6th

AfHEA Biennial Scientific Conference

Theme: Towards Resilient Health Systems in Africa: The Role of Health Economics and Policy Research.

7th - 11th March, 2022

Virtual Host:
Kigali, Rwanda

Theme:

Towards Resilient Health Systems in Africa

The Role of Health Economics and Policy Research.
6th AfHEA Biennial Scientific Conference

7TH – 11TH MARCH 2022

Programme and Abstract Book

The 6th AfHEA Scientific Conference is organized in partnerships with the **Bill and Melinda Gates Foundation, World Health Organization Regional Office for Africa, African Health Observatory - Platform on Health Systems & Policies (UNFPA), Strategic Purchasing Africa Resource Centre (SPARC)** and **African Health Observatory - Platform on Health Systems & Policies**

Towards Resilient Health Systems in Africa:
The Role of Health Economics and Policy Research.
6th AfHEA Biennial Scientific Conference

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Abstracts

Organized Session 1-1

How have adjustments in public financial management and strategic purchasing contributed to COVID-19 health sector response? Lessons for building back better.

Authors: **Dr. Hélène Barroy, PhD.**, *WHO, Geneva, Switzerland,* **Jonatan Daven**, *National Treasury, South Africa, South Africa, Dr. Inke Mathauer, PhD., WHO, Genève, Switzerland, Aaron Asibi Abuosi, University of Ghana Business School, Ghana, Danielle Serebro, CABRI, South Africa.*

Description

The COVID-19 crisis has exposed systemic public financial management (PFM) bottlenecks in health spending. It has forced countries to adapt their PFM systems to provide greater financial flexibility and to tailor accountability systems to respond to this unprecedented crisis. Similarly, countries had to reconfigure their purchasing arrangements to respond to new and different demands for services. PFM and purchasing arrangements are closely related calling for a joint focus for research and policy advice.

The session will share global and country perspective on countries' PFM and strategic purchasing aspects of the health response to COVID-19. It will discuss barriers and enablers for an effective response, key adjustments that were introduced in countries to facilitate the health sector response, and lessons for how to rebuild and strengthen PFM systems and strategic purchasing arrangements to make them more responsive to future pandemics and capable to sustain efforts towards UHC.

The first presentation by Hélène Barroy, Sr Public Finance Expert of the WHO, will present key lessons on needed PFM adjustments emerging from the crisis, building on a WHO survey conducted in 180 countries in 2020. It will be illustrated by a presentation on South Africa, delivered by Jonatan Daven, Economist, at the National Treasury, South Africa, to reflect on recent adjustments made to health budgeting and spending modalities to facilitate an effective budgetary response to COVID-19, balancing flexibility and accountability in health spending in South Africa.

The third presentation by Inke Mathauer, Sr Health Financing Specialist of the WHO, will discuss reconfiguration of purchasing arrangements to provide COVID-19 related health services, as well as to continue provision of non-COVID-19 health services. A country presentation on Ghana, from Aaron Abuosi, Associate Professor Health Policy and Management, University of Ghana Business School, will follow to reflect on adjustments made to the benefit package, provider payment and contracting mechanisms over the past two years in Ghana.

A discussant, Danielle Serebro from CABRI, will join the end of the session to share concluding

remarks, building on extensive work conducted on the financing of COVID-19 and COVID-19 vaccine roll-out in the region.

Public Financial Management And Covid-19 Health Response: Key Lessons For System Reform

Dr. Hélène Barroy, PhD, *WHO, Geneva, Switzerland*

Aims and Objectives:

Public Financial Management (PFM) systems, which refers to the institutions, policies and processes that govern the use of public funds are core to good health sector and pandemic response management. A strong PFM system can ensure higher and more predictable budget allocations, reduced fragmentation in revenue streams and funding flows, timely budget execution, and better financial accountability and transparency. During a pandemic, PFM systems are tested in many ways, as was demonstrated during previous health emergencies such as Ebola and SARs, and in the current COVID-19 crisis. Challenges commonly faced by countries relate to: (i) estimating and formulating additional budgetary provisions, (ii) making sure that funds are available for service delivery units and are disbursed efficiently while maintaining due regards for control, (iii) ensuring public funds deployed for emergency response are tracked and accounted for in a transparent way. In this Rapid Review, the authors document how countries have used existing PFM modalities or refined their regular practices to enable a rapid budgetary response to COVID-19. The main findings are organized around the stages of a budget cycle.

