated with outcomes of ICCM. Summary of the result was presented descriptively by frequency tables, graphs, and charts and analytically by p-value, adjusted odds ratio, and confidence interval.

Result: Seven hundred ninety one caregivers were participated in this study yielding about 98 percent response rate. Among the 791 under-five year children managed by health extension workers for common childhood illnesses, 705, 58, and 28 were cured, encountered complication, and died respectively. When cured cases compared to worsen cases, the independent variables; caregiver's educational status, household wealth, age of the child, distance from home to health post, caregiver's knowledge of childhood danger signs, and harmful traditional practices were significant predictors of outcomes of children managed by HEWs through ICCM program. All aforementioned variables except harmful traditional practices were significantly associated when cured cases compared to that of dead cases.

Conclusion: This study found that most of the under-five children improved following the management of common childhood illnesses by health extension workers. Attention should be given to infants, children far from health posts, teaching caregivers about childhood danger signs, eliminating harmful traditional practices on under-five children to gain better child health outcomes.

Using Intervention Mapping to Design and Implement Quality Improvement Strategies Towards Elimination of Lymphatic Filariasis in Northern Ghana.

Alfred Kwesi Manyeh[1,2,4] ; Frank Baiden[4]; Latifat Ibisomi[1]; Tobias Chirwa[1]; Ramaswamy Rohit[1,3]*

[1]Division of Epidemiology and Biostatistics, School of Public Health, University of the Witwatersrand, Parktown, Johannesburg, South Africa.

[2]Dodowa Health Research Centre, Dodowa Ghana.

[3]Public Health Leadership Program, Gillings School of Global Public Health, University of North Carolina, 4107, McGavran-Greenberg Hall, Chapel Hill, NC, USA.

[4]Ensign College of Public Health, Division of Epidemiology and Biostatistics, Ghana.

The Global Strategy to Eliminate Lymphatic Filiariasis (GFELF) through Mass Drug Administration (MDA) has been implemented in Ghana since the year 2000 and transmission has been interrupted in 76 out of 98 endemic districts. To improve the MDA in the remaining districts with microfilaria (MF) prevalence above the 1% threshold need for the interruption of transmission, there is the need to identify and implement appropriate quality improvement (QI) strategy for the elimination of the disease as a public health problem in Ghana.

Due to the complexities associated with implementing evidence based programs (EBP) such as the lymphatic filariasis MDA and variability in their context, an initial assessment to identify implementation bottlenecks associated with the implementation of lymphatic filariasis MDA in Bole District of Ghana was conducted. A context specific QI strategy was designed and operationalized using intervention mapping (IM) strategy in terms of seven domains: actor, the action, action targets, temporality, dose, implementation outcomes addressed, and theoretical justification.

This article describes the processes and the methods used in selecting the context specific tailored QI strategies to address identified bottleneck within an existing evidence based intervention for elimination of lymphatic filariasis in Bole District of Ghana.

Keywords: Lymphatic Filariasis, Quality Improvement, Mass Drug Administration, Intervention Mapping, Ghana.

Parallel Session 8-3 Priority setting and economic evaluation

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Primary health care delivery in post-apartheid South Africa: Exploring the equity-enhancing contributions of the public sector

Kehinde O. Omotoso Steve Koch, Department of Economics, University of Pretoria

Background: Prior to 1994, South Africa's health system was divided along racial lines. Post 1994, the South African health system was developed into a two-tiered system divided along socio-economic lines. Since the emergence of democracy in the last two decades in South Africa, considerable effort has gone into redressing the socio-economic and health care inequalities, which characterised the Apartheid regime. Specifically, the South African government has embarked on a variety of policies and reforms to reverse the discriminatory practices that pervaded all aspects of life before 1994. Policy interventions have targeted reductions in socio-economic inequalities in various capacities, and, by extension, these policies have also applied to the health care system: fiscal redistribution targeted at health, education, social protection sectors; abolition of user fees at the primary health care (PHC) level in 1994; extension of PHC policy to all users in relatively poorer households in 1996; and ongoing discussions related to universal health care coverage through a yet-to-be-fully-implemented national health insurance (NHI), among others.

Aim and objectives: This study sets out to explore the indirect contributions of the various public policies and reforms targeted at reducing inequity in health care access over the second decade of post-apartheid South Africa. Specifically, the contributions were linked to changes in social factors which are often targets of policy decisions.

Methods: Data come from information collected on social determinants of health (SDH) and on public versus private health care access in the 2004 and 2014 questionnaires of the South African

General Household Surveys (GHSs), nationally representative surveys. A decomposition of change in a concentration index method was employed to unravel the contributions of the public sector to equity in access to health care over the studied time period.

Key findings: Overall, the results show an improvement in access to health care over the post-apartheid period, especially for the previously disadvantaged population groups; with a widening preference for private health care in the event of illness. However, differences in rural/urban location and educational attainment contribute largely to inequalities in access to health care.

Main conclusions: While progress has been made in improving access to primary health care in post-apartheid South Africa, policies tailored towards increasing access in rural areas and among the uneducated could further prove beneficial in reducing inequalities of access to health care.

Are Community Health Workers the missing link in improving capacity of the health systems preventive arm?

MUTEBI ALOYSIUS, Makerere University School of Public Health, Uganda

Background Most deaths can be averted through simple evidence-based interventions such as the use of Community Health Workers (CHWs), also known as village health teams in Uganda (VHTs). However, the CHW strategy still faces implementation challenges regarding training packages, supervision, and motivation. The WHO advocates for the use of CHWs to expand health services coverage, as one of the method to tackle health workers shortages mostly in developing countries.

Methods CHWs were invited to share their perspectives and experiences on their role: Qualitative interviews (In-depth interviews) with 15 CHWs from three districts i.e. Kamuli, Pallisa and Kibuku explored their motivations, as well as the challenges they encountered. Each CHW was also interviewed independently, which gave insight into the practical day-to-day activities that they engage in.

Results CHWs mentioned that the key motivation for taking on their role was elevating their status in their community, but the main barrier was lack of confidence resulting from lack of appropriate training and supervision. In-depth interviews revealed that CHWs, contrary to literature, are the 'front line' health workers regarding basic health care, which extends to all preventive diseases. Complex health issues that were addressed by CHWs included provision of care for medication defaulters, sensitisation on antenatal care; malaria; both household/personal hygiene; and being 'first responders to community emergencies.

Conclusions With decentralization level one of the health care systems is now the village or LC 1 where CHWs are found. CHWs are key health support staff who shoulder a significant burden of care at community level. In practice, CHWs provide more than basic care especially to HIV/AIDS and TB patients. CHWs are very crucial in expanding health coverage mostly in rural and underserved communities. This has reduced the burden on health facility staff. However, lack of training and other materials that CHWs lack, make them feel ill-equipped to deal with the challenges that they encounter on a daily basis. If these gaps are addressed then CHWs would be the magic bullet towards improved household health care.

Key words: Community health workers, health services, coverage

Intra-urban inequality, a new emerging child health peril in Africa: the case of South Africa

Olufunke A. Alaba [:] Health Economics Unit, University of Cape Town, Cape Town, South Africa

Introduction There are more influences on child health and mortality in South Africa than what is revealed simply by looking at averages, aggregate economic growth and the seeming priority that has been given to social development and child welfare especially with the rapidly growing urban cities. Inequalities become apparent when efforts are made to disaggregate the picture.

Although, the rural-urban disparities in child malnutrition among socioeconomic groups is to be recognized, intra-urban differential is fast becoming a peril to child health outcomes including child malnutrition in sub-Sharan Africa. Childhood malnutrition remains a global challenge. Given that malnutrition is an underlying cause of over 50% of under-five deaths, it is clear that the accomplishment of Sustainable development goals (SDGs) require action directed at improving the nutritional status of vulnerable children.

Objective Thus, this study empirically investigates the understanding of the role of the urban environment in shaping inclusivity of children to basic need like healthcare and improved nutrition within the social determinants framework in South African cities. The study examines different features of the urban environment, especially income inequality within the urban environment that may influence child nutritional outcomes by developmental stages (Infancy:0 to 18 months and early childhood: 18 months to 60months) as well as the pathways through which it occurs in order to meet SDG targets 10.2 and 11.7 amongst others. Additional factors such as the nature of the home environment and capabilities of the parents are investigated.

Methodology and Data The study population for this empirical investigation is wasting, stunting and underweight within under-five children from the South Africa National Income Dynamics Study (NIDS) 2012 matched with intra-cities income inequality measures from the 2011 South African census. NIDS is designed to collect household data that can be used to evaluate various aspects of household welfare and behaviour and to evaluate the effectiveness of government policies on the living conditions of the nation. The study applies a multi-level modelling approach within a social determinants framework.

Conclusion Results showed that children from the poorest 10 per cent of households have higher rates of underweight and stunting compared to the richest 10 per cent. This study did not only provide a picture of the current state of child wellbeing in South Africa, it also considered possible effects of wider contextual (such as neighbourhood) influences on childhood malnutrition.

Economic Fluctuations and Child Mortality: How Well Children's Health Needs are Met in Nigeria.

Abdulganiyu Salami, Lafia Federal University Lafia

This study investigated the effect of economic fluctuations on child mortality rates, using Nigerian time series data. Using ARDL Bound test and Fully-modified ordinary least square regression imbedded with distributed lag of GDP per capita, it was found that GDP per capita significantly influence neonatal, under-5 and infant mortalities negatively. It is therefore recommended that policy makers put in place policies that will improve child health, GDP per capita, general productivity and ensure overall economic buoyancy.

Key words: child mortality, GDP per capita, policy makers

Identifying the challenges in Delivering the Essential Health Care Package in Eswatini

*Diana Kizza, **Velephi Okello: *Mbabane Clinton Health Access Initiative, ** Ministry of Health, Eswatini

The egalitarian goal of Universal Health coverage (UHC) by 2030, to provide health services without financial hardship to every member of the population; garners well with the monarchist system of the Kingdom of Eswatini, that aspires to attain social equality.

The government has committed to achieving Universal Health Coverage (UHC), as prioritized in the National Health Strategy (NHSSP II 2017 – 2020) and the National Health Financing Policy. The Essential Health Care Package (EHCP) defines the set of services to be provided freely at each level of the health system to reduce the disease burden and provide for the poor and vulnerable. Ministry of Health worked with stakeholders to develop a systematic practical approach to operationalize the EHCP and navigate from the decision to deliver and on-the-ground implementation.

To assess the ability of facilities to deliver the EHCP, government conducted facility service readiness assessments, and extensive resource availability assessments in 10 clinics and two hospitals to understand the input gaps preventing EHCP service delivery. These revealed gaps in availability of General Service Readiness commodities, including essential medicines and basic equipment items such as infection prevention, adult/pediatric examination, and point of care diagnostics. Given the identified challenges in resource gaps and inefficiencies, the Ministry of Health adopted a systematic approach to diagnose and address implementation challenges from a facilities perspective. Each facility conducted fish-bone analysis and root cause analysis to identify the causal bottlenecks in the supply chain of General Service Readiness Commodities. This additional analysis provided a range of systemic supply chain and budgeting issues.

To address these issues, quality improvement techniques have been adopted to fill the gaps and drive efficiencies. The Ministry worked to identify service delivery reforms which could help us service delivery gaps through innovative forms of service delivery.

The key lesson was that resource availability assessment output was not directly actionable from a health systems strengthening perspective. Follow-up processing mapping was required to understand the systemic root causes preventing resources from being available to the front-line clinician. Further follow-up work was required to connect resources their respective budgets and supply chains in identifying solutions to solve the bottlenecks. After this consultation process, a comprehensive standard Resource Matrix of the essential resource inputs necessary to deliver the services was developed.

Implementing Health Financing Reforms in Nigeria: A case study on the Basic Healthcare Provision Fund (BHCPF)

Nneka Orji Abuja Federal Ministry of Health, Benjamin Uzochukwu University of Nigeria

Background Nigeria's health system is structured like her constitutional governance system with diverse stakeholders that showcase mixed interests. Considering these complexities, policy makers, health care providers and major stakeholders have been saddled with the challenge of improving the performance of the health system. A number of health reforms have been implemented, but these efforts and investments have failed to demonstrate commensurate returns on investments. Despite these investments, Nigeria has experienced incremental out-of-pocket health expenditure and as at the last estimate in 2016, out-of-pocket household spending was very high at an average of 69.7% of total health expenditure compared to the global

benchmark of 30-40%. To respond to these systemic challenges, the National Health Act (NHAct) was enacted in 2014. The Act provides for a BHCPF to be used for the strategic purchase of a Basic Minimum Package of Health Services; it further prescribes a coordination framework for the National Health System.

Aim To assess and analyze the feasibility of strategies for implementing the BHCPF.

Objectives To identify and analyze the main factors impacting on the implementation of the BHCPF**;** Propose recommendations to fast track the implementation of the BHCPF.

Method Key respondents were interviewed using a semi structured tool. Respondents were purposively selected to reflect the different stakeholders at each level of implementation of the BHCPF- (FMOH, NPHCDA, NHIS, Federal Ministry of Finance, Ministry of Budget and National Planning), Media group, State government institutions (SMOH, SPHCDA, SSHIS, State Ministry of Finance, Ministry of Local Government); Local Government Health Authorities, Health workers, key officers of the facility development committees, Development Partners and Donors, CSOs, and Community members.

Key findings_Findings reveal health systems issues that predate the enactment of the Act; the strategies developed to respond to these issues seem fit for purpose but the current approach for operationalizing these strategies has rather than contribute to revamping the system, thrown up thorny policy issues and political interferences in the health system. Clear interpretation of the provisions of the Act for actors in the system may be very valuable. Political interference somewhat contributed to the delays and mistrusts in financing the BHCPF using donor and government resources.

Conclusion The key challenges that contributed to the delays and non-implementation of the BHCPF should be addressed. The identified challenges include, issues of transparency, poor understanding of the mandates of key officers, political interference, and non-release of government commitment to the BHCPF.

Parallel Session 8-4 Human Resources for Health – innovative approaches

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The midwives service scheme: a qualitative comparison of contextual determinants of the performance of two states in central Nigeria

**Arnold Okpani, **Seye Abimbola: *National Primary Health Care Development Agency, University of Sydney, Australia*

Background The federal government of Nigeria started the Midwives Service Scheme in 2009 to address the scarcity of skilled health workers in rural communities by temporarily redistributing midwives from urban to rural communities. The scheme was designed as a collaboration among federal, state and local governments. Six years on, this study examines the contextual factors that account for the differences in performance of the scheme in Benue and Kogi, two contiguous states in central Nigeria.

Methods We obtained qualitative data through 14 in-depth interviews and 2 focus group discussions: 14 government officials at the federal, state and local government levels were interviewed to explore their perceptions on the design, implementation and sustainability of the

Midwives Service Scheme. In addition, mothers in rural communities participated in 2 focus group discussions (one in each state) to elicit their views on Midwives Service Scheme services. The qualitative data were analysed for themes.

Results The inability of the federal government to substantially influence the health care agenda of sub-national governments was a significant impediment to the achievement of the objectives of the Midwives Service Scheme. Participants identified differences in government prioritisation of primary health care between Benue and Kogi as relevant to maternal and child health outcomes in those states: Kogi was far more supportive of the Midwives Service Scheme and primary health care more broadly. High user fees in Benue was a significant barrier to the uptake of available maternal and child health services.

Conclusion Differential levels of political support and prioritisation, alongside financial barriers, contribute substantially to the uptake of maternal and child health services. For collaborative health sector strategies to gain sufficient traction, where federating units determine their health care priorities, they must be accompanied by strong and enforceable commitment by sub-national governments.

Analysis of Factors Affecting Leadership Training Transfer Within a Health System Context: Learning from the Experience of Kenya's Healthcare Leaders.

T. Chelagat[1], G. Kokwaro[1], J. Onyango[1], J. Rice [1]
Strathmore University Business School/ Institute of Healthcare Management

Knowledge transfer in organisations is evidently being recognized as a key determinant of organisational competitiveness. Research evidence confirms that the conditions under which knowledge is transferred has great influence on organisational performance improvement. However, even though organisations are realizing positive impact of knowledge on performance, drivers and barriers for successful knowledge transfer in different scopes and contexts are under-represented. The study sought to bridge the current gap between theoretical perceptions on knowledge transfer and the leadership reality today. This is achieved through identification and analysis of factors affecting leadership knowledge transfer in healthcare organizations in Kenya. Mixed methods design without a random assignment was adopted, to provide evidences on effective strategies for transferring knowledge as well as its facilitators and barriers. The study participants were 39 Strathmore Business School, healthcare leadership, management and governance (LMG) program alumni. The group were trained between the year (2011-2016) from 19 counties in Kenya, from the public, private and faith-based health sector. The results indicate that transfer mechanisms related positively with the extent to which managers supported and reinforced the use of learning on-the-job (P=0.021); the extension to which training is designed to give trainees ability to transfer learning to job application and training instructions match the job requirement (P=0.027); and the opportunity to use the learning at work environment (P=0.022). The results provide evidence that ability scales (transfer design and opportunity to use learning) and work environment scale (supervisors support to use learning) plays a mediating role between the training learning and performance improvement, in a healthcare leadership context. The study concludes with recommendations that can be integrated successfully and inform future programs design and partnerships within the health system healthcare organisations towards maximization of knowledge transfer process from classroom setting to work environment.

Keywords: Healthcare performance, learning transfer system inventory scale, team-based coaching, priority challenge project.

The short-term and long-term cost-effectiveness of an augmented exercise referral scheme: A within-trial analysis and beyond-trial modelling

Anokye N[1], Ingram W, Taylor RS, Taylor A Trial Steering Committee
[1]Health Economics Research Group, Department of Clinical Sciences, Brunel University London.

Improving physical activity is a widely-stated policy aim from national to international level. It is therefore important to establish which approaches are effective and efficient at encouraging inactive individuals to become active. This would inform public health policy and practice. However, there is paucity of evidence on economic evaluation of physical activity interventions particularly in low and middle income countries. Building on the methods of a cost-effectiveness analysis of an augmented exercise referral scheme (ERS), the presentation provides recommendations for the health economics research agenda in Africa.

A short and long term cost-effectiveness analysis of an augmented exercise referral scheme alongside a trial was undertaken using health care provider, personal social services, and patient perspective. A multicentre parallel two group randomised controlled trial with 1:1 individual allocation to usual ERS alone (control) or augmented exercise referral scheme with web-based behavioural support based on the LifeGuide platform. Participants were inactive people with obesity, diabetes, hypertension, osteoarthritis or history of depression, referred to an ERS from primary care in UK.