Key Findings:

Our main conclusion is that countries that had already strengthened their PFM systems in line with global good practices were able to respond faster to COVID-19 public funding needs. We highlight examples of these practices such as program budgeting, flexible virement rules, legally mandated budget adjustments and the adoption of supplementary budgets, effective inter-governmental transfer mechanisms. Countries that have traditional and rigid input-based budgeting found it harder to move fast for COVID-19 fund deployment, although some new practices were adopted by countries to bring in flexibilities into input-based budgeting by grouping budget provisions for COVID-19 into a single envelope. Emergency regulations also allowed to simplify and accelerate spending modalities in some countries towards the “frontlines”, by fast-tracking spending authorization processes, accelerating disbursement of funds, and providing advance payments to purchasers and/or providers. Countries with stringent input-based budgeting and weak PFM systems had to resort to other mechanisms – creating off-budget Extra Budgetary Funds to pool and deploy resources. These Funds (since they operate outside budgeting rules) can further fragment health financing budget pools and are not subject to stringent budget reporting and accountability standards. Attention should be more on re-thinking regular PFM systems than sustaining new extra-budgetary and

parallel mechanisms. Moving forward countries are encouraged to build on those lessons to design future PFM systems for health.

Public Financial Management And Covid-19 Health Response In South Africa

Jonatan Daven, *National Treasury, South Africa, South Africa*

Aims And Objectives:

Like in many other countries, the COVID-19 pandemic was an unprecedented shock to South Africa as a society, but also to its public finances. Despite an already constrained pre-pandemic fiscal position, a relief package of R500 billion (approx. $33 billion, around 10% of GDP) was announced. This presentation aims to provide an overview of the PFM mechanisms used in South Africa's COVID-19 response and reflect on how well they worked, the lessons learnt as well as some of the challenges experienced.

Key Findings:

South Africa has a range of mechanisms to respond to emergencies and other extraordinary events in its PFM framework, several of which were used in the COVID-19 response. Some of these mechanisms are specifically designed for emergencies, whereas others were more routine budget mechanisms that were applied or adapted for the COVID-19 response. These included: A special adjustment budget; Virements within budget votes; Provincial disaster relief grant; Provisions for emergency allocations in the PFMA; In-year authorisation of spending announced in budget speech; Emergency procurement provisions and Introducing COVID-19 specific categories in basic accounting system. Key lessons learnt from the South African experience include the following. The uncertainty surrounding the pandemic has required considerable flexibility and it was useful to have a wide range of mechanisms available to fund the COVID-19 response. Different mechanisms proved beneficial for different purposes and in different phases of the response. Mechanisms that allow for rapidly augmenting allocations in-year were particularly valuable when funding needs are difficult to project, for example when budgeting for the COVID-19 vaccine rollout. Robust existing expenditure reporting systems with additional categories for recording COVID-19 expenditure assisted in continuously evaluating budget allocations but is dependent on consistent and uniform use by departments. In addition to these mechanisms, programme budgeting, which has been routinely used across government for at least two decades, gave departments flexibility to reprioritise funds for COVID-19 within and between budget programmes. Relaxation of procurement rules, while well-intended and possibly required to accelerate procurement of critical and scarce goods, also carries risk of abuse and corruption.

Adjustments In Purchasing Arrangements As Part Of The Covid-19 Health Sector Response: A Global Synthesis

Dr. Inke Mathauer, PhD, WHO, Genève, Switzerland

Aims And Objectives:

COVID-19 continues to have a tremendous impact on health systems, with countries around the world having reconfigured health service provision in order to meet the changing needs of their population. Importantly, purchasing arrangements play a key role in facilitating and supporting the adjustments in the provision of personal health services that are required due to the pandemic, for both COVID-19 and non-COVID-19 health services. Country health financing policymakers have taken action to adjust their purchasing arrangements. Critical purchasing actions include: expanding benefits and infoinforming public with clear simple, messages; adjusting payment methods and rates to new service delivery arrangements and ensuring continuity in funding flows to health care providers; using private sector capacities where needed; and establishing governance arrangements for accelerated decision-making and set clear reporting standards. This presentation summarises how countries have adjusted their purchasing arrangements to respond to COVID-10, explores what impact these adjustments have had on the health system and for UHC progress, whilst also outlining challenges. It concludes with lessons for building back better. The presentation is based on a survey with a focus on African countries, a rapid document review, and various country case studies from the African and other regions.

Key Findings And Lessons:

The most common strategies purchasers used to cope with increased funding needs were the reallocation of existing funds and creating greater flexibility in the use of funds. It was also reported that some purchasers had to get into deficit financing. The majority of the countries expanded their benefit package to include testing, hospitalisation and medication, with various countries also including teleconsultation and home-based care. Another frequent measure introduced by purchasers were financial incentives to motivate health staff working under difficult circumstances. Moreover, providing payments or incentives to increase intensive care unit bed capacity was indicated in about a third of the countries. However, one big challenge found across a number of countries is the gap between design and implementation of purchasing adjustments, due to capacity constraints as well as different interpretation of new rules. A key lesson is that strategic purchasing modalities need to be in place to enable rapid adaptation to the context of a pandemic crisis.

Adjustments In Purchasing Arrangements For Covid-19 Response In Ghana

Aaron Asibi Abuosi, University of Ghana Business School

Aims And Objectives:

In responding to the COVID-19 related health needs in Ghana, some adjustments were made in the purchasing arrangements as part of the service provision reconfigurations. The purpose of this paper is to share findings from a study that assessed Ghana's adjustments made in purchasing arrangements as part of the COVID-19 health sector response and analyse its impacts on the health system and health financing system as well as on UHC objectives. The study focuses on the following research questions:

- How effective have adjustments to purchasing arrangements been in supporting the COVID-19 health response?
- Do these modifications make purchasing more strategic?
- What have been the implementation challenges of these adjustments in purchasing?
- Which modifications and innovations should remain in the future?
- What is needed to "build back better"?

Methods

A mixed-method study was conducted, including a desk review and key informant interviews based on purposive sampling techniques. The key informants included policy makers from the Ministry of Health, Ghana Health Service and the National Health Insurance Agency, representatives of health facilities as well as patient representatives. For the quantitative aspect, we obtained claims data from COVID-19 claims in 2020 from hospitals for review which we analysed by means of descriptive statistics.

Key findings:

The MOH Ghana introduced several changes in the purchasing arrangements: the benefit package was expanded, by including testing, isolation and hospitalisation at no costs for the Ghanaian public; medicines and protective equipment were provided directly to hospitals by government and donors. However, additional supplies were needed by hospitals and claims submitted to government for reimbursement. The number of facilities designated for isolation purposes as well as to provide testing were increased through an accelerated accreditation process. While demand for non-COVID-19 health services slightly decreased, this was not substantial due to relatively low numbers of COVID-19 cases. Initial results suggest that these changes have been decisive to ensure access of people to critical COVID-19 health services. However, the information management system remained a challenge in influencing resource

allocation to and monitoring health providers. A key lesson emerging is that there is need for comprehensive stakeholder involvement to discuss strategic purchasing for effective epidemic response.

Parallel Session 1-1: Oral

Investing in Health systems Post COVID

COVID-19, Government Healthcare Investment in EAC and SADC Regions: The Role of Social Capital in Public Support for Healthcare Investment

Jack Chola Bwalya, *University College Dublin, Ireland*

The COVID-19 pandemic has injected a new dynamism into the East African Community (EAC) and the Southern African Development Community (SADC) Member States, to invest in their healthcare systems to curb the spread and mitigate the overall, lasting impact of the COVID-19 pandemic on their health sectors. Whereas previously, most countries' alleged commitment to finance public healthcare produced inadequate levels of support and weak implementation, the advent of COVID-19 has made EAC and SADC Member States cognisant of the need to earmark sufficient financial resources to health and to the building of a much more resilient healthcare system.

This paper reports on the first empirical analysis of the causal relationship between social capital, measured by membership in voluntary associations, in determining public attitudes toward governments in 15 countries belonging to two regional economic communities - the EAC and the SADC prioritising investment in healthcare. The analysis draws on the 2014 - 2015 Round 6 surveys based on national probability samples conducted by the Afrobarometer. Logistic regression results show that social capital is strongly and positively correlated with public opinion toward governments prioritising investment in public healthcare. The odds that the first priority is healthcare investment increases when there is a decrease of 1 point in structural social capital (odds=1.053 (1/0.950), $p<0.001$).

The results of this paper have significant policy implications for the countries that comprise both the EAC and SADC. From a policy perspective, it is imperative that policymakers consider prioritising public preferences as intrinsic factors within the government's policy priority-setting processes. Incorporating citizens' opinions into policy-making processes is fundamental to adherence to the resulting policies, because as key stakeholders on the ground, public views represent those of society as a whole.