The analyses were two-fold – short term (within-trial) cost-effectiveness analysis (from baseline to 12 months post randomisation) and long term cost-effectiveness analysis (beyond-trial modelling of long term expectations for cost-effectiveness), for augmented exercise referral scheme using web-based behavioural support against standard exercise referral scheme. Deterministic and probabilistic sensitivity analyses evaluate uncertainty.

The main outcome of the economic analysis is an incremental cost per Quality-Adjusted Life-Year (QALY - based on EQ5D5L). The short term cost-effectiveness analysis uses resource use data for development of training for LifeGuide coach, and technician; web and exercise support (e.g. duration and frequency) provided by technician; LifeGuide coach and health professionals respectively; provision and running of the exercise sessions at leisure centres; and health and personal social service use. The long-term cost effectiveness is based on an existing policy relevant decision analytical model (has informed 3 public health guidelines in UK). The analysis account for the impact of physical activity on lifetime risk of developing coronary heart disease, stroke, and type II diabetes. The discussion highlights the considerations for adapting the economic model to analyse the value for money of physical activity programmes in Africa.

Frontline Health Worker Performance on MNCH Care at the PHC Levels in Nigeria

Godwin Unumeri[1a], Ekechi Okereke[1], Ibrahim Suleiman[1] [a]Godwin Unumeri,
[1]Population Council

Background: Facility-based evidence indicate that strengthening frontline health workers (FLHWs) at the primary health care (PHC) levels reduce the incidence of maternal and infant health mortality when the personal, organisational and community factors are supportive as a survey in Bauchi and Cross River States (CRS) of Nigeria established.

Aims and Objectives and Methods: To establish a relationship between the contextual factors that promote effective service delivery by FLHWs and reduction in facility-based maternal and infant mortality in Nigeria.

Method: The cross-sectional study was conducted in November (6-13, 2016) to obtain data from FLHWs who had worked at the PHC levels 12 months prior, in 2 local government areas (LGAs) in each State.

Results: Personal FLHWs contentment (Bauchi 100%; CRS 100%); motivation to serve (Bauchi 95.9%; CRS 92%); job effectiveness (Bauchi 95.9%; 93.9%) and opportunity to use skills (Bauchi 95.9%; CRS 98.5%) were associated with performance MNCH roles. Other correlates included organizational factors like keeping the health facility opened and previous training for MNCH care (CRS 90%; Bauchi 60%). Village/ward support for disseminating knowledge on MNCH prevention/treatment to FLHWs/facility (CHEWs 79.2%; JCHEWs 80.9%); community mobilization (CHEWs 84.5%; JCHEWs 83.0%); record keeping support (CHEWs 71.7%; JCHEWs 68.1) and assistance during training (CHEWs 71.7%; JCHEWs 85.7%) were community interventions listed. Personal factors that inhibited FLHW were low knowledge on ANC care/counseling, danger signs and symptoms/complications of pregnancy and management of delivery/child health (less than 10% in Bauchi and CRS). Reported organizational inhibitors were lack of stethoscope (Bauchi 47.8%; CRS 46.7%); thermometer for CHEWs (Bauchi 31.9%; CRS 43.3%) and JCHEWs (Bauchi 54.5%; CRS 20.0%); weighing scale for CHEWs (Bauchi 43.5%; CRS 36.0%); JCHEWs (Bauchi 54.5%; CRS 56.7%) and infant scale (Bauchi and CRS 40%).

Main Conclusions: Facilities where FLHWs provided MNCH care at PHC levels in an environment with favourable personal, organizational and community factors maternal and infant mortality were significantly low. Also, carefully planned monitoring, supportive supervision, trainee feedback and implemented recommendations similarly enhanced the performance of FLHWs at the PHC levels in Nigeria.

Health facility-related determinants of choice for health care provider: lessons towards achieving the goals of universal health coverage in Uganda

Perez N. Ochanda[1†], Stephen Okoboi[1]
[1]Infectious Diseases Institute, Department of Research, P.O. Box 22418, Kampala
[1]Infectious Diseases Institute, Department of Research, P.O. Box 22418, Kampala

BACKGROUND: The nexus between Primary Health Care (PHC) and Universal Health Coverage (UHC) continues to dominate health policy discussions globally especially for low and middle-income economies. There is growing consensus that the most effective way to deliver UHC is by achieving a more efficient PHC system. Uganda's Household Out-of-pocket expenditure accounts for over 40% of the total health expenditure with over 50% of these expenditures made to privately owned facilities. Thus the motivation for this study.

OBJECTIVES: Aimed to examine health facility-related determinants of choice for public health facilities relative to private health facilities in Uganda. Specifically, we examine how facility-based factors such as; inpatients beds, laboratory, cost of treatment, availability of medicine, electricity, staff meals, determine choice of health care provider.

METHODS: We borrow the WHO Health financing conceptual framework which identifies key functions of efficient health systems like; resource mobilization, financing and investment for better health services. A Univariate logistic regression was applied. Community level data was extracted from the recent wave of Uganda National Panel Survey in 2016. Choice of facility (Public or Private) was the binary outcome variable while inpatient beds, functioning laboratory,

cost of treatment, electricity were key explanatory variables controlling for other covariates like; availability of medicine, waiting time.

RESULTS: The study included 300 eligible community level respondents. Private facilities out performed public facilities with (29%, 29% & 88%) providing staff meals, having long waiting time and a functioning laboratory compared to (2%, 50% & 68%) of public facilities respectively. More private facilities (53%) were reported expensive compared to a mere 4% of public facilities. Odds ratio for availability of inpatient beds (1.407) and expensive treatment (0.008) were statistically significant with $P<0.05$ and $P<0.01$ respectively. The likelihood of choosing a public facility reduces with increase in the cost of treatment and increases with availability of more medical equipment such as inpatient beds.

CONCLUSION: We conclude that people may not use public facility if they perceive it as expensive. The bivariate analysis indicates better quality in private health facility relative to public facilities in terms of; waiting time, availability of drugs & supplies, functioning laboratory. This implies that high household OOP expenditure in Uganda may be due to individual preference to pay more in private health facilities expecting better quality of service. Thus, more efforts towards improving quality in public health facilities form an integral part towards achieving equitable PHC for all and consequently UHC.

Patterns of incentives for frontline health workers at primary healthcare (PHC) level in Nigeria: implications for health workers' performance.

Ekechi Okereke[1], Bello Mohammed[2], Akinwumi Akinola[1], George Eluwa[1]
[1]Population Council Nigeria, [2]World Health Organization Nigeria

Background A properly motivated health workforce is a prerequisite for effective maternal, newborn and child health (MNCH) service delivery, but frontline health workers (FLHWs) may be reluctant to work in rural primary healthcare settings. Factors that influence the motivation and retention of healthcare workers in developing countries have not been exhaustively researched but providing incentives to FLHWs could be a viable policy option to improve the motivation, retention and performance of health workers, especially in rural settings.

Aim: This study explored patterns of incentives received by FLHWs in rural communities and its implications for job performance at primary healthcare level in Nigeria.

Methods The study adopted a cross-sectional quantitative design in two States in Nigeria. Structured interviews were conducted with 114 FLHWs using Personal Digital Assistants. Data analysis was done using SPSS software. Descriptive analysis was carried out using percentage frequency distribution tables. Bivariate analysis explored relationships between the level of satisfaction with incentives received by FLHWs and their performance within primary healthcare rural settings. Multivariate regression analysis was done to ascertain the extent of the relationship between satisfaction of frontline health workers with the incentives which they receive and their performance.

Key Findings Results show that half (51.8%) of FLHWs received incentives for their work. The State government provided the least (11.7%) incentives while host communities and 'not-for-profit organizations' provided 26.7% and 18.3% of incentives respectively. Money-for-referral (3.3%) was the least utilized incentive while payment of rural posting allowance (66.1%) was the most utilized form of incentive. Bivariate analysis shows a statistically significant relationship ($p = 0.012$) between satisfaction with incentives received by FLHWs and their health care service delivery performance at primary healthcare level. Results from unadjusted regression indicates that health workers who were satisfied with incentives were 2.8 times more likely to perform

better than those who were unsatisfied with incentives received. (P=0.013, C.I= 1.3-6.3). When other predictors were controlled for within the multivariate regression model, those who received incentives and were satisfied with the incentives were 3.3 times more likely to perform better than those who were unsatisfied (P=0.009, C.I =1.3 -8.2).

Main Conclusions Governments at all levels should provide incentives to frontline health workers working in rural communities to improve job satisfaction and performance. Structured performance-based incentive mechanisms are highly recommended at primary healthcare level which should lead to better maternal, newborn and child health outcomes especially across the developing world, including within sub-Saharan Africa.

Factors enabling and disenabling the services provided by community health workers: Case study of two health districts in South Africa

**Hlologelo Malatji, *Jane Goudge, **Julia De Kadt: Centre for Health Policy, School of Public Health, University of the Witwatersrand, Gauteng City Region Observatory*

Background As part of strengthening primary health care, the South African government has introduced ward-based outreach teams to work in under-served communities. In these communities, community health workers (CHWs) give health talks and refer health cases to primary health facilities for care. However, available literature highlight poor supervision, shortage of equipments and limited community link as some of the challenges confronting this cadre of workers in the communities.

As the SA has started implementing the NHI, these challenges need to be corrected because CHWs form part of the workforce that will continue to link needy people to health care under the NHI.

Aim This study aimed to explore the experiences, successes and challenges of community health workers in two health districts in South Africa in the context of the NHI.

Methods We employed qualitative approaches to recruit and interview study participants who comprised of, facility managers, CHWs and their team leaders and community leaders were interviewed to gather insights of experiences, successes and challenges that they encounter in providing primary health care services at community level.

Findings and conclusions CHWs serve as the main link between vulnerable members of society and the health care system. Despite this, we found out that CHWs face a number of challenges including lack of working tools, insufficient supervision and non-integration of their services to the health care system. This limited the efforts they put in place to help those suffering at the community.

We argue that integration of CHWs into the main health care system through provision of necessary tools and appreciation of their work will not only boost their morale in serving the community but improve the access to care for the vulnerable.

Key words: community health workers, primary health care services, experiences, challenges

Going operational with health systems governance: supervision and incentives to health workers for higher quality health care in public health facilities in Tanzania

Igor Francetic, PhD student in Epidemiology and Public Health, Swiss TPH (Basel, Switzerland)

Background Health systems governance is increasingly high in the global health agenda. However, most analyses focus on conceptual frameworks rather than operational aspects and impacts on health service delivery. Three notable health systems governance interventions are top-down supervision, bottom-up community supervision and incentive policies for health workers. Some evidence is available about the individual effectiveness of these tools towards higher quality of healthcare in Tanzania. Yet, little is known about their combined impact as policy tools available to local government authorities. This study analyzed quantitatively the joint effect of top-down and bottom-up supervision as well as incentive policies on proxies of quality of care.

Methods The study employed multilevel logistic regression techniques on a dataset from the Demographic Health Survey (DHS), the 2014/15 wave of the Service Provision Assessment (SPA) survey, focusing on a representative sample of Tanzanian health facilities. The data included process of care measures from patient visit observations and exit interviews, infrastructural and managerial data related to the health facility from an inventory survey as well as specific information about healthcare providers from health workers interviews. From the available dataset we obtained proxy indicators for quality of care, intensity of supervision and incentives available to health workers. The proxy measures of quality of care are compliance to Integrated Management of Childhood Illness (IMCI) guidelines on the one hand, and patient satisfaction on the other hand.

Results and discussion Three main results emerge from the study, contributing to fill the evidence gap and better address policies focused on improving the productivity of medical staff and consequently patients' satisfaction. First, top-down supervision is not associated with increased quality of care. The existing supervision arrangements may be suboptimal, with low supervision intensity and/or lack of constructive feedback from supervisors. Second, bottom-up supervision that engages the community favors higher patient satisfaction. The community may be more aware of the effort put in place by health workers in their daily activities. At the same time, health personnel address better the needs of the community, with direct returns in terms of satisfaction even without quality improvements. Third, the provision of subsidized housing to health workers is associated with both higher healthcare quality and higher patient satisfaction. Moving away from their hometowns to address shortage of human resources in other parts of the country and with modest salaries, living arrangements seem to be an important motivational factor for Tanzanian health workers.

Parallel Session 8-5 Access to health care services

Analysis of the determinants of health care demand choice in Ivory Coast

Dr Romuald GUEDE [(1)]; Pr Auguste K. KOUAKOU [(2)]; Dr Appolinaire YAPI [(3)]
[(1)] University of Jean Lorougnon Guede (Daloa, Ivory Coast)
[(2)] University of Jean Lorougnon Guede (UJLoG-Daloa)
[(3)] National Institute of Public Health - Abidjan

Introduction: At the end of the military-political crisis in 2011, Ivory Coast gave priority to the health sector to care for the most vulnerable. However, despite the efforts made, many challenges to access care exist, particularly in health facilities (RASS 2016). The geographical and

financial accessibility of poor populations is a major concern. This study aims to investigate, based on individual data, the factors that explain the demand for care in Côte d'Ivoire.

Variables and methodologies: In the literature, variables are likely to influence the use of care:

- **socio-economic variables:** income, health insurance policy;
- **socio-demographic variables:** level of education, age, sex, place of residence, household size;
- **cost variables**: benefit costs, drugs, transportation, hospitalizations;
- **accessibility variables:** geographical accessibility, regularity of access to a health worker.

A Logit-binary is used on data from the Household Standard of Living Survey (ENV 2015) conducted by the National Statistics Institute (INS) and we retain 1108 observations (455 men and 653 women).

Results: The use of care is significantly influenced by the following factors:

→ Remoteness explains 10.08% of the formal use of care;
→ The lack of health personnel influences for 8.00%;
→ Care costs are important factors representing a weight of 47.43%;
→ By gender, 59.38% of men use traditional medicine and 40.63% of women use it;
→ The decision to use modern medicine increases with the level of education;

Conclusion: It seems obvious, through this research, that efforts must focus both on improving the demand for care and the supply in Ivory Coast for a better match. Strategies must therefore focus on proximity, cost reduction or financing, gender and a greater formalization of traditional medicine, which remains predominant.

Keywords: determinants, choice, care, health

Factors affecting access to healthcare and efforts/challenges in securing PHC in Malawi

George Jobe, Executive Director, Malawi Health Equity Network (MHEN);

Background: Malawi has a three tier health system namely primary health care (e.g. health centres), secondary (district hospitals) and tertiary (e.g. central hospitals). Access to health care by some Malawians is a challenge although Malawi is a signatory to the Abuja Declaration[9]. Malawi fails to fulfil the benchmark thereby affecting communities' full enjoyment of primary health care (PHC). Inefficiencies also negatively affect the accessibility. Some efforts are employed to improve the situation though.

Aims: To establish effects of inadequate health financing on access and PHC.

Objectives of the research,

- To establish how Malawi is complying with health financing benchmarks
- To create the relationship between budget allocations and PHC

The methods used,

- Desk research
- Budget analysis
- Structured interviews

[9] The Abuja Declaration says 15% of national budgets should be allocated to heatlh.

- Projects' reports and interventions

The key findings: Malawi's past three years health budget allocations have been lower that the 15% Abuja benchmark. Health has always been third in rank after Agriculture and Education (See Table). This has caused such challenges as: inadequate health workers, health facilities and equipment, and shortage of some essential drugs and ambulances. Another challenge is leakages caused by theft of drug and medical supplies, and other forms of abuse (Interviews and Media Reports). These challenges affect health access through both inadequate infrastructure or facilities' failure to provide services. Some patients walk more than 15 kilometres to reach facilities despite Government's 8 Km radius policy. Sometimes patients are told to buy medicines because of inavailability. These affect provision of required PCH.

The problem addressed by: signing of Service Level Agreements between Ministry of Health and Christian Health Association of Malawi on maternal and neonatal health only; assigning multiple tasks to Health Surveillance Assistants (HSAs) at community level; and Chipatala Cha Pa Foni (Health Consultation Through Mobile Phone). MHEN establishes Mother Care Groups who join HSAs to sensitize communities on vaccines uptake.

The main conclusion(s): Access to health care is affected by factors such as effects of inadequate financing and leakages such as drug pilferage. Inaccessibility denies citizens PCH.

Quality improvement in community health in Kenya: estimating outcomes for investment decisions

Meghan Bruce Kumar, Liverpool School of Tropical Medicine
Jason Madan (Warwick University), Lilian Otiso (LVCT Health), Miriam Taegtmeyer (Liverpool School of Tropical Medicine)

Financial Year	Percentage of National Budget	Rank of Health
2016/2017	10	Third
2017/2018	9.9	Third
2018/2019	9.9	Third

Source: MHEN Budget Analysis reports

Background: Health systems strengthening (HSS) interventions are difficult to link directly to the type of clinical outcome measures traditionally used in cost-effectiveness analyses. Quality improvement is an example of an HSS intervention that requires economic evaluation to guide investment decisions around universal health coverage (UHC) by African governments and funders working in the region. Specifically targeted at the community level, where providers' work is primarily in preventive care and referral rather than treatment, links to these outcome measures are more long-term, more distal and more difficult to attribute. In this paper, we are applying novel methods to estimate the potential benefits of investing in quality improvement in community health systems to ensure high quality UHC.

Aim/Objective: The objective of the paper is to evaluate the cost-effectiveness of quality improvement for community health in Kenya.

Data and methods: We selected antenatal care (ANC) and testing (for anemia, syphilis, HIV and malaria) conducted in the first ANC visit as a tracer condition that might be identified and referred by community health providers in the selected setting in Kenya. We developed patient pathways for care-seeking and treatment using decision trees. At each decision node in the patient pathway, we identified probabilities of various possible outcomes through literature search and expert opinion from clinical providers in study sites in Kenya.

Next, we identified the probabilities most likely to vary in response to a change (quality improvement) in community health provider behavior based on a system map we developed.

Using primary costing data from the intervention, we determined the magnitude of change in intermediate, proximal outcomes of the intervention in the patient pathways required to yield a cost-effectiveness ratio below the selected thresholds.

Key findings: We show three key findings (analysis in progress):

1. ANC patient pathway including pre-/post-intervention probabilities
2. System map identifying potential impact and feedback loops from quality improvement intervention
3. Table of results on cost-effectiveness including sensitivity analysis on outcome measures

Conclusions: These results should be discussed with policymakers and funders as a potential alternative to traditional cost-effectiveness analyses. This type of evidence, coupled with budget impact analyses, might be more useful than incremental cost-effectiveness ratios to guide decisions about investment in UHC and HSS in general.