Keywords: COVID-19, Healthcare-Investment, EAC, SADC, Social Capital

Leveraging Covid-19 Pandemic Response For Improved Health System Financing And Infrastructure Investment: Lessons From Ghana

Jacob Novignon and **Kwasi Gyabaa Tabiri**, *Kwame Nkrumah University of Science and Technology, Kumasi, Ghana*

The COVID-19 pandemic has exposed health system funding challenges across many developing countries. The needed infrastructure to effectively respond to the pandemic was absent in many developing countries. The inadequate resources meant that capacity to test, contact-trace and treat was limited and lock down strategies were ineffective. This resulted in policy makers resorting to various strategies to mobilize sufficient resources in response to the pandemic. This paper reviewed Ghana's efforts to mobilize domestic and external resources for the health sector in response to the pandemic. The paper also evaluated lessons from these strategies and highlights how these lessons could be leveraged to sustain financing for the health sector. To achieve this objective, we relied on information from three main sources; (i) the 2020 mid-year national budget produced by the Ministry of Finance, (ii) official documents from the website of the private sector fund for COVID-19 and (iii) the Ministry of Health. We conducted a desk review of these documents and extracted the necessary evidence. The results support the existence of fiscal space through external sources, partnership with non-state actors and effective public financial management (budget space). While external sources of financing were critical in the pandemic response, we did not find it to be sustainable, especially for debt distressed countries. We also show that the COVID-19 pandemic presents an important momentum to drive investment in health infrastructure across developing countries. The lack of a clear pandemic response strategy was also identified to be a major contributor to funding challenges. Steps to develop pandemic response strategies is, therefore, highly recommended. Also keeping the momentum created by the pandemic will be important to improve investment in the health sector.

Analysis Of The First 19 Months Of The Covid-19 Pandemic Response Process In Guinea: A Scoping Review

Delphin Kolie[1], *Fatoumata Namaren Keita*[1], *Alexandre Delamou*[1], *Jean-Paul Dossou*[2], *Jean-Pierre Olivier de Sardan*[3], *Wim Van Damme*[4] *and Irene Akua Agyepong*[5], *(1)University of Conakry, African Centre of Excellence in the Prevention and Control of Communicable Diseases, Conakry, Guinea, Conakry, Guinea, (2)Centre de Recherche en Reproduction Humaine et en Démographie (CERRHUD), Cotonou, Benin, (3)LASDEL, Niamey, Niger, (4) Public Health Department, Institute of Tropical Medicine of Antwerp, Belgium, Antwerp, Belgium, (5)University of Ghana, School of Public Health, Accra, Ghana*

Introduction:

The first case of the COVID-19 pandemic was notified on 12 March 2020. This study aims to assess the response process to the COVID-19 pandemic in Guinea, from the onset of the pandemic in Guinea to September 2021.

Methods:

We conducted a scoping review using policy documents and research papers on the COVID-19 pandemic in Guinea. For policy documents, we search through national COVID-19 electronic platforms and websites of the government and key national health institutions. We conducted

a thematic analysis, using a deductive approach, to assess the studies.

Results:

Between January 2020 and September 2021, the response to the COVID-19 pandemic is divided into five phases: anticipation of the response; response to the first wave with the sudden boost of political actions alongside the implementation of strict restrictive measures; lifting of restrictive measures; concomitant response to the second wave of the COVID-19 and several epidemics-prone diseases; response to the third wave of COVID-19 including the strengthening of vaccination activities. At the advent of the pandemic, ego and influence struggles were observed among key national health system actors, and this had likely affected the response to COVID-19, and to recurrent epidemics in Guinea. In addition, certain restrictive measures adopted during the response have had human and economic impacts on the population.

Conclusion:

Health system actors anticipated the response to COVID-19 pandemic, and (re-) adapted response strategies to the health and socio-economic context of the country as the pandemic evolved. There is need to work towards setting-up a governing framework for epidemic-prone diseases response with the full participation of national health system actors and institutions.

Keywords: Policy decisions, Coronavirus, preparedness, response, Guinea.

A Review Of Nigeria's Health Systems Response To Covid-19: Lessons For Strengthening The Health Systems For Improved Service Delivery

Chinyere Cecelia Okeke[1], *Chioma Amarachi Onyedinma*[1], *Benjamin Chudi Uzochukwu*[2] *and Obinna Onwujekwe*[3], *(1)HPRG, Enugu, Nigeria, (2)University of Nigeria Enugu Campus, Enugu, Nigeria, (3)University of Nigeria, Nsukka, Enugu Campus, Enugu, Nigeria*

Introduction

The COVID-19 pandemic has challenged the health systems of almost all the countries in the world. A strong health system is characterized by its ability to respond to emergencies while remaining resilient in delivering high-quality routine essential services promptly. This is not the case in most low- and middle-income countries, of which Nigeria is one of them, making them very vulnerable to COVID-19 pandemic. Prior to the pandemic, health systems had not received adequate attention. However, with this pandemic, the country's leadership has made efforts to respond to reduce its spread. These efforts are worth documenting, as they will inform policy makers and other stakeholders in Nigeria to reflect on the ways to adopt and scale up the positive measures identified.

Methods

A scoping review of published and grey literature including journals, news/ media documents and official documents that were published from 1st December 2019 to 31st December

2020 was conducted. The reviewers read and extracted relevant data using FACTIVA in a uniform data extraction template. The template was structured in themes using the health system building blocks and service delivery subtheme that captured technical support and interventions targeted at health workers was used for the manual content analysis.

Results

The identified interventions and strategies that have affected health service delivery were mostly technical support and interventions targeted at health workers. These included training of about 17,000 health workers, supervising and engaging more workers, upgrading laboratories and building new ones to improve screening and diagnosis, motivation of health workforce with incentives (financial and non-financial). There was an influx of philanthropic gestures and improved data and information systems, supply of medicines, medical products and non-pharmaceutical preventive materials through local production. Overall, the presence of political will and the government's efforts in health systems response to COVID-19 facilitated these interventions.

Conclusions

The interventions of state and non-state actors have to some extent, strengthened the health systems for improved service delivery. However, more needs to be done towards sustaining these gains and towards making the health system strong and resilient to absorb the unprecedented shocks.

Keywords: COVID-19, Health systems response, strengthening health systems, Service delivery, Nigeria.

Health System Resilience And Endemic: Evidence From The Covid-19 Outbreak

Albert Opoku Frimpong, *Department of Banking and Finance, University of Professional Studies, Accra, Ghana*

Background

The importance of resilience of health systems to contain endemics and pandemics has become an important international issue. For outbreaks increase mortality, reduce productivity, and cause negative externality. Coronavirus disease 2019 (COVID-19) was one such outbreak. Health expenditure reflects investment in health. Public health expenditure has been found to increase access to health services and improve health outcomes. There is, however, scarce evidence on the relationship between public health expenditure and the resilience of health systems to contain outbreaks.

Objective

This study explored the contribution of public health spending to the resilience of health

systems to contain the COVID-19 outbreak.

Methods

The study applied the probit regression model to cross-sectional data on 154 countries. The data were sourced from the World Bank's 2021 World Development Indicators and World Health Organisation's 2020 Coronavirus datasets.

Results

A higher probability of containing the COVID-19 was associated with increases in public health spending across time than in a year preceding the outbreak. Also, the results showed a positive effect of population density and a negative effect of physician ratio and tertiary school enrolment on the probability of a country reaching a COVID-19 endemic status.

Conclusion

Increases in public health spending over time increase the resilience of health systems to contain outbreaks. Public health spending allocated to both public and private health facilities, not only public health facilities, would increase the pace towards containing endemics.

Parallel Session 1-2: Oral

Strengthening Public Financial Management Systems

Examining The Implementation Of Public Financial Management Laws For Increasing Facility Autonomy And Their Impact On The Covid-19 Response: Insights From Five Counties In Kenya

Boniface Mbuthia[1], *Ileana Vilcu*[2], *Anne Musuva*[3], *Felix Murira*[3], *Felix Murira*[3], *and Nirmala Ravinshankar*[4], *(1)ThinkWell, Nairobi, Kenya, (2)ThinkWell, Geneva, Switzerland, (3)ThinkWell, Kenya, (4)ThinkWell, WA*

Background

Kenya's 2010 Constitution and 2012 Public Finance Management (PFM) Act mandate counties to deposit all revenues to the County Revenue Fund. Counties run public health facilities and are allowed, to develop their legislation to simplify fund flows to public facilities and grant them autonomy to retain own-source revenues. The Ministry of Health (MOH) gave advisories to allow public facilities' managerial and financial autonomy. However, there is variation in the way counties interpret the PFM Act and advisories affecting service delivery at public facilities, particularly during the COVID-19 pandemic.

Aims and Objectives

This study examined the impact of PFM laws on public facilities' in responding to the population's health needs during the COVID-19 pandemic. We purposively selected five counties (Isiolo, Kakamega, Kilifi, Makueni, and Nakuru) to capture variations in PFM arrangements.

Methods

We conducted interviews with county health managers and focus group discussions with public facilities managers to understand their experience with PFM arrangements, and how these affected their COVID-19 response. We reviewed legislation that counties developed as mandated by the PFM Act to assess how these affected PFM arrangements.