The Effects of Health Care Access on Child Nutritional Status in Kenya

Cornelius Kiptoo, Pharmaccess Foundation, 52 El Molo Court, Off Naushad Merali Drive, Lavington, Nairobi

Background: One third of Kenyan children suffers from stunted growth and about 2.1 million children under the age of five years are malnourished. Despite interventions put in place to address poor child health indicators, nearly 45% of the under-five's deaths occur due to poor nutrition. Child health depends on access to health care services such as immunization, proper nutrition and quality management of childhood illnesses. However, little is known on the significance of these variations on the utilization and impacts on the ultimate health status of the children and hence the basis for this study.

Aim: To explore the effect of healthcare access on child nutritional status in Kenya.

Method: This study utilizes a cross sectional Kenya Demographic Health Survey of 2014. We employed binary probit model to estimate the probability of a child being stunted. Access to care was the outcome variable and was measured using distance as being near or far from health facility. Nutritional status was the dependent variable and was measured using height for age z scores. Confounding variables were maternal factors such as age of the mother, education, breastfeeding, place of residence, and regions. We controlled for sample design, and heterogeneity from unobserved characteristics correlated with stunting.

Results: Access to child health significantly influences the probability of a child being stunted in Kenya. Older women and secondary education were found to reduce stunting. On the other hand, being married, breastfeeding, and living in urban area were associated with increased stunting. In terms of regions, the coast, north eastern, eastern, and Nyanza lowered the probability of a child being stunted.

Conclusion: More efforts are required to enhance prioritization of policy formulation for better child nutritional outcomes. This includes the need for government intervention to address distance barriers of access to essential health care hence achievement of Sustainable development goal number 2.2 and enhance primary healthcare. Both regional and specific county health policies should be designed in the respective and significant regions that is geared towards integrated people-centered care systems. Overall, the government needs to address barriers in healthcare access for its citizens either financial or distance in order to achieve universal health coverage.

Key words: stunting, child health, access

Pathways to care for patients with Type 2 Diabetes, HIV/AIDS and other chronic comorbidities in Soweto: A Health System's Perspective

Edna Bosire[1,2], Shane N Norris[1], Jane Goudge[2], Emily Mendenhall[1,3]
[1]MRC/Wits Developmental Pathways for Health Research Unit (DPHRU), School of Clinical Medicine, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa
[2]Centre for Health Policy, School of Public Health, Faculty of Health Sciences, University of the Witwatersrand, Johannesburg, South Africa
[3]Science, Technology, and International Affairs Program, Walsh School of Foreign Service, Georgetown University, Washington, DC, USA

Background: South Africa has a high burden of colliding epidemics of HIV, tuberculosis (TB), Type 2 diabetes (T2DM), and/or hypertension (HT), and in many cases patients have more than one of these conditions. The National Department of Health (NDoH) in South Africa initiated the Integrated Chronic Disease Management (ICDM) model to respond to this high disease burden, which integrates the HIV platform with other chronic conditions. However, the model has not been implemented in most clinics. Instead, a multiple level system requires patients to seek care from primary health center in their community and specialty medical care at hospitals upon referral.

Objective: This research project investigates the trajectory and pathways to patient care from primary health care (PHC) to a tertiary hospital in a low-income neighborhood in urban South Africa through ethnographic research methods. The project focuses on patient and provider experiences and perspectives of how the healthcare system functions to care for patients with comorbid T2DM and HIV.

Methods: We employed ethnographic and survey methods. The first author observed the working of primary health care clinics and specialty clinics in the tertiary hospital. This also involved lengthy interviews with actors within the health system -administrators and health care providers (from different disciplines, N=30) and patients (N=50). Field notes from clinical observations and qualitative interviews were transcribed and analyzed verbatim with the aid of QSR NVivo 12 software.

Results: We found that patients with comorbid T2DM and HIV attend multiple, different clinics for care, which is disease specific. Despite legislation that promotes integrated care, we found limited collaboration across different levels of care. Gaps identified were at the referral system, non-unified/centralized records, poor communication between providers, non-involvement of patients and their families in decision making, and overburdening workload in part due to staff shortage.

Conclusion: PHC facilities in urban South Africa have not benefited from the ICDM model and this has produced an overburdening of public hospitals. Limited collaboration between healthcare providers across different levels of care as well as lack of coordination between providers, patients and their families necessitate the need to strengthen the health system in order to address the existing gaps. Without putting people first, integrated and collaborated healthcare would still face challenges because no established direct relationship between individuals, families and health care providers exists.

Factors Inhibiting Effective Utilisation of Primary Health Care Services in Eredo Local Council Development Area of Lagos, Nigeria

Olusoga Shittu, West Africa: Police Academy, Wudil, Kano – Nigeria

The objective of primary health care (PHC) services is provision of accessible and affordable health for all by the year 2000 and beyond. In Nigeria, there are some factors that inhibit the optimal utilisation of PHC services vis-à-vis educational, religious, socio-cultural and financial. This paper examines factors inhibiting the effective utilization, under-utilisation and non-utilisation of primary health care (PHC) services usage among the residents of Eredo Local Council Development Area of Lagos, Nigeria. Being an exploratory study, a qualitative methodology was adopted wherein data were collected primarily from the respondents with the aid of In-depth Interview (IDI). Multi-stage sampling techniques were used to select the respondents for the study. 20 respondents from each of the 6 PHC centers comprising of Odomola, Eredo, Ilara, Ibonwon, Igbonla and Mojoda were systematically selected using the clinic register while the health personnels ranging from Medical officer of health (MOH), Chief Apex Nurse and Officer in charge (OIH) were purposively selected and interviewed. The study finds out that inadequate PHC centers, lack of proper referral system, corruption among health care personnel, inadequate Doctors Patients Ratio (DPR), inadequate funding among others have been identified as some of the factors inhibiting the proper utilisation of these PHC centers. The study concluded that for PHC services to be effective and imbibed there should be a participatory approach between the government and the community stakeholders as health problems should be properly defined, planned, implemented and properly evaluated in order to achieve its stated objectives.

Keywords: Community, healthcare, utilisation, primary health care, strategies.

Determinants of access to Ivorian public hospitals: An analysis by the counting model.

Amamy Elysée ETIEN, Félix Houphouët-Boigny University

Context: Access to care is critical in assessing the quality of health care systems. Among the factors of poor quality of care related to access, we can count the death, disability or renunciation of long-term care of patients. In Côte d'Ivoire, accessibility to care is made difficult because of many barriers. The 2015 Household Living Standards Survey (ENV-2015) notes that 52% of households have to travel at least 5 kilometers to receive modern health care. The length of the journey, the state of the road and the monetary costs of transportation and medical diagnosis discourage patients. The situation becomes more critical when one looks at the conditions of access of general hospitals and regional hospitals. However, reports on the health situation of the Ministry of Health show that their activity is mainly focused on primary health care (40% in general medical consultations and 28% in pediatric and gynecological obstetric consultations).

Goals and objectives: This study aims to identify the determinants of the use of health care in Ivorian public hospitals. More specifically, it is a question of determining the socio-economic and health factors likely to increase the number of consultations in these hospitals.

Methods used: Using a sample of 4,308 individuals who reported having used care in a modern health center in the 4 weeks prior to 2015, we established the frequency of use of public hospitals. Therefore, we used the negative zero-inflation binomial model to estimate the coefficients of the factors that could increase the number of patient consultations in hospitals.

Key Findings: The consultation fee, prescription and transportation fees positively influence the number of consultations in public hospitals. Compared to men, women are more likely to use care in the hospital system.

Key findings: The results show that economic factors are not a reason for giving up care in public hospitals in Côte d'Ivoire. We recommend that Ivorian decision-makers in the health sector integrate hospitals into the primary health care extension strategy as part of universal health coverage.

Keywords: Accessibility, Ivory Coast, Hospital, Counting model.

Obstacles and factors facilitating access to sexual and reproductive health (SRH) services for young people living with disabilities (YLD) in Senegal

Fatou Kebe, Eva Burke, Alex Le May _ Dakar GRESAFRIC

Background: Recent initiatives have sought after prioritising young people in sexual and reproductive health (SRH) policies and conventions in Senegal. Commitments have been made to defend the health rights of people living with disabilities (Article 17 of the Constitution). However, research on the use of SRH services among young people with disabilities (YLD) is negligible. Our study explored SRG's priorities for YLD, key vulnerabilities and access to services including preferences and barriers to accessing these services.

Methods: 17 focus groups and 50 individual interviews were conducted with YLDs having reduced mobility or with visual or hearing disabilities aged 18 to 24 in Dakar, and Kaolack, and Thiés. A peer approach was used for data collection and analysis.

Results: There was a low awareness and use of SRH services among YLDs. They were dependent on SRH services for access, which hinders confidentiality. The use of contraceptive methods was relatively limited to condoms. Multiple cases of rape have been reported among women having hearing disabilities. The main barriers to SRH services for YLD were financial barriers, health agent /parent attitudes and accessibility (related to their disability). The study found little or no use of existing and specific SRH strategies for young people in Senegal. In addition, no mention was made of access to the new initiative on free health services for people with disabilities (equal opportunity card).

Conclusions: Age and disability are constraints for YLD to access SRH services. YLD women are more confronted with constraints, in connection with social norms (preservation of virginity until marriage). Interventions to increase access to services must consider disability-specific barriers and gender norms. The recent national initiative to introduce free care for people with disabilities must be accessible/ appropriate for YLD but should also be subsidized at the private level. Further research on people living with disabilities is needed to explore the load of sexual violence, the role of health agents in supporting rape cases, the determinants whether YLD uses contraceptive methods.

Towards Effective Implementation of Maternal and Child Health Programmes in Nigeria: Lessons for Policy Makers

Chinyere .C. Okeke[1], BSC Uzochukwu[1,2], Ifeyinwa Arize[1], Obinna Onwujekwe[1]
[1]Health Policy Research Group, Department of Pharmacology and Therapeutics, College of Medicine, University of Nigeria Enugu-Campus, Enugu, Nigeria.
[2]Department of Community Medicine, College of Medicine, University of Nigeria Enugu-Campus, Enugu, Nigeria.

Background: The distressing maternal and neonatal health indicators in Nigeria are not improving despite various interventions. Though progress was initially recorded in reducing

maternal deaths, the number of women who die in pregnancy or from complications associated with childbirth remains significantly high in Nigeria. It has increased from 576 per 100,000 in 2013 to 814 per 100,000 in 2018.

Development partners have in many cases shut down or scaled back operations and public health experts fear that this will attenuate the health gains of the last decade as already presenting. Limited improvement in health may also be partly explained by late offset, lack of sustenance, disjointed design and non-scaling up of implementation of interventions targeting maternal and child health (MNCH).

Currently, policy recommendations which favour MNCH interventions should be designed and implemented to address fundamental etiological factors of the mother and child through a comprehensive and continuum of care approach. In a resource constrained setting, interventions should be designed to ensure efficiency and cost-effectiveness.

Aims and Objectives: This study aimed to examine the past experiences of MNCH programmes, with a view to identifying the enabling and constraining factors for implementation and effectiveness, and the opportunities for adaptation and programme scale-up in Nigeria.

Methods: An exploratory, descriptive qualitative study using multiple case study design was used for the study at the national and state levels in Nigeria. Data was collected through document review, in-depth interviews and focused group discussions and analysed using manual content analysis.

Key Findings: The study revealed a lack of coordination of policies and interventions either as source of evidence for initiating intervention or its evaluation. Furthermore, the scale and duration of many of the interventions was insufficient to have demonstrable impact on MNCH outcomes. A number of interventions were implemented as pilots or within the framework of vertical programmes thereby raising concerns for scaling-up for wider coverage, integration into the health system and sustainability. Hesitation and delays by the sub-national levels to pay their counterpart funds in carrying out national programmes and much dependence on external donors affects the ownership, implementation and sustainability of such programmes, which usually has a bearing in the PHC functionality in Nigeria.

Conclusion: This study provides important lessons for policy makers to set evidence based agendas for understanding MNCH problems and institution of relevant interventions. Early engagement of all tiers of government in national activities is key to proper implementation of programmes.

Parallel Session 8-6 Hospital management and financing

Hospital efficiency in healthcare use: A case study of Rwanda

BIRINDABAGABO Pascal, Ministry of Health
ATAGUBA John, University of Cape Town

Background: Efficiency and Equity are the key objectives of health system that deemed to be resilient to ensure the move toward universal health coverage, importantly in the SDG's era. However, evidence show that hospitals in developing countries remain inefficient in term of

using the scarce resources and yet, they consume the greatest share of funds devoted to any health care system globally, hence the failure of providing healthcare services needed to everyone mostly the poorest one. This study aims to assess the relative efficiency of district hospital and equity in health care use in Rwanda.

Methods: Data Envelopment Analysis and concentration curves were used in this study to measure hospital efficiency and equity in the use of health care in Rwanda.

Results: The results from this study revealed that the mean technical efficiency of Rwandan district hospital was 94.5%. And only 60% of district hospitals are relatively technical efficient. Therefore, almost 40% of district hospitals are wasting their inputs compared to the best performer district hospitals of all inputs used at district hospital levels as considered in this study are being wasted.

In term of equity in use, the concentration curves revealed that the use of most malaria services were pro rich unless the inpatient services which was more concentrated in the poor district while the most of the services related to all the diseases are concentrated in the well-off and all the use of related services were pro rich only inpatient related to malaria was pro poor and assisted delivery which was somewhat equitable in all districts.

Conclusion: This study has demonstrated that there are inefficiencies in the use of inputs in district hospitals while a certain level of equity in using healthcare services in Rwanda Healthcare delivery system. It also finds some pattern between district hospital efficiency performance and the use of some services. It is then argued that more effort in term of mentorship should put in the district with inefficient hospitals while for improving the equity in use of health care, services should be decentralized to allow access but also health care resource allocation should be based available data in Health Information Management System. This will enable to allocate existing resource in health sector according to existing need. Future studies should look at the causes of district hospital inefficiency or investigate inequality in use of malaria and maternal health as well as their determinant factors.

Relationship between organisational justice and work-related behaviour of health professionals: evidence from public hospitals in South-east Nigeria.

Ghasi Nwanneka[1], Onodugo Vincent[1] and Ogbuabor Daniel[2]
[1]Department of Management, Faculty of Business Administration, University of Nigeria Enugu Camus, Enugu, Nigeria.
[2]Institute of Public Health, College of Medicine, University of Nigeria Enugu Campus, Enugu, Nigeria.

Background: There is gap in knowledge about how employee-centred human resources practices influence the work-related attitudes and behaviours of health professionals in low and middle-income countries.

Aims and objectives: The aim of this study was therefore to investigate the effect of organisational justice on task performance (TP) and counterproductive work behaviour (CWB) among health workers in public hospitals in South-east Nigeria.

Methods: A cross-sectional questionnaire survey which involved 370 health professionals comprising 84 doctors, 186 nurses and 100 allied health professionals (AHPs) selected from 5 public tertiary hospitals in South-east Nigeria using multi-stage sampling technique was conducted between January and April 2018. Mean score differences were tested using student t-test and analysis of variance (ANOVA). Multivariate analysis was used to test prediction models for work-related behaviours. Statistical significance was set $\rho < 0.05$.

Results: The results showed that, overall, the mean score of organisational justice was 3.05 (0.96). Mean (SD) scores for distributive justice, procedural justice and interactional justice were 2.70(0.94), 3.17(0.91) and 3.09(1.03) respectively. There were significant mean scores differences in perception of organisational justice, TP and CWB among different categories of health professionals. Overall, TP was predicted by education (β = 0.216, ρ <0.05), tenure (β = -0.103, ρ<0.05) and CWB (β =-0.141, ρ<0.05). Marital status (β = -0.311, ρ <0.05), distributive justice (β = -0.166, ρ <0.05) and task performance (β =-0.185, ρ <0.05) predicted CWB. Within the sub-groups, TP among doctors was predicted by gender, marital status, and procedural justice. Tenure predicted TP for nurses only. Among AHPs, only hospital predicted task performance. Age singularly predicted counterproductive work behaviour among doctors (β = -0.216, ρ <0.05). Among nurses, marital status (β = -0.400, ρ < 0.05), distributional justice (β = -0.624, ρ <0.05), interactional justice (β = -0.496, ρ < 0.05) and overall organisational justice (β = 0.763, ρ<0.05) predicted counterproductive work behaviour. Hospital location singularly predicted counterproductive work behaviour among AHPs (β = 0.180, ρ<0.05).

Conclusions: We conclude that CWB mediated the effect of organisational justice on task performance of health professionals in Nigerian public hospitals. Whereas procedural justice was important among doctors, distributional and interactive justice was significant to nurses. Optimizing performance of health professional would require attention to these peculiarities and context-specific differences in demographic and workplace characteristics.

Secondary hospital efficiency analysis in Ethiopia: Technical and scale efficiency applying data envelopment analysis method

Elias Asfaw Zegeye[1] and Ermias Dessie[2]
[1] University of California Davis (MINIMOD Project) & The Children Investment Fund Foundation (SURE Program), Addis Ababa, Ethiopia,
[2] Federal Ministry of Health, Health Economics and Financing Analysis Team, Addis Ababa, Ethiopia

Background: Ethiopia has able to effectively achieve better health gains for the population with a broader vision of seeing health, productive and prosperous citizens. Understanding its relevance efficiency, effectiveness and evidence based decision making are taking the priority objective in the five year strategic objectives of the health sector (FMOH, 2015). The efficiency analysis would be expected to be enhanced across different health tiers: primary, secondary and tertiary level.

Objective: This efficiency analysis aims to generate technical and scale efficiency of secondary level hospitals in Ethiopia and assess the possible inputs saving for these inefficiencies.

Methods: The costing study was retrospective, facility-based and employed cost accounting techniques to identify and measure the costs incurred in delivery health services at the facility-level. A nationally representative sample of 12 hospitals at the secondary care level was included for the costing analysis. The efficiency analysis computed to the relationship of hospital inputs (human resources, drugs and medical supplies, depreciated equipment and indirect cost at the 2017 costing base year) and outputs measured in the outpatient equivalent visits. Data envelopment analysis (DEA) non-parameter technique was applied to analysis total hospital efficiency and department-level efficiency.

Findings: Human resources and medical supplies accounts for more than 50% of the cost across the surveyed secondary hospitals. Of the twelve surveyed secondary hospitals, two hospitals (Bishoftu and Kemise) were technically efficient while the remaining ten hospitals were technically inefficient in 2016/17. The overall average technical efficiency score among the inefficient hospitals is 66%. On average the secondary hospitals could reduce their inputs by 34% without reducing the current output level. Through reducing the inputs, there is a potential to

save a total of 192.5 million birr (without any reduction in outputs). The average scale efficiency score among inefficient hospitals is 15%, inferring a potential to increase total outputs by 85% within the existing capacity and size.

Conclusions: The majority of secondary hospitals were inefficient and a significant amount of inputs resources could be potentially reduced. There exist a huge potential to increase outputs (almost by 85%) with the current existing capacity and size. But this probably depends on other factors such as: increasing service acceptability, quality and awareness creation.

The determinants of healthcare quality among the private and public hospitals in Ibadan Metropolis, Nigeria.

Bosede Olanike AWOYEMI (PhD)[1] , Professor Olanrewaju OLANIYAN[2]
[1]Department of Economics, Afe Babalola University Ado-Ekiti, Ekiti State, Nigeria.
[2]Department of Economics, University of Ibadan, Ibadan, Nigeria.

Healthcare quality assessment among hospitals incentivize the performance of the healthcare system and gives room for improvement. Quality of healthcare differs across hospitals, some hospitals in order to increase their market share of patients, provide higher quality of healthcare. In Nigeria there are few numbers of public hospitals compare to private and the presumably few existing public hospitals are confronted with unique challenges of inadequate funding and lack of proper supervision, which threaten their existence. These situations have made the private hospitals unavoidable choice of many patients. However, it is noted that too little regulation is being enforced to ensure that minimum quality standards are met among the private hospitals. Therefore, this study examined the factors that influence the quality of healthcare among the private and public hospitals in Ibadan metropolis.

To measure the quality of healthcare, input and patient quality experience indicators were used. Six (6) different hospital inputs were employed and the patient quality experience indicator was presented as an index of the patient's level of satisfaction with hospital quality delivery. Given the continuous nature of the dependent variables, Ordinary Least Square (OLS) was used to identify factors that influence healthcare quality among hospitals, while descriptive statistics was used to describe different attributes of private and public hospitals. Data were drawn from 127 hospitals and 761 patients that attended these hospitals In Ibadan.

The results of the study show that on the average, patient quality indicator for private hospitals is 0.81 which indicates a higher level of satisfaction than in the public hospitals. The average healthcare price paid by patients and quarterly visit by regulatory agencies, motivate private hospitals to increase quality of healthcare, while regulation on human resources and patient volume motivate public hospitals to produce higher quality of healthcare. Thus, healthcare reforms that will ensure strict compliance with the hospital establishment procedures and minimize negligence among hospitals is recommended.

Keywords: Hospital, Healthcare quality, Patients, Ibadan

Productive efficiency of the Ivorian hospital system: an analysis by the DEA-Malmquist

Amany Elysée ETIEN, Abidjan, université Félix Houphouet-Boigny

Context: Since the Harare conference, health care delivery systems in African countries have been pyramid-shaped at three levels. The Ivorian hospital system is characterized by an increasing evolution over the years of the number of level 2 health centres in the health

pyramid. However, hospital activity is declining in favour of first contact health establishments (level 1).

Aims and objectives: In response to this alarming situation, this study aims to explain the loss of attractiveness of general hospitals and regional hospitals. In other words, the aim is to assess the productive efficiency of these hospitals and to determine the sources of factor productivity.

Methodologies: Using data from the Ministry of Health and Public Hygiene's health statistics yearbooks (2012; 2013 and 2015), the Data Wrapping Method (DEA) is used to calculate technical efficiency scores and the Malmquist Index for factor productivity analysis.

Key findings: Under the assumptions of variable scale returns and output orientation, the results show that the average technical efficiency score is 0.798 over the three years of study. Hospitals are therefore technically inefficient. The average score of the regional hospitals is the highest. And on the other hand, Malmquist's productivity index averaged 1,053 over the study period. Thus, the reference hospitals have generally improved the total productivity of their production factors by 5.3%. This improvement is explained more by the change in efficiency than by technological change.

Main conclusions: Based on the above results, actions such as training hospital managers in managerial techniques, motivating health human resources and strengthening the technical platform will contribute to improving the quality of the Ivorian hospital system.

Keywords: Ivory Coast, Technical efficiency, Hospital, Productivity.

Attributable Cost and Extra Length of Stay of Surgical Site Infection at a Ghanaian Teaching Hospital

Ama Fenny, Legon University of Ghana

Background: Limited information is available on the financial impact of surgical site infections (SSI) in Ghana. To calculate the cost of SSIs in a surgical department, a prospective case-control study was undertaken at the Korle Bu Teaching Hospital (KBTH) in Ghana.

Methods: We studied 446 adults undergoing surgery from the surgical department. In all, 41 patients with SSI and 41 control patients without SSI were matched by type of surgery, wound class, ASA, sex and age. The direct and indirect costs to patients was obtained from patients and their carers on daily basis. The cost of drugs was confirmed with the pharmacy at the department.

Results: Prevalence rate for SSI was found to be 10.2% of the total 446 cases sampled between June and August 2017. On average patients with SSI who undertook appendix surgery paid approximately GHC1,210 ($256) more than those without SSI in the same category. The least difference was recorded amongst patients who had thyroid surgery, a difference of GHC62 ($13). The results show that for all surgical procedures, SSI patients report excess length of stay. The extra days range from 1 day for limb amputation to 16 extra days for rectal surgery. However, the regression estimation showed that ALOS is not significantly influenced by SSI status although ALOS partly account for variations in total cost borne by SSI and non-SSI patients.

Conclusions: In this study, patients with SSI experienced significant prolongation of hospitalisation and increased use of health care costs. In many cases, the indirect costs were much higher than direct costs. These findings support the need to implement preventative interventions for patients hospitalised for various surgical procedures at the Korle Bu Teaching Hospital.

Definition of Universal Health Coverage and Primary Health Care Practice at Kayes Hospital

Dr Makan SOUMARE, Kayes Hospital Pharmacist
Dr. Jonas KAMATE, hospital pharmacist of Kayes

The research is done to check the state of the services of the hospital of Kayes and it is half-yearly and it is a method of investigation of the heads of services of the hospital made by the medical commission of establishment.

The goal of Universal Health Coverage is to ensure that all individuals have access to the health services they need without incurring financial hardship.

Primary health care (PHC) is a health strategy strongly based on prevention and implemented through the community participation1 of the populations, to improve and mobilize at best the available local people and means, but also to promote the diffusion of knowledge and behaviors and attitudes of "prevention" within the community, or even neighboring communities, by spin-offs.

In the services that make up Kayes Hospital, there is a shortage of health staff or an insufficient care of patients, lack of access to care for the sick

On the other hand, a lack of necessary equipment and the unavailability of funds necessary for the financing of activities within the hospital, financial difficulties for health staff and patients

Overall, the failure to respect the means of financing and support by the government of our country.

Hence the need to draw the conclusion that universal health coverage is not applicable within the Kayes hospital, and at the same time primary health care is not essential in our country in Mali.

Key words: Health workers - care - sick

Parallel Session 8-7 National health Insurance

Examining the Extent of Balance billing in the Ghanaian National Health Insurance.

Eugenia Amporfu, Kwame Nkrumah University of Science and Technology

Background*:* The Ghanaian National Health Insurance Scheme (NHIS) was established in 2003 to relieve residents of the overburdened healthcare user fee, locally known as Cash and Carry, by offering social health insurance service. Since its establishment, the NHIS has provided financial protection to its members by offering healthcare in more than three thousand accredited health facilities. Under the NHIS, members make no co-payment for services covered implying that providers cannot charge beyond the fee paid by the National Health Insurance Authority (NHIA) for covered services, hence balance billing is illegal. Balance billing refers to a provider charging an insured patient above what he or she is obliged to pay and what the insurance is also obliged to pay. Since NHIS members are not supposed to make co-payment at the point of service, and the NHIS is supposed to pay the provider directly, any payment made by insured patients for

covered services is a form of balance billing. Even if consumers are balance billed, by a small percentage of the fee it could constitute catastrophic healthcare expenditure depending to consumers' ability to pay. There have been anecdotes of NHIS providers engaging in balance billing but no formal research has been done to examine it.

Objective*:* The purpose of this study is to verify the existence of balance billing, the extent to which it imposes catastrophic healthcare expenditure on members, and members' response to being balance billed.

Methods: the study used data were collected from Kumasi and Accra, the two largest cities in the country, with a sample size of 500 per city, 300 insured and 200 uninsured, using convenience sampling. Catastrophic expenditure was computed. In addition, regressions were run to examine the extent of balance billing and the response of the insured to being balance billed.

Results: The results showed that balance billing is practised extensively, more in Kumasi than Accra, causing catastrophic expenditure to the insured. Providers were not likely to admit to engaging in balance billing. The insured were mostly unaware that they were being balance billed. Those who knew were not likely to report to the NHIS.

Conclusion: Balance billing needs to be addressed if the NHIS is to be the channel to the achievement of universal health coverage.

An economic evaluation regarding the benefits package of Ghana's National Health Insurance Scheme

Heleen Vellekoop, Ministry of Health Ghana

Background: Ghana's National Health Insurance Scheme (NHIS) was initiated in 2003, with the aim of achieving Universal Health Coverage. However, NHIS performance has been challenged by financial sustainability issues. The NHIS has faced deficits since 2009. Healthcare providers receive reimbursements nine months late on average. A revision of the benefits package has been suggested as a mitigating measure and policy-makers are investigating the option of including only primary healthcare (PHC) interventions.

Objectives: We conducted an economic evaluation with the objective to give recommendations regarding the interventions to be included in a revised benefits package. A scenario analysis was performed to provide insights into the outcomes of various options for the benefits package, including the option of focusing on PHC.

Methods: 70 interventions were costed using local data sources. Data on the health benefit of each intervention (measured in Disability-Adjusted Life Years (DALYs) averted) was collected through a literature search. Subsequently, the **net** health benefit of each intervention (DALYs averted) was calculated and used to rank the interventions.

Six different benefits packages were designed, based on different policy aims. The expected total costs of the packages were kept within a budget drawn from 2017 expenditure on NHIS claims. For each package we reported: total cost; budget impact per disease area; total DALYs averted; total cases treated; and number of interventions included.

Findings: The most beneficial interventions were found to be in the areas of *malaria*, *maternal and neonatal care* and *reproductive health*, while interventions in the areas of *NCDs* and *neurological and psychological disorders* tend to be less beneficial.

We found that aiming to maximise DALYs averted in designing the benefits packages also achieves good results in other areas of interest. Focusing on including a high number of

interventions, as opposed to covering a larger proportion of the population, leads to low total health benefit and number of cases treated. Including all available PHC interventions in the benefits package is unlikely to be possible with the current NHIS budget. Introducing co-insurance appears a promising avenue to achieve good outcomes. However, further research is needed.

Key recommendations: We recommend for population coverage to be prioritised over intervention coverage. Emergency obstetric and neonatal care should be included in any PHC package, despite being higher-level care, as these interventions are highly beneficial. We also recommend increased efforts to build technical capacity in the field of health technology assessment to enable further research.

JISoGH A checklist for designing and developing contributory health insurance programs in Nigeria

Yewande Ogundeji, Kelechi Ohiri, Azara Agidani
Abuja Health Strategy and Delivery Foundation

There is widespread and growing interest in achieving universal health coverage across many low and middle-income countries by way of designing and implementing social health insurance (SHIS). SHIS recently gained traction in Nigeria through the National Health Act and many states are planning to design and implement SHIS. However, some states struggle with designing an optimal SHIS scheme, which is important because literature suggests that failures or success of SHIS are to a certain extent dependent on the design features. Therefore, it is crucial to examine the suitability and readiness before implementation of SHI in any given context.

In Nigeria, evidence regarding optimal design features of SHIS is sparse and there is lack of a simple and standardized checklist, which scheme designers, implementers, and researchers could use to assess readiness to implement SHIS or to guide and inform the design of SHIS.

This paper describes the development of a SHIS checklist and demonstrate that the newly developed checklist consisting of six design domains which can be used by scheme designers and policy makers, as a simple and effective tool to assess and inform SHIS design features across Nigeria to maximize the chances of the effectiveness of the schemes.

Delayed provider claims reimbursement challenges: a decade after the implementation of the National Health Insurance Scheme Policy in Ghana. Time to rethink.

Alexander Suuk Laar[1] Michael Asare[2], Philip Ayizem Dalinjong[3]
[1]University of Newcastle, School of Public and Medicine, Faculty of Health and Medicine, Australia.
[2]Holy Family Hospital, Nkawkaw, Eastern Region, Ghana
[3]Navrongo Health Research Centre, Post Office Box 114, Navrongo, Upper East Region, Ghana.

Background: To ensure that all people can access quality health services to protect them from public health risks and impoverishment due to illness, from out-of-pocket payments for health care, the government of Ghana implemented the Universal Health Coverage (UHC) under the National Health Insurance Scheme (NHIS) in 2005. However, over a decade of its implementation, reimbursement of claims to providers is threatening the trust and sustainability of the scheme.

Aim: To find innovative ways of addressing the current challenges, this study explored health professionals' views on key policy interventions.

Methods: A qualitative study comprising of 16 key informant interviews (KIIs) were conducted with

health professionals comprising of 4 hospital directors, 4 claims managers, 4 hospital administrators and 4 accountants in four districts in the Eastern region of Ghana. The participants were purposively selected from three public hospitals and one mission hospital. The data collection tool was in-depth interviews using open-ended interview guid**e.** Thematic framework was utilized for the analysis.

Results: The main findings of this study were: long delays of claims reimbursement to health facilities ranging from seven (7) to ten (10) months on the average. They also mentioned that the current phenomenon affects the quality of healthcare provided to clients since in some instances, clients are compelled to make co-payments or out-of-packet payments for health care. The participants attributed the current challenges of the scheme to inadequate funds, manual processing of claims and political interference in the activities of the scheme. To get rid of the current challenges bedevilling the scheme, participants suggested the need for the government to explore alternative and sustainable sources of funding by levying special taxes on mobile and money transfer and other profitable companies, allocation of a certain percentage of the oil revenue and raising of the Value Added Tax on healthcare to support the health budget. Computerization of the claims system and decoupling of politics from the schemes activities were also suggested.

Conclusion: The implication of delayed claims reimbursement and provision of health services draws critical issues on quality and equity of care. To address some of the issues identified in this study, the government, policy makers and implementers need to consider our recommendations to ensure the sustainability of the scheme.

Keywords: Universal Health Coverage, claims delays, claims reimbursement, Health facilities, Ghana.

Poster presentations

Poster Presentation 1

Analysis of factors associated with using health facility-based care for fever in children aged 0-5 years in Ivory Coast

YAPI Apollinaire[1]; ORSOT Tétchi[1,2]; Amed COULIBALY[1,2]; SABLE Parfait Stéphane[1,2]
[1]National Institute of Public Health - ABIDJAN
[2]University of Félix HOUPHOUET-BOIGNY

Introduction: The presence of fever in children is one of the main reasons for parents' consultations. The time between the onset of fever and the health consultation is sometimes long and exposes children to emergencies. Most often, parents use several types of consultations depending on their means. Some authors in the analysis of the different types of fever remedies have shown non-recommended practices in care. The objective of this work based on data from the Demographic and Health Survey (DHS) was to study the factors associated with health care use in health facilities for fever in children aged 0 to 5 years.

Methodologies: The data in this study are from the 2011-2012 DHS of Ivory Coast. Our Cross sector consisted of 1662 children who had a fever in the last two weeks before the survey. Data processing and analysis were done with Stata 15 software. The different steps of this analysis were a univariate analysis that allowed us to describe the main variables of the study. The bivariate analysis, the only one of which was $p<0.05$, allowed us to perform chi-square tests and the Cramer's V test to prepare the variables to be included in our logistic regression model.

Results: It was 1662 children who developed a fever during this period. Of these children, 38% received care in a health facility. About 68% of children from poor families did not receive care in a health facility. The wealth index was associated with use of care (Pearson chi2(4) = 141.0878, Pr = 0.000 and Cramer's V = 0.2914). The Cramer's V test between home environment and care use shows that 47% of children in the home environment received care in a health care facility (Pearson chi2(1) = 72.3671, Pr = 0.000 and Cramer's V = 0.2087). On the other hand, in rural areas 73% did not receive care. Religion was also associated with moderate association strength (Cramer's V =0.1051, Pearson chi2(2) = 18.2992, Pr = 0.000). Other factors such as region, ethnicity, level of education and exposure to mass media were associated with the use of care.

Conclusion: Health policies should develop strategies to raise awareness and improve access to care in a health facility, taking these factors into account.

Key words: fever, health facility

Sustainable Financing for PHC: Designing a Contributory Health Scheme in Niger State, Nigeria

Dr. Usman Mohammed, Niger State Contributory Scheme Agency,
Résultats pour l´Institut de Development (R4D): Dr. Chris Atim, Tamara Chikhradze, Ezinne Ezekwem, Oludare Bodunrin, Rachel Neill, Felix Obi
Systèmes de santé Consult Limited Health (HSCL): Oluwatosin Kolade, Onyeka Ojogwu, Ifeoma Kalu Igwe, Nnamdi Anedo H., Maimuna Abdullahi
Université du Nigéria Nsukka : Dr. Hyacinth Ichoku

Background: A Readiness assessment for UHC conducted in Niger State in 2017 showed the existence of poor utilisation of PHC services and that majority of citizen lack access to quality healthcare due to limited pooling and pre-payment systems in the State. Pre-payment systems have been recognised to increase financial protection as well as improve health outcomes (WHO Bulletin 2012). Recognising this, Niger State in collaboration with Results for Development (R4D) and Health Systems Consult Limited (HSCL) is designing a State Contributory Health Scheme (SCHS) for implementation to ensure access to quality health services. This paper describes the process undertaken to design a launch of a contributory health scheme with focus on Primary Health Care (PHC) and vulnerable groups.

Key objective of the paper: To present the approach adopted by Niger State in the design of its SCHS as well as key lessons learned in the design process.

Scheme Design Methodology: R4D/HSCL and the state have adopted a number of approaches in designing key components of the scheme (resource mobilization, enrolment, strategic purchasing, M&E systems). This includes: quantitative analysis to identify costs and potential revenue amounts to launch scheme, adoption of best practices to guide decisions on prioritization of scheme components for initial launch and scale-up, technical reviews of scheme bill to ensure readiness for passage into law, establishment of design Technical Working Groups (TWGs) and a design finalization committee to advance the scheme design; provision of on-the-job mentoring and trainings to build capacity of Niger SCHS Agency staff and key state actors in healthcare financing.

Key Lessons Learned

The input of key stakeholders (government agencies and partners) is critical to the design process as this creates opportunities to leverage on existing systems and platforms e.g. the means testing approaches to identify poor and vulnerable.