Key Findings

While one county is developing legislation to respond to MOH advisories, the other four already have such legislations. Two are reviewing their legislation to comply with the PFM Act and simplify funds flow to facilities. Currently, the funds flow in these counties is complex resulting in stock-outs of key supplies and unreliable transfers negatively affecting service delivery of essential and COVID-19 response. The other two have compliant legislations that simplify funds flow and grant autonomy to public facilities. Facility revenues representing 3% and 18% of health allocations in these counties are used to cover a portion of facilities' operation expenses. This was beneficial during COVID-19 in these two counties, allowing facilities to purchase

personal protective equipment and supplies as they waited for additional funding from counties.

Conclusion

As purchasers of primary healthcare services, counties can build resilient health systems by ensuring that public facilities have funds that they can flexibly use. This proved to be critical for facilities during the COVID-19 but also to improve quality service delivery in the public sector. Correct application of PFM laws allows simplified funds flow empowering facilities to better respond to population health needs.

Tracking Covid-19 Health Expenditures To Inform Efficiency And Equity Of Future Investment Of Pandemic, And Building A More Resilient Health System In Malawi

Emily Chirwa, *Ministry of Health, Lilongwe, Malawi, Atamandike Chingwanda, Health Policy Plus Project-Palladium Group, Lilongwe, Malawi, Mark Malema, Options Consultancy Services Ltd, Lilongwe, Malawi and Martina Mchenga, World Health Organization, Lilongwe, Malawi*

Background:

Tracking Covid-19 health expenditures is a key policy tool for informing the efficiency and equity of the Covid-19 response. Expenditure tracking in emergencies also serves as an important source of transparency and accountability in the context of large flows of funds and limited fiduciary risk assessments. In Malawi, Covid-19 health expenditure tracking was even more important given the fact that the health system is ordinarily characterized by leakages, donor fragmentation and inefficient allocation of resources.

Aims And Objectives:

To inform the efficiency and equity of future investments in response to the Covid-19 pandemic and build a more resilient health system.

Methods:

An Excel data collection tool was designed in line with the System of Health Accounts framework. The tool was used to capture Covid-19 health expenditure data for 2020 across healthcare financing agents, implementing agents, and level of implementation. Data were collected from government institutions, donors, and non-state implementers of donor-funded programs through workshops and via emails. The National Health Accounts Production Tool was used to analyze the expenditure data.

Results:

Our findings show that the total Covid-19 health expenditure, TCHE in 2020 was US$93, 869,153, which translates to US$5.34 per capita. Donors contributed 80.6% of TCHE, the government contributed 10.2%, and the private sector contributed 9.2%. Government Covid-19 health expenditure as a share of TCHE is significantly small relative to Burkina Faso (78.7%) which has

a similar per capita health expenditure (US$40). 84% of the TCHE were new additional funds to the healthcare system. There was limited flexibility in spending with 84% of TCHE strictly earmarked for activities.

62% of TCHE was pooled under non-profit institutions serving households (NPISHs), 27.8% under non-resident donors and 10.2% under government. Curative spending at 15.8% of TCHE was relatively low despite the healthcare system requiring massive infrastructure, medical equipment and health worker investments in response to the pandemic. Sub-national spending was also not related to actual or anticipated disease burden as Lilongwe (24% of total cases) and Blantyre (34% of total cases) had 1.8% and 1.5% of sub-national level expenditures, respectively.

Conclusion:

The Government of Malawi should increase health budgets towards the Covid-19 pandemic response. Efficiency and equity can be improved through more flexibility in the allocation of funds amongst Covid-19 activities and through focusing more on potential hotspots. The major limitation of the study is that it does not include household-level data due to time and financial constraints.

Improving Public Financial Management (Pfm) To Support The Health Objectives Of Nigeria's Federal Ministry Of Health (Fmoh)

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Background

As low- and middle-income countries (LMICs) pursue universal health coverage (UHC), the strategic use of public financing is critical for making progress towards more equitable coverage. Governments' challenges stem from being able to connect financing with achieving UHC. Most public-sector healthcare funds in many LMICs are often deployed through traditional input-based, line-item budgets and channelled via routine PFM systems. An assessment of the PFM cycle of the FMOH highlighted the disconnect between budget and UHC priorities and informed the technical support provided by Results for Development (R4D) for the reform of FMOH's budget process through funding by the Bill and Melinda Gates Foundation (BMGF).

Aims and Objectives

This paper highlights how R4D supported FMOH to make its budgets more targeted, aligned to priorities, with stronger monitoring mechanisms for tracking output performance across different domains. The expected outcome of R4D's support is for the FMOH to make health care expenditure more strategic and results-oriented.