- In settings where a legal framework for the existence of the scheme "the law" is yet to be established, the set-up of strong structures such as design TWGs can be valuable to advance the scheme design and ensure readiness to launch when the law is eventually passed.
- Continuous advocacy and engagement with the government and other important actors is key to ensuring buy-in on some key design components (e.g. resource mobilization) of the SCHS.
- Lessons learned from fellow states, federal government schemes, and international experiences should be leveraged to adopt best practices from countries and states that have operationalized similar schemes.

Factors affecting access to healthcare and efforts/challenges in securing PHC

Ms. Chioma B. Kanu, Civil Society Legislative Advocacy Centre (CISLAC)

The Civil Society Legislative Advocacy Centre (CISLAC) has worked to improve policy environment that will revitalize the health system since 2012 in many Northeast and Northwest states in Nigeria. This was achieved through engagement with policymakers, legislators, civil society groups and media at national and sub-national levels.

The aims and objectives of the interventions are to improve financing for health by increasing legislative oversight; to increase media reportage of health and to galvanize civil society action towards advocating for the implementation of health policies and laws.

The strategies for the interventions include series of policy dialogues for executives-legislature-CSOs-media, advocacy engagements with policy makers and legislative arms of government, capacity building on budget tracking and reporting for media and civil society on maternal health and nutrition.

From the multi-sectoral approach applied, it became obvious that the challenges facing PHC in Nigeria are complex and essentially arising from poor legal, regulatory frameworks and implementation, economic, socio-cultural challenges, infrastructural decays, inadequate/unqualified health personnel and equipment. The situation of PHC worsens, as financial and political commitments from government are lacking; in cases where there have been pronouncements, they have been partially or entirely not implemented.

There are many health programs by the government at national and sub-national levels but the big question is how effective are these programs? How many Nigerians are aware of their existence and how many women in the rural communities access them? There are over 24,000 PHCs and health posts, scattered all around the country within the rural areas. Health workers posted to these areas are hardly available. There is no gainsaying that community people prefer the services of unconventional community health workers, "chemists", herbal mixtures and traditional birth attendants, because the health facilities are unsatisfactory. Ideally, PHC should be affordable but in communities where families live below the poverty line even the least fee is unattainable by the community, which begs the question of Universal Health Coverage and basic health care funds.

In conclusion, health is on the concurrent list of the government. This signifies that if indeed the government wants to pay attention to the prevalent health condition it can easily be achieved through serious implementation of health policies and redeeming of pledges at all levels.

Non-farm employment for the rural poor and impact on health outcomes in Ghana: the role of social protection

Isaac Osei-Akoto, Institute of Statistical Social and Economic Research (ISSER), University of Ghana, Legon

Addressing disturbing poverty and inequality trends in developing countries require innovative ways of providing secured job opportunities for the populace; most importantly during the agricultural off-seasons for the rural poor. This could be achieved through social protection programs, among many other strategies. Active labour market social protection options, as compared to others such as cash transfers facilitate access of the most vulnerable to jobs, while reducing their dependence from public welfare support schemes. To this effect, the Labour Intensive Public Works (LIPW) of the Ghana Social Opportunities Project (GSOP) was initiated in Ghana to provide targeted rural poor households access to local employment and income-earning opportunities during agricultural off-seasons. The program seeks to lessen the burden of unemployment or under-employment in deprived rural communities during the lean agricultural season while creating vital infrastructure for development of both farming and non-farming households. The study designed to evaluate the project assessed the project's impact on labour force participation and employment for both young men and women, and their implications for welfare in many farming communities of Ghana.

The study used data on 130 community-level sub-projects including manual construction of feeder roads, small earth dugout and tree planting to analyse the effects on broad aspects of rural livelihoods. Quasi-experimental techniques, employing random assignment of sub-projects and application of propensity score matching were the major estimation techniques used.

The results show significant effects on labour force participation and short-term wage earnings for both young men and women. Additionally, there were significant findings on key household issues such as health, savings behaviour, farm investment, and reversal of seasonal migration.

This presentation highlights the mixed results on how the use of social protection to improve the economic security of poor households influences access to health care, food security, and uptake of health insurance in Ghana. The projects had no significant impact on the use of health care facilities but rather increased the use of self-medication. Some arms of the programme led to significant

reduction of enrolment into the national health insurance scheme, but other arms in the southern part of the country increased the capacity of beneficiaries to enrol. The findings shed light on design effects and implications for the sustainability of such innovative programs.

Key words: rural poverty, off-farm income, social protection, health insurance, access to health care services, gender, Ghana

Emigration of Nigerian Medical Doctors Survey

**Ifeanyi Nsofor, Bell Ihua, ** Hamza Kabir: *ABUJA Nigeria Health Watch, ** NOI Polls*

Background Emigration of Nigerian healthcare workforce, particularly medical doctors has been a lingering problem in the country. In a bid to measure the scope of this trend, Nigeria Health Watch in partnership with NOI Polls conducted a survey on medical doctors to assess the prevalence with which medical doctors pursue work opportunities abroad and probable reasons why.

Aims and Objectives To understand the scope of emigrating doctors, the frequency, and some of the underlying factors.

Methods The survey was targeted at Nigerian medical doctors, and it involved a mixed methodology approach employing quantitative and qualitative methods. For the quantitative method, an online survey using a standardized, well-structured questionnaire was employed; and a semi-structured interview guide was utilized for the qualitative approach. The various cadres of doctors were captured in both the quantitative and qualitative methods. Respondents to the online survey were not limited by geographical location, although the in-depth interviews were conducted with medical doctors in Nigeria's Federal Capital Territory, Abuja.

Key findings A large proportion (83%) of doctors who filled the survey and are based abroad are licensed in Nigeria. All respondents (100%) to the survey know medical doctors who are presently resident in Nigeria, who are currently seeking work opportunities abroad. Almost 9 in 10 respondents (88%) disclosed they are seeking work opportunities abroad.

Most respondents cited high taxes & deductions from salary (98%), low work satisfaction (92%), and poor salaries & emoluments (91%) as challenges doctors face that make them consider moving abroad. The United Kingdom and the United States are the top destinations where Nigerian medical doctors seek work opportunities. Prevalent reasons for emigrating include better facilities and work environment, higher remuneration, career progression & professional advancement, and better quality of life.

Majority of survey respondents (87%) believe government is unconcerned with mitigating the challenges facing medical doctors in Nigeria. Improved remuneration (18%), upgrade all hospital facilities and equipment (16%), increase healthcare funding (13%), and improve working conditions of health workers were the top suggestions respondents proffered to mitigate challenges doctors are facing.

Main Conclusions The issue of emigrating doctors is an imminent problem as the findings from the survey clearly reveal. Alarmingly, majority of respondents who are resident in the country disclosed that they are considering work opportunities abroad. This problem is a crisis considering Nigeria's rising population and growing demand for health care services.

Do Facility-based Deliveries in Kenya adhere to WHO-recommended Guidelines for Post-Natal Care (PNC)?

Grace Njeri Muriithi, Association africaine d'économie et de politique de la santé (AfHEA)

Background The postnatal period (from birth to six weeks after delivery) is a crucial period for the survival of mothers and newborns. According to the World Health Organization, 66 percent of all maternal deaths and 75 percent of all newborn deaths occur within the first week after delivery. Therefore understanding the gaps in postnatal care for women in Kenya is important for ensuring that the maternal and neonatal mortality rates are reduced further.

Aims and objectives of the research The overall aim of this research was to analyze whether facility-based deliveries in Kenya adhere to the WHO-recommended guidelines for provision of postnatal care.

Methods The study made use of data obtained from the 2014 Kenya Demographic and Health Survey (KDHS). A sample of children aged below 5 years who were born in a health facility was drawn (n=4,104). The variables of interest were check-up of mothers and newborns after delivery before discharge. Data was analyzed using descriptive statistics and logistic regression models, which were run to evaluate the factors that influence the quality of postnatal care received by women who deliver in health facilities.

Results From the descriptive statistics, 30 percent of the mothers stayed in the health facility for less than 24 hours, while an additional 32.2 percent stayed for a day and were released. Only 38 percent stayed in the health facilities for more than 24 hours. Seventy-five percent of the mothers received post-natal check-up before discharge while 25 percent did not. Of those who did not receive PNC before discharge, only 12 percent received check-up after discharge. In total, 22 percent of the women in the sample did not receive PNC at all. On the other hand, 69 percent of newborns received PNC in the two months after birth, while 31 percent did not.

The logistic regression models showed that the education level of the woman, the place of delivery and number of antenatal care visits had statistically significant influence on postnatal check up. Specifically, women who had some education (whether primary, secondary or higher) were more likely to receive PNC than women with no education at all and the probabilities increased with the increase in educational level. Women who delivered in lower-level public facilities had lower probabilities of receiving PNC compared to those who delivered in public hospitals; while women who delivered in private hospitals or clinics had higher probabilities of receiving PNC compared to those who delivered in public hospitals. Women who received 4 or more ANC had higher probabilities of receiving PNC compared to those who received less than 4 ANCs.

Conclusion Ensuring that women in Kenya deliver in health facilities is not enough to reduce the high maternal and neonatal mortality rates. The quality that the women and newborns receive while in the health facilities also matters. Policies should ensure that women and their newborns receive adequate post-natal check-ups before and after discharge to help address the immediate causes of maternal and neonatal mortality.

We assume they are gone : Traditional birth attendants as perceived deterrents to utilization of delivery services in Nigeria communities

Agbo, H.A[1, 2] [MBBS, FWACP, MSC, MPH], Department of Community Medicine,
[1]Jos University Teaching Hospital/
[2]University of Jos
Co-author: Pam S [Dip PHC][1]

Introduction: Peculiarities are bound to nations/countries where appropriate and available resources may come timely such as the introduction of traditional birth attendants into the health system to identify and refer women with risk of likely birth complications to health centres. This practice was later abolished by the World Health Organization when the desired benefits from training and using these health allied were no longer beneficial to maternal health.

They had series of health training on basic identification of at risk women and management of simple cases. Like in every aspect, outcomes are measured against input and this is no exception with the traditional birth attendants. Do we assume they have been abolished? We may be wrong. They are recognized in communities for their affordable services, timely and culturally acceptable practices despite complications that are often recorded. A study of women assessing services at two urban Primary Health Care [PHC] centre, [Nassarawa Gwong and U/Rimi] was conducted.

Aims and objectives: Prevalence of home delivery was obtained and reasons for declining hospital delivery despite routine antenatal care visits were assessed as an indirect assessment of the activities of traditional birth attendants.

Methods: Cross sectional study of 215 married women gravid or parous irrespective of the delivery outcome who assessed the PHC from May 7th -18th 2018 were studied. An interview administered questionnaire was used.

Findings: One hundred and sixty seven (77.7%) had formal education to secondary level. Eighty three (38.6%) registered and had uneventful antenatal care but did not assess the health centre for delivery services. Of these that had they delivery attended to by a traditional birth attendant, 31(37.3%), 28 (33.7%) and 24 (28.9%) did not assess institutional delivery due to cultural practices for first delivery, enforced by spouse and in-laws and in order to save cost of hospital charges respectively.

Conclusion: The gains of routine antenatal care climaxed with institutional delivery should be encouraged through vigorous health education series to women. This may likely curtail the increasing act of home deliveries which are often without complications.

Achieving Universal Health Coverage in Nigeria: Do pecuniary factors matter?

Onwube, Onyebuchi, Department of Economics and Development Studies, Faculty of Management and Social Sciences, Alex Ekwueme - Federal University Ndufu Alike, Ikwo. P.M.B 1010 Abakaliki, Ebonyi State.
Agwu, George, and Ike, Precious R.

Nigeria has adopted Primary Health Care (PHC) as the anchor of the Nigerian health system in its efforts to improve equal access and utilization of basic health services and thus achieve Universal Health Coverage (UHC) for some forty years (1988 -2018) now. The approach has gone through various improvements leading to some modest achievements. Yet Nigeria ranks as the third leading country in infant mortality rate in the world (UNICEF 2017). This is in addition to the high rate of maternal mortality, unemployment, poverty and the daunting economic recession. The objective of the research is to give a narrative of the forty years journey in the primary health care approach to achieving universal health coverage and to know what factors are critical to strengthening the PHC approach to achieving UHC in Nigeria. Using a vector autoregressive dynamic model approach the study aims to determine the unique pecuniary factors that can enhance health outcomes thereby giving credence to the primary health care approach to achieving universal health coverage for accessing basic health care services. The study found that in Nigeria, the following pecuniary factors, public health expenditure and per capita income have the capacity to sustain the primary health care approach to achieving UHC, through their effect on improved access to health services and health outcome while high rates of inflation and high exchange rate lowers access to health care services and thus limits the capacity of the primary health care approach to achieve the universal health coverage. The study recommends that health expenditure be increased to ensure steady supply of health care services and per capita income should be increased in line with macroeconomic realities while inflation and exchange rate should be effectively managed by the monetary authority to regulate its fluctuations and subsequent distortion of the economy with implications on health. The

study concludes that primary health care remains the best approach to achieving UHC in so far as members of the society finds health services available, accessible and affordable.

Impact of National Health Insurance Scheme Coverage on Catastrophic Health Expenditure in Ghana.

Sandra Kwakye, University of Ghana, School of Public Health.
Co-authors: Duah Dwomah, PhD, Justice Nonvignon, PhD

Background: Ghana's National Health Insurance Scheme (NHIS) was designed to improve financial access especially amongst the poor, in the country's bid to attain universal health coverage. The scheme has been implemented since 2004 with the aim of providing financial protection to households therefore preventing payment at point of use of health services. The study sought to determine the impact of NHIS coverage on catastrophic health expenditure (CHE) among households in Ghana.

Methods: Data were obtained from the Ghana Living Standards Survey Round 6 (GLSS6), conducted in 2012-2013, with 16,772 households. CHE in this study was measured using 10% and 40% thresholds i.e. CHE was measured as household's annual total out-of-pocket health payments (hospitalization excluded) equaling or exceeding 10% and 40% of household's non-food expenditure.

Propensity score matching was used to determine the impact of NHIS on out-of-pocket payment (OOP) and CHE. Multiple linear regression analysis was employed to determine the relationship between covariates and OOP. Further, multivariate logistic regression analysis was used to determine the relationship between covariates and CHE at both 10% and 40% threshold.

Results: The study found the proportion of households incurring CHE to be 6.2% and 0.3% for 10% and 40% thresholds, respectively. NHIS coverage had a positive impact ($p<0.05$) on CHE at 10% threshold but no impact at the 40% threshold.

Conclusion: The positive impact of NHIS coverage on CHE implies that the financial risk protection objective of the scheme is being realized, though at a small margin.

Key terms: Catastrophic health expenditure, out-of-pocket health expenditure, National Health Insurance Scheme, Ghana.

Saving for health using local financial social networks. A case study of districts in Eastern Uganda

Mutebi Aloysius, Elizabeth Ekirapa, Rornald Kananura, Moses Tetui
Makerere University School of Public Health

Background: Financial constraints are one of the factors that hinder access to health services. Results from the national health accounts showed that 49% of health expenditure was met by households. Households incur costs for transportation, food, purchase of medicine and other supplies that may not be available at the health facility. Most of the rural population in Uganda has no access to formal financial institutions but a growing majority belongs to saving groups. These saving groups could help households save and invest income that could be used to reduce financial barriers to services.

Objectives: This paper seeks to describe the key characteristics of saving groups, benefits and challenges of Community Based Saving Groups (CBSGs), as well as solutions to the challenges in the quest of improving household health.

Methods: This was a cross sectional descriptive study with quantitative and qualitative data collection techniques. Data was collected from 247 CBSG leaders in the districts of Kamuli, Kibuku and Pallisa using self-administered open-ended questionnaires, qualitative interviews and from

project reports.
Results: At the baseline, the main reasons for the formation of CBSGs were to increase household income, develop the community and save for emergencies. Slightly more than a half of the saving groups had 15-30 members. Ninety-three percent of the CBSGs indicated electing their management committees democratically. The most common challenges associated with CBSG management included high illiteracy (35%) among the leaders, irregular attendance of meetings (22%), and lack of training on management and leadership (19%). It was noted in the intervention arms that the number of saving groups more than doubled from 431 to 915 between September 2013 and December 2016. Out of 915 saving groups, 22% had members saving for MNH.

Conclusions: Saving groups in Uganda have the basic required structures and communities are interested in joining the community based savings groups and saving for health. However, challenges exist in relation to training and management of the groups and management of group assets. The government and development partners should work together to provide technical support to the groups.

Key words: Community based saving groups, saving for health, local financial social networks

Exploring the relationship between Community-Based Health Insurance and Primary healthcare systems performance: Evidence from Nigeria

Ms. IBORO E. NELSON; PhD Candidate, Department of Economics, University of Uyo, Akwa Ibom State, Nigeria

Background: Primary Health Care (PHC) is the backbone of a health systems and her strength is associated with improved population health in low and middle-income countries. The chronic under-funding of the Nigerian health system generally and primary health care in particular exacerbates health inequity and hampers efforts towards universal health coverage (UHC). Besides, it results in poor service utilization rate and hampers efforts towards poor health indices. However, mechanisms that offer health security through risk pooling like community-based health insurance (CBHI) scheme has been implemented across most rural settings albeit in relatively small scale as a tool in achieving equity in access to health services.

Objective and Method: The paper seeks to assess the contributions of the inputs and processes of the CBHI to the PHC systems performance using a simple input-output logic model that focuses on health financing and service delivery capacity as input and governance and health service utilization (ANC, delivery and immunization) as output. Data from two CBHI schemes in Akwa Ibom and River States (pre-CBHI scheme and during the scheme) were used. This was complemented by FGD and Key Informant interview (KII) on health workers, community structures and CBHI enrollees.

Results: The result of the analysis shows that antenatal clinic (ANC) attendance and delivery increased significantly over the six months period following commencement of the scheme and progresses thereafter. Similarly, quality of care from the client perspective, together with the availability of drugs and equipment at the centre also showed significant improvement. In additional, the scheme also engenders effective referral mechanism.

Conclusion: CBHF holds huge potentials towards improving the population health in Nigeria and accelerating efforts towards the achievements of UHC. Besides, it provides a good option to providing health coverage for the informal sector when properly designed and owned by the community.

Health Insurance and Out-Of-Pocket Payment In Malaria Case Management in North-western Cameroon

Malaria remains the most important cause of mortality of persons, especially children and pregnant women in Africa. Health Insurance is a way to pay for health care. It protects persons from paying the full costs of medical services when they are injured or sick. The overall objective of this study is to evaluate the importance and effectiveness of Health Insurance in facilitating the payment of malaria bills in the Bamenda Health District. This is a cross sectional study in which questionnaires were administered to 202 respondents. Secondary data was obtained from hospital registers of four health facilities in Bamenda Health District. The data was analysed to show that there is a less than 1% coverage and enrolment in health insurance schemes in the BMHO, which is very low. Therefore people still cover their entire cost for malaria treatment, and are not opportune to save some money from their total expenditure on malaria bills. In addition, the knowledge of Health Insurance among persons in Bamenda Health District is 90.09%, which is good, but there is less enrolment, making the scheme, not very effective when it comes to covering malaria treatment bills. Finally, with the estimated cost of about 20 434 Francs CFA monthly on malaria, uninsured persons are likely to save less than insured persons as about 75% of the bill is covered for insured persons. This is a serious economic burden on patients, which pushes them to borrow money to cover cost always, use traditional medicine and road side medicine as a way to evade cost of hospital treatment.

Keywords: Cameroon, Malaria, Health Insurance, Out-Of-Pocket Payment

Poster Presentation 2

Analysis of the sources of health human resources losses in Ivory Coast

Yapi Apollinaire [(1)]; Kouakou Konan Auguste [(2)]; Bissouma Tania Renée [(3)]; Codjia Laurence [(4)] ; Badié Yao [(5)]
[(1)]National Institute of Public Health - Abidjan
[(2)]University of Lorougnon Guédé de Daloa / CEDRES
[(3)]World Health Organisation – Ivory coast
[(4)]World Health Organisation – Geneva
[(5)]Human Resources Department

Introduction: To achieve universal health coverage (UHC), the problem of the shortage of personnel involved in the provision of care and social services in low-income countries should be addressed. However, there is a significant loss of HHR from training to recruitment. Thus, the objective of this study is to critically analyse the sources of health human resources loss from training to retention.

Data and methodologies: These results use the data from the survey conducted during the conduct of the health labour market study. The survey was conducted from May to July 2016 in a cross sector of 223 health facilities, 38 specialized public and private institutions and 363 health science students.

A quantitative retrospective cohort was studied. It concerned students admitted to the scientific baccalaureate series D and C in 1997 and followed up from their requests for assignment in health sciences training courses to recruitment as practitioners.

A qualitative study was associated with this study to find out their motivations and the reasons for their loyalty.

Results: 6% of baccalaureate holders enter the first year of the common core curriculum (EPSS), representing 80% of all baccalaureate holders who apply for the health sciences;

Medical and paramedical disciplines attract 8% of graduates against Law (36%), Science and Technology (22%), Modern letters discipline, Languages and Art (13%), Economics (11%) in 2013;

16% of them are admitted to the second year, 74% of whom are male and 26% female; 84% of students who have validated the second year are in thesis. Among these PhD students who supported 27% were recruited by the public sector. 36.88% of the physicians in the cohort were assigned to the public service. The average waiting time before the first job is between 1 and 3 years; the percentage of doctors who have migrated (40% in terms of stock and 18% in annual flow); the emigration rate of nurses (16%); the immigration rate of doctors (7%).

Conclusion: The observation is that the training system must be adjusted in order to better target the objectives assigned to the trained personnel. Better collaboration also between the Ministries of Higher Education, Civil Service and Health will allow for better HHR planning.

Keywords: loss, Human resources, Ivory Coast

The Economic Impact of Rheumatic Heart Disease (RHD) on the Health System of South Africa. A Cost of Illness Study.

Assegid Hellebo. School of Public Health and Family Medicine, Health Economics Unit, University of Cape Town, South Africa.

Background: RHD is a disease of poverty that is neglected in developing countries. The consequences of RHD are increasingly becoming huge economic burden to the health system and consecutively the government. Despite RHD being preventable, most of the RHD related deaths happen in children and working age adults where the economic burden of premature death is high. Several strategies have been suggested to advance the escalation of disease severity in order to avoid medical cost including cost of surgery. However, lack of adequate evidence regarding the cost of treating RHD has hindered the needed decisions and interventions to prevent RHD related death.

Aims and Objectives: The main objective of this study was to evaluate the utilization of resources and quantify the annual average total cost related to RHD in a tertiary hospital in the Western Cape, South Africa.

Methods: A mixture of ingredients and step-down costing approaches were used to estimate the annual cost of RHD care from health system perspective. All costs were estimated in 2017 (base year) South African Rand (ZAR) and 3% discount rate in order to allow depreciation and opportunity cost. Data on service utilization rates were collected using a randomly selected sample of 100 patient medical records from the Global Rheumatic Heart Disease Registry (the REMEDY study), a registry of individuals living with RHD. Patient-level clinical data, including, prices and quantities of medications and laboratory tests, were collected from Groote Schuur Hospital (GSH). Step-down costing was used to estimate provider time costs and all other facility costs such as overheads. REMEDY and GSH data were aggregated to estimate the total annual costs of RHD care at GSH and the average annual per-patient cost among REMEDY participants. One-way univariate sensitivity analysis was conducted to deal with uncertainty.

Results: The total cost of RHD care at GSH was estimated at $2, 238, 294 (ZAR 27 million) in 2017, with surgery costs accounting for 65% of total costs. Per-patient average annual costs, which included outpatient care, medical and intensive care unit (ICU) care, catheterisation lab procedures, and heart valve surgery, was estimated at $4, 311 (ZAR 52, 000) per-patient annually. The cost of medications and consumables related to catheterisation and heart valve surgery were the main cost drivers.

Conclusions: Scaling up of primary and secondary prevention programs at primary health centres reduces future burden on tertiary services. There is high need of resource allocation efforts related to RHD at tertiary centres, and the study provides cost estimates for future studies of intervention cost-effectiveness.

A Digital Labour and Delivery Solution (DLDS) for improved service provision

Sarah Kedenge[1], Elizabeth Mwashuma[1], Caroline Gitonga[1], Alice Tarus[1], Albert Orwa[1], Caroline Kyalo[1], Eddine Sarroukh[1].
[1]Philips Research Africa

Background The World Health Organization (WHO) advocates the partograph as the single most useful tool for monitoring labour and reducing labour complications. Despite its effectiveness, sub-optimal utilization and poor recording of partograph parameters during labour are a matter of great concern for the quality of intrapartum care worldwide. The digital labour and delivery solution (DLDS) is a tablet-based solution envisaged to make monitoring of labour and delivery more systematic and efficient as well as provide a tool for easy communication between health care providers in maternity within and between health facilities. The primary aim of the study was to test the applicability, benefits, and limitations of the tablet-based DLDS in a low-resource healthcare setting in Kenya as efforts are made to achieve universal health coverage with increased access to quality services.

Methodology The study was designed as an open-label exploration study, divided into two phases. The first phase involved the assessment of the healthcare professionals' use of the partograph as per routine practice. The second phase involved both the use of the tablet-based solution and paper partographs. The study was implemented in two sites within Kiambu County, namely: Githurai Langata Health Center and Ruiru Sub-County Hospital.

Results During phase one, a total of 22 midwives were trained. The one-day included a refresher on partograph use and potential gaps and training on research ethics. The midwives consented 82 pregnant women. From the partograph analysis, majority of the parameters were documented with only few with minimal or no entry. During phase two, 15 midwives from phase one were trained on the application and provided a user guide for reference. The midwives entered data for 75 pregnant women into the application. Their feedback was mainly positive with a large majority stating the partograph, history taking and discharge summaries as the most exciting features. The application scored 65% on the system usability scale, highlighting the need for some feature changes. The integration of the planned referral module was highlighted as key.

Conclusions The findings from this study demonstrate the need for continued support and training in ensuring 100% completeness of partograph parameters. Feedback on the application demonstrated that with some modifications, the application provides a great opportunity to improve the efficiency and effectiveness in the management of patients during labour and delivery.

Household cooking fuel choice and health effects in Ghana

Lucy Ofori-Davis AWOSHIE & John-Bosco Dramani: Kwame Nkrumah University of Science and Technology

According to the International Energy Agency, more than 2 billion people worldwide are unable to access modern and clean fuels such as electricity, LPG and biofuels and thus, resort to biomass. This implies that the choice of cooking fuel by households has serious effects on energy transition. Therefore, we examine the determinants of household choice of cooking fuel and the effect of the household choice of cooking fuels on the health of children under five. Using data drawn from the 2014 Ghana Demographic and Health Survey, we estimate the determinants of cooking fuel by means of an ordered probit model and the health impact of cooking fuel applying the probit model. The results reveal wealth, the age, gender and education of the household head, size of the household and the location of kitchen in the household to influence the choice of cooking. Furthermore, the analysis provides evidence on the negative effect of solid fuel use on health, which implies that the use of solid fuels is a major contributor to the incidence of acute respiratory infections in children under the age of five in households that use solid fuels. We recommend that strategies that are aimed at poverty reduction should be intensified to aid the transition to cleaner and modern fuels and intensify education and awareness of the detrimental effects of traditional fuel use on health of women and children.

Securing PHC for all: Applying GIS to Evaluate Siting of New Primary Health Facilities in Eswatini

Siyabonga Ndwandwe[1], Katherine E. Battle[2], Nontokozo Mngadi[1], George Shirreff[1], Bradley Didier [1], Sifiso G. Mamba[3]
[1] Clinton Health Access Initiatives (CHAI) Inc.
[2] Malaria Atlas Project (MAP), University of Oxford
[3] Ministry of Health, Kingdom of Eswatini

Background: The government of Eswatini, through the National Health Sector Strategic Plan (NHSSP II 2014-2018), had set a bold target to build one primary health care (PHC) facility in each of the four regions every year. However, this goal has not been achieved due to funding challenges. As the government continues to receive requests from communities for new PHC facilities, the prioritization of sites poses a challenge. Historically, the approval and siting of facilities has not been informed by a quantitative assessment. This analysis propose an approach for assessing new health facility requests based on geospatial analysis of access to care in order to optimise resource allocation by prioritizing construction of facilities in areas with the most limited access to care.

Methods: The research team used ArcGIS to map out existing healthcare facilities and road networks across Eswatini using data collected by the Surveyor General's Office. Travel times to the nearest health facility were calculated using a cost-distance analysis that assumed speeds of motorized transport within stipulated limits and modes of transport and walking speeds specific to the terrain. Accessibility thresholds were set at 8km Euclidean distance, per WHO recommendations and 30 minutes travel time per the literature. An additional cost-distance analysis was performed on proximity to maternity services, a proxy for specialized services generally not offered at lowest level of health system.

Key findings: The majority of the population lives in close proximity to a health facility: 98 percent of homesteads are less than 30 minutes from a facility whilst 73% are within an 8 km radius. The government has 25 pending requests; only two sites are identified as needing a PHC facility using the 30 minutes threshold. Seven sites were identified using the 8 km threshold: five with pending requests and two without. Nine percent of homesteads are more than 30 minutes away from maternity services whilst 51% are beyond 8 km. Poor access to specialized care is concentrated in the north-east and south-west parts of the country.

Conclusions and recommendations: Eswatini has a good network of existing facilities therefore the government does not need to build four primary health facilities per year to improve equitable access to healthcare service. However, PHC is more than physical facilities. The evidence highlights a need to revise the service package offered at facilities to ensure equitable access to specific services may serve as an instrument for the ministry to advocate for more resources.

Education on the abortion law: implications for choice of place for abortion services in Ghana

Fred Yao Gbagbo, University of Education, Department of Health Administration, P. O. Box 25, Winneba . Ghana.

Background The Ghanaian abortion law (Act 29, sections 58-59 and 67), was modified in 1985 (Law No. 102 of 22 February, 1985). Although abortion is not explicitly legal in Ghana, some provisions made in the law suggest legality to increase access.

Aims and Objectives This study explored Education on the abortion law and implications on choice of place for abortion services in Ghana.

Methods The study was conducted in Accra metropolis, most densely populated urban metropolis in Ghana between January and December 2010 using retrospective, cross-sectional, community based design and mixed method approach to collect data from 401 randomly sampled women in January-June 2011. Data analysis was done using SPSS and STATA to test the hypothesis of the study and chi-square test for the significance of associations observed. Qualitative data obtained were paraphrased and/or presented verbatim to compliment the quantitative data collected. The Ghana Health Service gave ethical clearance for the study.

Key Findings There was < 50 percent awareness the abortion law with about 43 percent of the respondents reporting that abortion was legal in Ghana. There was a significant association between educational attainment and knowledge about legal status of induce abortion among respondents who had secondary and higher education (x^2=16.977; p=0.009). About 9 percent of respondents indicated that abortion was legal but did not correctly indicate any of the legal provisions for an abortion in Ghana but rather gave socio-economic justifications for abortion. There were no significant association between knowledge of the abortion law and respondents' choice of place for abortion. A multinomial logistic regression shows that respondents who attained at least secondary level education were 2.7 ($p<0.05$) significantly more likely to know the legal status of abortion compared to those without any formal education. Less than 2 percent of respondents gave an accurate gestation period for legally permitted abortion and 72 percent indicated that abortion was legal stated that somebody's consent is always required prior to an abortion. Opinions from the in-depth interviews showed variations in decisions on place for an abortion without considering legal implications for their choice of place.

Conclusion Educational attainment impacts on understanding the abortion laws of Ghana for decision making on choice of place for services. Although facilities could be legally mandated to provide abortion services, legal mandates alone do not have significant implications on individuals' choice of place for induce abortion in Ghana.

Health shocks in Sub-Saharan Africa: are the poor and uninsured households more vulnerable?

Esso-Hanam ATAKE, University of Lome (Togo), Department of Economics.

Background: In developing countries, health shock is one of the most common idiosyncratic income shock and the main reason why households fall into poverty. Empirical research has shown that in these countries, households are unable to access formal insurance markets in order to insure their consumption against health shocks. Thus, in this study, are the poor and uninsured households more vulnerable from health shocks? We investigate the factors that lead to welfare loss from health shocks, and how to break the vulnerability from health shocks in three Sub-Saharan Africa (SSA) countries, namely, Burkina Faso, Niger and Togo.

Method: This study focusses on 1,597 households in Burkina Faso, 1,342 households in Niger and 930 households in Togo. A three-step Feasible Generalized Least Squares (FGLS) method was used to estimate vulnerability to poverty and to model the effects of health shocks on vulnerability to poverty.

Results: The estimates of vulnerability show that about 39.04%, 33.69%, and 69.03% of households are vulnerable to poverty, in Burkina Faso, Niger, and Togo respectively. Both interaction variables, 'health shocks and wealth' and 'health shocks and access to health insurance' had a significant negative effect on reducing household's vulnerability to poverty. Poverty is the leading cause of economic loss from health shocks as the poorer cannot afford the purchase of sufficient quantities of quality food, preventive and curative health care, and education. We found that lack of health insurance coverage had a significant effect by increasing the incidence of welfare loss from health shocks. Moreover, household size, type of health care used, gender, education and age of the head of the household as well as the characteristics of housing affect vulnerability to poverty.

Conclusion: Our findings suggest that for the poor households, reduction of user fees of health care at the point of service or expansion of health insurance could mitigate vulnerability to poverty. Other challenges—birth control policy, adequate sanitation facilities and a universal basic education program—need to be addressed in order to reduce significantly the effects of health shocks on vulnerability to poverty in SSA.

Keywords: vulnerability to poverty, health shocks, health insurance, poverty, fertility, sanitation, education, Sub-Saharan Africa.

The effects of child mortality and income on fertility in Ghana

Mr. William Angko, University for Development Studies

Using data from the 2014 Ghana Demographic and Health Survey, we apply the conventional microeconomic theoretic approach to consumer choice and model a demand function for children in order to estimate the effects of child mortality and income on the demand for children among women of reproductive age 15-49 in Ghana using the negative binomial regression. The results indicate that child mortality, resulting from the loss of a son or daughter has a positive and significant effect on fertility, while fertility falls with increasing wealth. In addition, the age of women at first births, mother's years of education and contraceptive use are significant and negatively associated with fertility, while current age of the woman, fertility preference, and decision maker on contraceptive use and place of residence positively influence fertility in Ghana. We recorded variations in the effects of some variables in total, urban and rural samples. We conclude that reduction in child mortality and improvement in wealth can contribute significantly to the quest to reduce fertility in Ghana in order to keep population growth in check and to enhance the growth of per capita GDP. Increasing women access of formal education, increasing women power in decision making on contraceptive use, increasing access to and use of contraceptives and providing employment opportunities in rural areas are keys policy issues that could help achieve fertility reduction in Ghana.

Keywords: Child mortality, Income, Fertility, Demand for children

Factors influencing demand for health insurance in Uganda

Ssempala Richard, Makerere University School of Public Health

This study applies a probit model to secondary data to investigate the factors influencing demand for health insurance in Uganda. The results reveal that wealth, level of education, access to information and area of residence are significantly associated with demand for health insurance. However, age, marital status and health status as proxied by smoking are insignificant. Results further reveal that health insurance is more pronounced among wealthier, educated and well-informed individuals who reside in urban areas. The study therefore recommends for the policies geared towards poverty reduction, investing in education both at primary and secondary levels, increased public awareness about benefits of health insurance and establishment of a National Social Health insurance scheme since such variables were highly associated with demand for health insurance.

How to cope with food price shocks? – Assessing children's nutritional status using biomarker data from Tanzania.

Lukas Kornher, Center for Development Research, University of Bonn

Surges in staple food prices regularly distress agrarian societies in Africa. In Tanzania, maize prices doubled in 2008 and again in 2017 within few months. Whenever staple food prices increase, households make use of food based coping strategies of affected households include shifts from expensive to cheaper less preferred food items, a reduction of dietary diversity towards energy-rich products, and a general reduction of the quantity consumed; either for all household members or only some members (Matz et al., 2015; d'Souza and Joliffe, 2014).

Yet, depending on the adjustment behavior, the price shock can lead to severe macro and micronutrient deficiencies of children, which are associated with adverse consequence for their physical and mental development. The objective of this research to assess the impact of staple food price inflation on the short-term nutritional status of children between 0 to 60 months. Thereby the study utilizes a unique biomarker data set as part of the Tanzanian DHS 2010. The study fills a research gap in the existing literature (e.g. Abdulai and Aubert, 2004) by looking at micro-nutritional indicators, namely weight-for-age, retinol-binding protein for vitamin A, and the soluble transferrin receptor as a marker of iron status, directly instead of nutrient consumption levels.

The empirical identification makes use of the timely and spatial variation of staple food prices, which are matched with the micro data at the sub-regional level. To account for the serial correlation of standard errors across equations, Zellner's seemingly unrelated regression equations model is employed. Preliminary findings, controlling for socio-economic and biological characteristics, suggest that there is a significant positive association between staple food price inflation and children's as well as women's iron deficiency. On the other hand, weight-for-age seems unrelated to the food price level, while women's bmi is related to staple prices inflation. Surprisingly, the level of retinol-binding protein for both children and women is positively associated with the price level.