Methodology

This support adopted a Human Centered Design (HCD) and three propositions based on R4D's work in-country to reform PFM systems to become more strategic:

1. Employing a "whole-of-government" perspective for budget formulation and execution
2. Targeted/results-based, routine monitoring and evidence generation to track output performance
3. Formation of an explicitly designated, well-designed collaborative unit; a planning and budget committee (P&B Committee) within the health ministry

Key Results and Lessons Learned

This support has revealed that:

- To track the budget seamlessly, it is important for the priority activities in the annual operational plans (AOP) to align with those in the budget.
- To address communication breakdown, a common language that appeals to the ministry's departments, agencies and programmes (DAPs) is required to form a unified approach to the budget cycle concerning health objectives.
- Frequent changes in the membership of the committee and leadership flux at the FMOH were key variables that influenced the outcomes.
- Finally, the bureaucratic bottlenecks of the system and inadequate government funding impacted timelines of planned activities and expected results.

Conclusion

This support has confirmed the importance of tracking budget performance in building a better health system. It has also provided evidence-based information to advocate for more resources from the government to fund these processes adequately. Finally, funding, technical, and civil society partners can prioritize this budget process-focused agenda as a salient component of broader PFM and strategic purchasing reforms in Nigeria.

Strengthening Financial Management Systems In Tertiary Hospitals: A Case Study Of A West African National Hospital

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Background

A major challenge that has plagued healthcare organizations in low- and middle-income countries (LMICs) is poorly managed financial systems. In healthcare, an efficient fiscal system ensures that scarce resources and risks are optimized to help achieve sustainable financial goals and aid the delivery of quality healthcare services to patients. Establishing effective financial governance and control systems, transparent and detailed financial reporting, adequate cash flow and cash handling management amongst others are requisite for organizing an effective financial management system. This paper highlights the impacts of a weak financial management system on service delivery in a West African tertiary facility.

Methodology

Our assessment approach was both qualitative and quantitative. First, we developed a comprehensive financial management assessment tool (FMAT) with a focus on key domains including financial governance, budget and planning, internal control, information systems relevant to financial reporting, insurance/payor administration, cash, and revenue management. In addition, a patient satisfaction survey tool was developed. Second, we assessed the facility's fiscal system using the assessment tool via a mix of process observation, key informant interviews and review of relevant documents. Third, we analyzed assessment data using a thematic and narrative analytic approach. We held a co-creation session with the facility's management team to develop and prioritize high-impact and low-cost interventions to address identified weaknesses.

Findings and Discussion

Results from the assessment revealed significant weaknesses in the hospital's overall financial management system. The financial management system had an average quantitative score of 36% which indicates a low performance and medium risk rating. Weak internal control/ audit systems, inefficient financial information systems, poor cash and revenue management practices predisposed the facility to financial losses and fraud. Several interventions were co-developed with the stakeholders, including expert coaching on financial reporting and controls to the fiscal team, and the development and use of requisite financial policies and guidelines. These interventions have led to streamlining of the cash collection process through outsourcing, with the construction of central cash points ongoing. Institutionalization of periodic audits and monthly financial performance reviews have also been implemented to strengthen the facility's fiscal system to improve the efficiency of revenue generation and expenditure.

Strengthening Public Financial Management For More Efficient Health Financing Reforms

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Background

Public financial management (PFM) in health systems offers an opportunity to improve the efficiency of public spending through proper accountability and transparency, planning, and control of financial activities. In addition, health financing reforms in many countries include the implementation of health insurance schemes and decentralized facility financing, which both have a critical PFM component. However, historically, there has been less emphasis on the role of PFM in health financing and health systems reform. Our paper describes the design and effects of a PFM intervention for primary healthcare at the sub-national level in Nigeria.

Methods

The PFM interventions were designed to address specific challenges identified by a previous diagnostic of the health system, which highlighted weak technical capacity, and oversight needed for effective PFM for primary health care (PHC). These PFM interventions included:

- **Capacity building:**

  targeted capacity building of 25 LGA PHC accountants to improve both computer literacy and PFM skills required to prepare, review, and utilize financial reports. Accountants acquired capacity and began submitting monthly reports timely.

- **Innovation:**

  A mobile platform was created through the WhatsApp mobile application between April to September 2020 to enable reporting summaries of financial transactions and virtual technical support and mentorship.

- **Institutionalization:**

  To encourage institutionalization and ownership, mentors from within the state PFM technical working group were trained to provide virtual technical assistance on the mobile platform. However, low demand for and use of financial reports by oversight Agencies potentially affects sustainability.