Dietary diversity and meat consumption reduces with increasing staple food prices, but there is also empirical evidence for a substitution of staples by diary products. The differential impact of food prices on women and children, can be a sign of maternal buffering, which is the reduction of caloric intake of mothers in favor of their children. The results indicate the importance to widen the policy

focus beyond staple food crops. Further, it is important to better understand substitution and income effects when staple prices rise.

Direct and spillover effects of health insurance on household consumption patterns in Ekiti state, Nigeria.

Francis O. Adeyemi, Department of Economics, University of Ibadan,

The twin issues of resource and poverty distribution in Nigeria are paradoxical. This is because, though the country is rich in natural, land and human resources, Nigerian people are still being described as poor. This is confirmed by the report of national bureau of statistics that nearly 70 percent of Nigerians as at 2017 were living in poverty using dollar per day adjusted purchasing power parity as the criterion. This implies weak ability to smoothen consumption over time for a large percentage of the population whenever there is ailment. Previous studies had investigated direct effect of health insurance on medical consumption with no attention to the spillover effects on non-medical consumption. This study is therefore, designed to examine the direct and spillover effects of HI on both medical and non-medical consumption in Ekiti State.

The survey research design was employed and purposive sampling technique was used to select hospitals that offer health insurance services across the sixteen local government areas (LGAs) of Ekiti state. A structured questionnaire was randomly administered to 95 patients per LGA.

Diagnostic test was performed to show the quality of match between the insured and uninsured households, and their suitability for the study. The propensity score from logit regression at ρ /≤/0.05 was used to predict the probability of HI participation, while propensity score matching estimator was used to determine the direct and spillover effects of health insurance.

The average age of the respondents was 43 years; about 69% were married; 76% and 50% of the family heads had post-secondary education and were government employees respectively. The reduction in the value of Pseudo-R^2 and Mean bias from 0.17 to 0.01 and from 72.4 to 17.9 respectively showed high quality of match between the two groups and this underlined their suitability for the study. The propensity score matching coefficient for medical consumption was 0.07 and positive, showing that medical consumption increased with health insurance status. The

spillover effect of HI was 24,970 and it was positive (+) indicating that health insurance increasednon -medical consumption of the insured by ₦24,970 in the period of illness.

This implies that health insurance increased the overall consumption of the insured households in th e State.

Keywords: Direct effect, Spillover effect, Propensity Score Matching, Consumption patterns,

Implementation of a Mental Health Act in Ghana: A study of potential barriers and enablers using a mixed-method approach

Kenneth A. Ae-Ngibise[1,2], Michael Hazelton[2], Chris Kewley[2], David Perkins[2], Kwaku Poku Asante[2]*
[1]University of Newcastle, Australia and
[2]Kintampo Health Research Centre, Ghana

Background: The World Health Organisation estimate that more than 450 million people worldwide are suffering from mental health disorders. Low and middle-income countries are badly affected partly because they are ill-equipped to address mental health needs due to lack of mental health policies and more importantly enforcement and implementation. The prevalence of mental disorders in Ghana is estimated at 13% with very limited mental health services available. In 2012, Ghana

passed a Mental Health Act 846 to promote mental health care delivery. There is no evidence of implementation post-enactment. Previous mental health laws have never been implemented in Ghana, resulting in wider human rights abuse and many seeking alternative treatment from traditional and faith-based practitioners.

Aim: This research seeks to assess organisational barriers and enablers for implementation of the 2012 Mental Health Act across Ghana.

Methods: Mixed-method research using both qualitative and quantitative data collection techniques would be used. Qualitatively, face–to–face interviews and Focus Group Discussions will be conducted with a representative key stakeholders across all ten regions of Ghana to assess the barriers to implementation. Quantitatively, there will be a survey of people with severe mental disorders in the Kintampo North Municipality to measure disability. The 12-item World Health Organisation Disability Assessment Schedule will be used to assess the disability functionality of people with severe mental disorders, and their expectation of mental health service delivery. In addition, a brief survey will be conducted to assess the progress of implementation of the Mental Health Act from the perspectives of mental health service users and community members.

Anticipated Findings: There will be a broader perspective of evaluating and documenting the barriers and enablers for a full-scale implementation of the Mental Health Act in Ghana. The study will explore how best to address the complex practice-interface between traditional practitioners, faith-based practitioners and main stream mental health services within a regulated and statutory environment and recommend their integration into the formal mental health delivery system. Baseline data is expected to be established for future measurement of implementation progress of the Act. Above all, this study will create stakeholder awareness and reinforcement of human rights surveillance and protection.

Conclusion: The Mental Health Act 846 of 2012 made important steps in recognising the need for dignified, all-inclusive treatment of mental disorders. Nonetheless, no plans, regulations, incentives and financing mechanisms have so far been created to ensure the Act is implemented properly.

Examining existing economic and political dynamics towards achieving universal financial risk protection in Enugu State southeast Nigeria.

Ifeyinwa Arize[1], Chikezie Nwankwor[1], and Obinna Onwujekwe[1]
[1]Department of Health Administration and Management, Faculty of Health Sciences and Technology, College of Medicine, University of Nigeria Nsukka, Enugu Campus.

Background: Moving towards universal health coverage (UHC) requires political and economic inputs. The general consensus on health system financing is that it should not only seek to raise sufficient funds for health, but should do so in a way that allows people to use needed services without incurring financial risk. Despite substantial increases in external assistance for health in most low and middle income countries (LMIC) like Nigeria, out-of-pocket expenditure remains incredibly high (95.3% in 2013) in Nigeria.

Objective: The objective of this study is to examine political and economic factors that enable or constrain achievement of universal financial risk protection through the opinions of Key stakeholders.

Methods: The study was conducted in Enugu State, South eastern Nigeria. Enugu State in 2004 adopted and implements the District Health System Approach to health care delivery. We employed a cross sectional study design and qualitative method (In-depth-Interviews) in collecting data for this study. Purposive sampling of one urban (Enugu North) and one rural (Enugu East) local government areas was adopted. Data were collected through in-depth interviews (n=17), and document reviews

(policy and regulatory documents). We purposively sampled respondents from the Ministry of Health, State Health Board, State Primary Health Development Agency, cottage hospitals, PHC, House of Assembly Committee on Health and NHIS desk officer.

Findings: Political factors that enable achievement of universal financial risk protection included political will, commitment and political stability. On the citizen's side, their voice is usually not considered in the affairs of running the polity, which inevitably leads to their rights been sidetracked. Findings also showed that poor prioritization of health on government agenda, was inimical to achieving UFRP. The major economic factor that constrained achieving UFRP was poor fiscal space for health.

Conclusion: Poor prioritization of health in government agenda and poor fiscal space remain major obstacles in achieving universal financial risk protection. Continuous and objective engagement of citizens and other stakeholders in the policy dialogue should be increased and encouraged to bring UFRP on top of government's agenda. It is also necessary to involve community stakeholders as voice of the people to participate in the policy debate to force government to give health its due priority in the wide agenda of catering for the citizens.

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Perspectives of women and health professionals on the benefit package for free maternal health services under the National Health Insurance Scheme of Ghana.

Alexander Suuk Laar[1], Sylvester Isang[2], Benjamin Baguune[3], Emmanuel Bekyieriya[4]
[1]University of Newcastle, School of Public and Medicine, Faculty of Health and Medicine, Australia.
[2]Ghana School of Law, Kwame Nkrumah University of Science Technology, Kumasi, Ghana
[3]School of Hygiene, Environmental Health Programme, Ministry of Health, Tamale, Ghana
[4]REJ Institute, Research and ICT Consultancy Services, Ghana.

Background: To ensure equity in healthcare delivery for all residents of Ghana and ensuring an acceptable quality package of essential health care services without out-of-pocket payments; the government of Ghana implemented Universal Health Coverage under the National Health Insurance Scheme (NHIS) in 2005. To improve financial access to maternal health services, free maternal care exemption policy was also implemented in 2008.

Aim: This study explored the views of women and health professionals on the comprehensiveness of the benefit package of the free maternal health policy for maternal health services.

Methods: A qualitative study comprising of 6 Focus Group Discussions (FGDs) and 10 Key informant interviews (KIIs) were conducted with women and health professionals in three rural districts in the Upper West region of Ghana. Interviews were audio recorded and transcribed. Data were analysed using thematic framework approach.

Results: The findings showed that reproductive health service such as family planning was not part of the benefit package. Both FGDs participants and KIIs expressed dissatisfaction of the current benefit package not including family planning services. They were emphatic that the benefit package cannot be comprehensive and equitable if these services were not part. Some participants were of the view that it is because of the money women have to pay to access these services that is making them to avoid using them. They also think that the policy may not be adequately addressing the maternal health needs of women if family planning services were left out of the benefit package. Participants unanimously agreed that it was essential for policy makers to begin considering making family planning services part of the package of the policy to meet women needs on planning their families.

Conclusions: Our study has identified cost as one of the reasons for non-use of family planning services in rural Ghana. To ensure universal access to sexual and reproductive health services is

critical due to its multiple health and social benefits. For Ghana to achieve the sustainable development goal 3 target by 2030, requires policy makers and implementers to consider making family planning services part of the benefit package of the free maternal health policy to improve access by poor rural woman.

Key words: National health insurance scheme, universal health coverage, women, health professionals, Ghana.

Poster Presentation 3

Evaluation of sustainable surgical training for clinical officers in Malawi

Jakub Gajewski, Eric Borgstein: Dublin Institute of Global Surgery, Royal College of Surgeons in Ireland

Background: Shortages of specialist surgeons in African countries mean that the needs of rural populations go unmet. Task-shifting from surgical specialists to other cadres of clinicians occurs in some countries, but without widespread acceptance. Clinical Officer Surgical Training in Africa (COST-Africa) developed and implemented BSc surgical training for clinical officers in Malawi.

Methods: 17 trainees participated in the COST-Africa BSc training 2013-2016. This matched-pairs study done in 16 hospitals compared crude numbers of selected numbers of major surgical procedures between intervention and control sites before and after the intervention. Volume and outcomes of surgery were compared within intervention hospitals between the COST-Africa trainees and other surgically active cadres.

Results: The volume of surgical procedures undertaken at intervention hospitals almost doubled (+89%, 2013-2015), and there was a slight reduction in the number of cases done in the control hospitals (-4%, 2013-2015), (p=0.059). In the intervention hospitals most general cases were done by COST-Africa trainees (61.2%) compared to other Clinical Officers (31.3%) and Medical Doctors (7.4%). Postoperative wound infection rates for hernia procedures at intervention hospitals were compared between trainees and Medical Doctors with no statistical difference found (p=0.065).

Conclusion: COST-Africa developed, implemented and evaluated Malawi's first postgraduate surgical training programme for non-physician clinicians. The training model has proved to be effective and has been embedded within the mainstream educational programmes offered by the University of Malawi's College of Medicine. However, there are serious risks endangering the long term success of the model, including the absence of career paths for COs in Malawi after obtaining the BSc in Surgery, which is similar to the situation of other NPCs in the region.

Comparative costing analysis of Primary Health Care: PPP-PHC model vs traditional PHC model

***Alice Tarus*[1*]**, *Vincent Okungu[1], Boniface Oyugi[2], Caroline Gitonga[1], Sarah Kedenge[1], Caroline Kyalo[1], Albert Orwa[1], Eddine Sarroukh[1]*

[1]Philips Research Africa Hub

[2]Centre for Health services studies, University of Kent CT27NF England

Background: The goal of Universal Health Coverage (UHC) is to ensure access to affordable, equitable and quality health services for all by 2030 and is at the top of global health policy agenda. Whilst no clear blueprint to UHC exists, there is renewed emphasis on primary health care (PHC) as a viable approach to achieve UHC. Because of the cost implications, progress to UHC would requires involvement of the private sector through partnerships such as public-private partnerships (PPP). Partnerships have been shown to improve efficiency, reduce costs and increase value in health care. Philips through collaboration with the county government of Kiambu in Kenya set up first of its kind PPP-PHC intervention in 2014, Community Life Centre (CLC), to address access to care, quality outcomes and efficiency of care in low-resource settings. As part of the collaboration, the Kiambu County has been carrying out routine monitoring and evaluation of health indicators, revenue, expenditure and staffing with support from Philips. However, there has not been a costing analysis of the PPP-PHC model compared to a conventional county run model. Therefore, this study seeks to understand the value-add of a PPP-PHC model through comparative costing analysis of the two models.

Methods: The study employed activity-based costing. Direct and indirect cost were allocated to respective cost centres including direct materials (drugs and consumables), direct and indirect labour, overheads, and property and equipment.

Results: Initial results shows, in the initial phase of the partnership, the cost per capita for maternal service is higher in the PPP-PHC model than in traditional PHC due to the high capital investment. At the start of the partnership, the reimbursement to PPP facility was more than the expenditure until late 2016 where expenditure exceeded revenues. However, health expenditure by the non-PPP facility is consistently higher than the revenues throughout the study period.

Conclusion: The PPP was formulated on the premise on creating a value addition in healthcare with a view to achieving UHC. While the results show that revenues and expenditures of a PPP are significantly lower than the non-PPP models, full results from the costing study will be used to contribute to the current discourse on role of PPPs in achieving UHC. While the PPP could create demand for service, there is further need to understand their role in achieving efficient health systems in such low-income settings.

Determinants of use of skilled attendants at birth in East Gonja district of the Northern Region

Kipo Bii Bole, University of Ghana

Introduction: In the late 2003, Government of Ghana introduced a policy exempting women in the four poorest regions of the country (Northern, Upper East, Upper West and the Central) attending public and private health facilities from paying user fees for delivery care.

The strategy intended to get high levels of facility delivery and thereby to lower maternal morbidity and mortality. In year 2005 the strategy was increased to the remaining six (6) regions of the country (Bosu et al, 2007). Despite this free delivery care policy, the East Gonja District still records low skilled attendants at birth of about 37.9% with maternal mortality of 3 per 1000 live birth (East Gonja District Health Directorate, 2016).

Objectives: The study examines the association of maternal factors, access to reproductive health services, socio-cultural factors and the use of skilled attendants at birth.

Methods: The research approach was quantitative approach. I carried out primary data analysis of a cross sectional study design. A purposive sampling technique was used to interview 345 eligible mothers' respondents (15-49years), who had children less than one year of age prior to the study.

Collected data were coded and summarized using excel and exported into STATA and SPSS 14.1 for analysis. Multivariable logistic regression model was carried out. Adjusted odds ratio (AOR) and their 95% confidence intervals were calculated. P value less than 0.05 were considered significant.

Results: Among the mothers who were interviewed of their last birth, 37.97% (n=131) were delivered with skilled birth attendant while 60.87% (n=210) were delivered with unskilled birth attendants. Attending ANC was equally important, 92 (26.67%) women attended ANC during pregnancy and 253 (73.33%) did not attend ANC during pregnancy.

Conclusion: Less than 40% of women deliver with skilled birth attendants (that's 37.9%). The woman's educational level, her partner level of education, ANC attendants and occupation, cultural factors, parity are associated with a woman accessing skilled attendants at birth.

Keywords: Skilled attendants, Delivery, Birth, Maternal health, Obstetric care, East Gonja District and Antenatal care (ANC).

The role of partners in negotiating pre payment for maternal and child health services

Mwanaid Mlaguzi, Institut Sanitaire d'Ifakara

Introduction For years, there has been poor cooperation in preparation for accessing health services in a number of communities in developing countries. A number of influencing scholar looking on ways to improve quality and behavior change that will facilitate utilization of maternal health services advocated the need to in cooperate man on reproductive health.

From 2010 the national health insurance fund (NHIF) implemented a program covering heath services for pregnant women and later covers a family of a women with community health fund (CHF) for a year in district of Tanga and Mbeya region. The intension was to rise women purchasing power when seeking maternal and child health services during pregnant, delivery and after delivery. The program was designed to involve a man in accessing health services and later advocate the CHF enrolment.

Methodology The study team performed indepth interview with male partner, focus group discussion with female partner who benefited from maternal and child health pre paid insurance. Also the team conducted group discussion with health providers at community (CHW), at dispensary (facility incharge and nurses) at health centre with facility incharge and nurses working on reproductive and child health unit, at hospital with nurses working on reproductive and child health unit and at management level the team conducted group discussion with district health management team, regional management team and national health insurance team responsible on implementation of the program.

Result The result depict that the all pregnant women at a time of the program were enrolled. Not all women were able to receive the CHF card on time. The reason behind is most of them were not aware that they were enrolled in a program offering a free services at a time they are pregnant, during delivery and after delivery her household is covered by CHF for a year. For those who were aware, some failed to have the CHF as they did not brought pictures for their family on time and others were single mothers, so they did not see motive to enroll other members.

A number of male claimed that they were not aware of the program and if their wife were enrolled in the program.

Conclusion There is a need to intensify community sensitization on the implementation of the programs. Partners involvement negotiating maternal health services pre payment and utilization increases commitment and motives of males partner on their wives and newborns.

Performance Based Financing: A Qualitative Assessment and Cost Implication on burden on Disease in Cameroon

Okwen Patrick, Anendam Larinet: Bamenda Effective Basic Services

Background: Cameroon is lower middle-income country with modest resources. Despite increased spending in health, health outcomes are still progressing very slowly and Cameroon is still lagging behind key SDG targets. Performance-based financing has been introduced in Cameroon as a joint intervention by the ministry of health and the World Bank Group. An impact evaluation conducted in Cameroon suggested that PBF had impact on some health sectors and but not on others. Reflections on the approach have suggested that increasing demand may be strategic in making PBF even more efficient. There are existing opportunities including use of lay health workers that could be used to mobilize communities to support hospital performance and increase demand.

Objectives: To evaluate the financial contribution of PBF to health facilities in Cameroon. To evaluate the contribution of community involvement in improving health facility performance.

Methods: Community monitoring was developed as an approach to facilitate community mobilization process for healthcare demand, supporting health facilities to be more performant and adding value to the activities of community health workers. It utilized a community mobilization approach to provide feedback on community health priorities. This feedback considers community issues, hospital performance and community health workers performance and incorporated into hospital's business plan. The approach was used in four health districts in the North-West Region between 2015 and 2017 and 96 communities experienced this approach.

We calculated the contributions of PBF to hospital production (equity and quality bonuses), quality of care, outreach, and ability to use community voice for decision making. We focused on diseases with highest disease burden, including malaria, HIV/AIDS and sexual and reproductive health services.

A qualitative assessment is important because it helps with bringing out the experiences of communities, health facilities and community health workers, which will help in meaningfulness of the program to these groups. Experiences and meaningfulness have been shown to play a key role in global health, policy and practice, and the evidence ecosystem.

Results: Total quarterly productions increased for all indicators and across all districts by a mean of 3,722.8 score (R: 1,244 – 6,629) new services provided. Three out four districts showed mean improvements in quality of 3.5 points (R: 1.6 - 5.1) over 15 months period while one health district showed depreciation in quality by -12.3 points, with depreciations being uniform across all technical quarterly quality assessments.

Discussions: PBF has become trendy with African health systems. It is popular amongst healthcare workers. However, there is need to take relevant evidence to policy makers including cost analysis and impact on burden of disease.

Assessment of NHIS-MDG Free Maternal and Child Health Program in North Central Central Nigeria: Achievements and challenges

**Uchenna Ezenwaka, *Obinna Onwujekwe Emmanuel, **Hyacinth Ichoku Ement: Healt1.*
**Policy Research Group, **Department of Economics, University of Nigeria, Nsukka.*

Background: The Nigerian government launched a pilot health project, titled the "NHIS-MDG free Maternal and Child Health Program" in 2018. The program focuses to address the critical problem of access to health care services for pregnant women and children under five years in the country and

to accelerate the achievement of two of the three health specific MDGs (4&5). The program was implemented in some states in Nigeria between 2009 and 2015 using funds from the debt relief gains. The funds were directly disbursed by the MDG office in the presidency to the NHIS for use in providing the services to beneficiaries in the implementing states.

Aim and Objectives: This study assessed the implementation experiences of the free maternal and child healthcare program (FMCHP) with a view to identifying achievements and challenges faced by the program for reactivation and scale-up in Niger State, Nigeria.

Methods: The study adopted a descriptive qualitative design to assess the FMCHP at the state level and four PHC in two Local government areas in Niger State. A total of 29 in-depth interviews was conducted with relevant respondents (policymakers, providers, Health Maintenance Organizations) purposively selected to include those who were knowledgeable on the program and actively participated in implementation. We also conducted focus-group discussions (n=4) with 27 service users and facility ward development committee in communities where the program was implemented. A validation meeting was held with the respondents, to ensure accuracy of information obtained. Data were analyzed using manual thematic analysis derived from the study conceptual framework.

Key Findings: The FMCHP was reported to have positive improvements and increased service utilization as a result of availability and accessibility of services offered. It also led to marked improvement in the quality of health facilities. Most importantly, removal of financial barriers to accessing health care within the implementation period. However, non-payment of full counterpart funds affected the program continuity. Other health system factors that negatively affected the program were inadequate human resources resulting from the increased workload, weak monitoring and Health Information Management System.

Conclusions: The program's central achievement was removal of out-pocket payment which is one of the most severe impediments to accessing health services in Nigeria. Financial sustainability should be properly addressed if the program is to be reactivated, otherwise the country's health care system will remain unimproved and will not assure UHC for target beneficiaries.

Key words: FMCHP; MDG; NHIS; NIGERIA

Assessing sub-national health system's capacity to deliver primary care for diabetes mellitus and hypertension in Kenya

Robinson Omondi, Martin Njoroge, Kenneth Munge : KEMRI Centre for Geographic Medicine Research, Coast, Kilifi, Kenya

Background: The growing burden of non-communicable diseases (NCDs) presents an emerging challenge to Kenya's health system ability to provide interventions and services. Kenya's health policy aims to halt and reverse the rising burden of these diseases and to strengthen primary care services. Subnational (county) governments are crucial to delivery of health services in Kenya. This study critically appraised the subnational health system's current capacity to deliver services for diabetes and hypertension at primary care level.

Methods: We used a cross-sectional qualitative approach with primary care services at the county government level as the unit of analysis. We collected data through document reviews (policy, statutes and budgets), in-depth interviews with senior county officials (n=7) and with facility managers and front-line health workers (n=15) in one county in Kenya. Facility audits of staff numbers and mix, availability of medical equipment, and essential drugs, were conducted in 3 hospital clinics and 3 primary care facilities to triangulate interview findings. Data were analyzed using a framework approach.

Results: There were gaps in hardware elements of capacity including financing, human resources, service delivery and commodities as there were inadequate quantities of these resources to address the unique needs of diabetes and hypertension. Some tangible software elements of capacity such as organizational arrangements were present e.g. an official responsible for these diseases; though others such as treatment guidelines and adequate referral arrangements were absent. Power resided with political leaders and controllers of finance who influenced the resourcing and consequently the management of these diseases. As a result, facility managers felt unable to address the resource gaps that would have improved service delivery. Front-line workers felt the need for routine capacity building to offer the best service possible. Comprehensiveness of care was affected by the absence of equipment and the lack of staff diversity. Coordination and continuity of care were affected by poor information systems, staffing gaps and gaps in quality of care. Accessibility was supported through use of ambulances, increased investment in physical infrastructure and through waiver systems.

Conclusions: County governments should provide adequate resources required to fill in the hardware capacity gaps especially at primary care level. Tangible software capacity gaps such as standard treatment guidelines, training and supervision of front-line workers should also be urgently addressed to complement existing intangible software capacity.

Assessment of adolescents sexual behaviour as risk factor for HIV infection among in-school adolescents in Ondo State, Nigeria

Abdulazeez Adewale, University of Benin

Background: HIV/AIDS infection amongst adolescents in sub-Sahara Africa countries including Nigeria has attracted global attention and several studies have identified sexual risk behaviour as the major risk factor enhancing the transmission of HIV infection.

Rationale: The increasing cases of HIV infections amongst adolescents are worrisome, and the thus need to assess adolescents' sexual behaviour in order to identify the pattern and prevalence of risky sexual behaviours (RSBs) that can put them at the risk of contracting HIV infection and make recommendations to relevant stakeholders in addressing identified problems.

Methodology: A descriptive cross-sectional study design conducted in Ondo State Nigeria to assess sexual behaviour as a risk factor for HIV infection among in-school adolescents. Multi-stage sampling technique was used to select consented 400 in-school adolescents aged 15-19years and data collected with the aid of pretested, structured; self-administered questionnaire. Descriptive statistics such as frequencies and percentage distribution were used to show the distribution of the study sample according to selected study variables, statistical testing was done using Chi-square at the 0.05 level of significance.

Result: The study revealed that the major prevalent risky sexual behaviours among adolescents include early sexual debut, premarital sex, unprotected sexual intercourse and multiple sexual partner. Sexual activity rate was 28.7%, mean age of sexual debut15.7+7years, 38% of which was due to coercion (rape). 40.6% engaged in sex with multiple partners and the prevalence of unprotected sex is 62.6%. The majority (38%) uses condom prevent unwanted pregnancy rather than HIV and STIs.

Male gender is significant determinant of adolescents sexual behaviour, others include advancing age and class of respondents, polygamous family setup and single status. These determinants need to be modified to reduce the risk contracting HIV infection.

Respondents have good (59.0%) level of knowledge of HIV basic facts, prevention and cure, and good (67.0%) level of knowledge of the mode of transmission, and high (73.5%) level of basic knowledge of

sexual and reproductive health. There is a significant association between the level of awareness of HIV/AIDS and prevalence of risky sexual behaviours amongst adolescents at 0.05 level of significant.

Conclusion: High risky sexual behaviours in the form of early sexual debut, premarital sex, multiple sexual partners and unprotected sexual intercourse among the adolescents are risk of contracting HIV infection. All relevant stakeholders are recommended to promote specific intervention programmes that will enhance adolescents' knowledge of HIV and behavioural change in addressing the risk of HIV infection.

Political Instability: a major concern for Prepayment Health Financing in Sub-Saharan African countries

Yann Tapsoba, Ouagadougou Center for studies and researches on international development (CERDI)

The paper examines the role of political instability on prepayment health financing in Sub-Saharan Africa. Political instability reduces prepayment health expenditures. The effect passes by a tax revenues reduction and the disrespect of rules of law. In addition the cooperation between SSA countries and international community attenuates the adverse effect of political instability on prepayment health expenditures. The paper suggests taking actions to avoid political instability events, to find other sources of health financing except the tax revenues, mostly in period of political instability, and to promote the cooperation with international community and the respect of rules of law.

Economic Burden of Treatment for Child Undernutrition in Low and Middle-Income Countries: A Systematic Review

Rebecca Gathoni[1,], Jay Berkley[1, 2], Julie Jemutai[1]*
[1]KEMRI Wellcome Trust Research Programme, Kilifi, Kenya,
[2]Centre for Tropical Medicine and Global Health, Nuffield Department of Clinical Medicine, University of Oxford,

Background: Undernutrition is highly prevalent in low and middle-income countries with sub-Saharan Africa and Southern Asia accounting for majority of the cases. Apart from the human impacts including mortality and morbidity to affected children, there are huge economic impacts to households, society and the government that need further exploration.

Objectives: The main aim of this study was to determine the current state of knowledge on the costs of child undernutrition treatment(s) to households, health providers, organizations and governments in low and middle-income countries (LMICs).

Methods: We conducted a systematic review using Preferred Reporting Items for Systematic reviews and Meta-Analyses (PRISMA) guidelines. Literature search was done for articles published up to November 2017 for studies done in low and middle-income countries. Databases searched included PubMed-Medline, Embase, Popline, Econlit and Web of science. Additional articles were identified through bibliographic citation searches and Google scholar. Only articles including costs of child undernutrition treatment(s) were included.

Results: The literature search yielded 6177 articles, among these, only 44 met our inclusion criteria. The studies varied in the interventions studied, perspective(s) adopted and costing methods used with some studies reporting costs as low as US$0.44 per child and as high as US$1344 cost per child. The main cost drivers for households and community volunteers were the opportunity cost of time spent away from normal duties while seeking treatment. Personnel costs and therapeutic food were the main drivers of costs incurred by the government, health providers and organizations funding

interventions aimed at managing undernutrition in children. One of the coping strategies adopted by the households was employing people to take care of their duties while seeking treatment.

Conclusion: There is need to address the economic burden of child undernutrition on households, health providers and the government through collaborative and sustained effort. Researchers and other development partners need to team up to identify locally appropriate evidence based and cost-effective interventions. Further, this review recommends a standardization of the methods used and results reported in economic evaluations to facilitate meaningful interpretation and provide a useful means for comparing costs and cost-effectiveness of interventions.

Extent, distribution and correlates of household catastrophic expenditure for health in Kaduna state, Nigeria

Chukwuemeka Azubuike, Yewande Ogundeji, Kelechi Ohiri: Abuja Health Strategy and Delivery Foundation

Background: In Nigeria, household out-of-pocket expenditure (OOP) has been the major source of health financing, constituting about 73% of total health expenditure. This is mainly due to lack of financial protection, which is a predominate barrier of access to health services. High OOP often results in catastrophic health spending (> 5%-40% of total household expenditure on health), which leads to impoverishment especially for the poor and vulnerable. As Nigeria moves towards achieving universal health coverage by designing effective pro-poor financial protection schemes, evidence on the extent of OOP expenditures on health and catastrophic incidence on households are required for decision making. This study examined health expenditure among households in Kaduna state, to estimate the extent and distribution of catastrophic expenditure on health.

Methods: We utilized data from the Kaduna state 2017 household health expenditure survey. This survey reported socioeconomic, general expenditure, healthcare expenditure, and healthcare utilization data across a representative sample of 1020 households. The proportion of health expenditure relative to income was derived as follows: R= Hexp / HHInc * 100. Where R is the share of health expenditure in income, Hexp is the average monthly spending on health, HHinc is the average monthly household income. We also explored association between catastrophic spending and socioeconomic factors using regression models.

Results: The total annual per-capita OOP was 19,795 Naira ($64.9), which translates to catastrophic spending in 57% of sampled households and using a threshold of ≥10% of household income, whilst catastrophic spending was experienced by 36% of sampled households using a threshold of ≥40% of household income. In addition, 67.2% of the poor households experienced catastrophic health spending, compared to 41.5% among the richest households. Households were also more likely to incur catastrophic expenditures if the head of household was female.

Conclusion: At 19,795 Naira ($64.9), Kaduna OOP is relatively higher than the national average of 15,037 Naira ($49.3), which is the highest in Africa. It is evident that this burden is borne disproportionately by the poor and those in the rural areas. In the context of an absence of financial risk protection mechanisms, a vicious cycle of poverty, ill-health and poor outcomes is perpetuated especially among the poor. The poor in Kaduna state are well positioned to benefit from the social contributory scheme and other financial protection mechanisms being planned by the state to reduce out of pocket expenditure for the poor and vulnerable.

Equity and Universal Coverage: A Trend Analysis of WHO Target Indicators in then Context of Nigerian Health System

**Christopher Kalu, **Dr. Charles C. Ezenduka: *African Dept.of Health Adm& Mgt, UNEC, Nigeria, **Dept. of Health Adm& Mgt, UNEC, Nigeria*

Background: Improving and enhancing the performance or the overall functioning of the health system and achieving equitable access and affordability of healthcare services to all is a major effort towards universal coverage. The World Health Organization (WHO) proposed four target indicators for countries including Nigeria to use to measure progress towards achieving universal coverage (UC). They are: 1) Total health expenditure should be at least 4%-5% of the gross domestic product (GDP). 2) Out-of-pocket expenditure should not exceed 30-40% of total health expenditure. 3) Over 90% of the population is covered by pre-payment and risk pooling schemes; 4) close to 100% coverage of population with social assistance and safety programmes

Objective/Aim: The overall objective of the paper is to examine the relationship between equity and the attainment of universal coverage. Specifically, it aims at analyzing the Nigerian health system in relation to WHO target indicators for UC.

Methodology: The paper adopted the descriptive/trend analysis approach. This approach is suitable to the study mainly because of its relevance to achieving the objectives of the study. The scope of the study is from 2010-2018 and the data used in the analysis were sourced from the Nigerian health system records, documents and World Bank Development Indicator, (WDI, 2017).

Key Findings: The findings from the analysis revealed that out-of-pocket expenditure for health and poor service delivery are among the major contributors to the health inequity in the Nigerian health system. Moreover, the analysis showed that the Nigerian health system indicators is not in line with the WHO recommendations, resulting to low level of access to healthcare, rising health poverty, inequity, and low level of coverage among others.

Conclusion: This paper using WHO parameters for UC has once again shown the incidence of health inequities in the Nigerian health system. Inequities in access and use of healthcare services and coping with payments on treatment provide great obstacles to achieving UC in Nigeria and no doubt leads to low levels of financial risk protection, decrease affordability of service and general low levels of coverage with health services. There is need for Nigerian health system managers and administrators to draw lessons from countries (Ghana inclusive) that have achieved universal coverage.

Key Words: Equity, efficiency, universal coverage, WHO target indicators, Nigeria.

Health expenditure at the sub-national level in Nigeria: Evidence from the Kaduna State Health Accounts 2016

Yewande Ogundeji Abuja, Emeka Azubike, Kelechi Ohiri: Health Strategy and Delivery Foundation

Background: The health accounts provide accurate estimates of health expenditure, which are important for effective resource allocation and planning in the health sector. In Nigeria, two rounds of health accounts have been conducted at the national level. However, these national estimates do not necessarily reflect estimates at the subnational level, and hence cannot be reliably used for decision making and/or planning at those levels. This study presents the process of conducting a subnational health accounts and its results in Kaduna State, Nigeria.

Methods: We utilized data from primary and secondary surveys. Health expenditure surveys were administered to relevant organizations in the health sector for the reference year of 2016. Household health expenditure was derived from a household survey across a representative sample of households in the state. Secondary data were obtained from government audited reports and financial statements. We also utilized the health management information system (DHIS2) and conducted a health provider survey across a representative sample of health facilities to estimate

disease expenditure. Analyses were conducted using Microsoft Excel, STATA and the Health account production tool (HAPT).

Results: The aggregate health expenditure was estimated at N183 billion ($600 million), representing 7% of the state's GDP; 99% of which was on current expenditure (N181 billion). Government current health expenditure (CHE) accounted for only 7% of total CHE, and only 25% of this proportion was spent on primary care. Households spent about 81% of CHE, compared to a national average of 71.5% of CHE and the recommended benchmark of 30% of CHE.

Discussion and conclusion: The Kaduna state health financing system is heavily dependent on out of pocket financing (81% of CHE), which translates to catastrophic spending especially for the poor. A shift towards a well designed and implemented pooled prepayment mechanisms such as a contributory health insurance scheme would promote risk equalization and cross subsidization to reduce financial burden on the poor. In addition, given the governments meagre contribution to health expenditure (10%), there is a strong need to improve government prioritization and expenditure on health especially for primary care.

Effect of National Health Insurance Authority's medecine reimbursment prices on the occurrence and affordability of medecine co-payment practice among national health insurance acredited providers

Gyasi DP and Agyei-Baffour P, National Health Insurance Secretariat, Ghana Health Service Headquarters, Accra
Peter Agyei-Baffour (PhD), Department of Community Health, School of Medical Sciences, College of Health Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana;

In most developing countries, access to basic essential medicines needed to save lives may be impeded due to the menace of poverty that places larger proportion of the population from financial access to healthcare. Fortunately, Ghana introduced National Health Insurance in 2004 as means of financing healthcare, efforts at achieving universal health coverage and addressing gaps in health outcomes. However, infrequent reviews of the medicines reimbursement prices to contain the fluctuating economic trends makes National Health Insurance Authority's (NHIA) reimbursement prices become obsolete as quickly as they are set. This study evaluates the economic implications of infrequent reviews of reimbursement prices for tracer essential medicine on the occurrence and affordability of co-paid cost of medicines among accredited health facilities in Ejisu-Juaben Municipality. A cross-sectional study involving review of inventory records and invoices of purchases of thirty four tracer medicines allowable at all levels of healthcare was done retrospectively from March 2016-December 2016. A multi-stage cluster sampling was deployed to initially form clusters of health facilities based on ownership types of public, private, mission facilities respectively. Consequently, fifteen facilities were selected through simple random sampling from a sub-cluster of facilities formed within the main clusters based on level of care of the facilities. Quantitative method was used to assess micro-economic indicators of affordability based on daily minimum wage of clients, indirect and intangible cost on medicines. Providers' perceptions on affordability of co-paid cost of medicines were also sought through key informant interview. Data was analysed using Stata software version 12 and Microsoft Excel Version 2013. Sensitivity analysis was done to assess the robustness of the estimates over time. The study established medicine co-payment in majority (7 in 10) top ten OPD conditions in privately owned, few (4 in 10) top ten OPD conditions in mission and public health facilities accredited by NHIA. However, the amounts co-paid are generally affordable (FDW≤1). Frequent reviews or indexation of reimbursement may be helpful.

Keywords: Insurance, Reimbursement, Health, Pharmacy, Tariff, Price, Medicine

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