Results

Over 80% of Facility Managers trained showed significant improvement in PFM knowledge and processed based on pre and post-test scores. In addition, the timely submission rate of financial reports increased from 0% in March 2020 to 86.7% by September 2020 across all pilot facilities. Data from the financial reports aided the PHC system fund transparency and accountability at the service delivery level. However, towards the end of the pilot, motivation from the state mentors on the virtual app had significantly reduced and there was limited demand for financial data from oversight agencies for PHC

Conclusion

Targeted interventions on PFM yield considerable results in improving the capacity of key actors and establishing best practices and procedures for financial reporting. However,

oversight agencies at the subnational levels must increase the effectiveness of their coordination role through regular demand for financial reports and the status of financial management at the PHC facilities to ensure that the gains are sustained after the project.

Parallel Session 1-3 Oral

Decision Models And Quality Of Care

Developing The Eq-5d-5l Value Set For Uganda Using The 'Lite' Protocol

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Background:

In African countries, methods of health technology assessment including economic evaluation have been increasingly used to inform healthcare resources allocation decisions. However, until September 2021, only one EQ-5D-5L value set for Ethiopia was available. As the EQ-5D value set reflects the social preferences of a population, a country-specific EQ-5D-5L value set is preferred and would provide valuable information to inform future economic evaluations in a context where better decisions regarding resource allocation are essential.

The standardised EQ-5D valuation protocol requires a representative sample of 1,000 participants from the general population with each completing 10 composite time trade-offs (cTTO) and 7 discrete choice experiment (DCE) tasks, which could be resource-intensive and cognitively burdensome.

Objectives:

Therefore, in this study, we proposed a 'lite' version of the EQ-5D-5L valuation protocol, requiring a smaller sample by collecting more cTTO data from each participant and applying it to develop an EQ-5D-5L value set for Uganda.

Methods:

Adult respondents from the general Ugandan population were quota-sampled based on age and sex. Eligible participants were asked to complete 20 composite time trade-off (cTTO) tasks in the tablet-assisted personal interviews using the offline EuroQol Portable Valuation Technology software under routine quality control. No discrete choice experiment task was administered.

The cTTO data were modelled using four additive and two multiplicative regression models. Model performance was evaluated based on face validity (larger decrements for more severe problems), prediction accuracy in cross-validation and in predicting mild health states. The

final value set was generated using the best-performing model.

Results:

A representative sample (N=545) participated in this study. Responses to cTTO tasks from 492 participants were included in the primary analysis. All models showed face validity and generated comparable prediction accuracy. The Tobit model with constrained intercepts and corrected for heteroscedasticity was considered the preferred model for the value set based on better performance.

In the final value set, the relative importance of dimensions is pain/discomfort (most important), mobility, self-care, usual activity and anxiety/depression (least important). The value set ranges from -1.116 (state 55555) to 0.943 (state 11112, 2nd best) and 1 (state 11111, full health).

Conclusions:

This is the first EQ-5D-5L valuation study using a 'lite' protocol involving cTTO data only. Our results suggest its feasibility in resource-constrained settings. The established EQ-5D-5L value set for Uganda is expected to be used for economic evaluations and decision making in Uganda and the East Africa region.

The Financial Architecture Of Vector Borne Diseases In Burkina Faso

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Introduction

Vector-borne diseases (VBD) are responsible for over 17% of all the infectious diseases globally causing more than 700,000 deaths annually. Despite the availability of effective interventions for many Vector-borne diseases, a lack of resources prevents their effective control. More financial resources are required for VBD control. But there is little published information about the domestic and international financial resources allocated to VBD. More specifically we do not know much about levels, trends and allocation of domestic and donor financing of VBD related activities. Thus, there is a need for empirical assessments to determine current resource allocations. The specific objectives of this study were to map the main funders of VBD in Burkina Faso and to explore how investment decisions on VBD by the funders who reported data from 2015-2018 have been allocated among diseases and particular activities.

Method

Our research framework was grounded in political economy analysis and different frameworks in public policy analysis. The study was a case study design focused on Burkina Faso and primarily based on secondary data in addition to some qualitative analysis. Budget allocation and expenditures data from 2015 to 2018 were collected from the NTD program and a fund

management institution of the Ministry of Health. Annual reports and financial reports were used for data extraction. Data were extracted from these datasets and pooled in a unique database. The database included variables such as Budget mobilized and allocated, expenditures, source of funding and type of activity. The descriptive analysis explored levels, trends and allocation of domestic and donor funds for VBD.

Results

Most of the sources were from external donors (7/8). The government has funded only 4% of activities. The trend of sources of financing was discontinued. Over time some sources disappeared and some appeared. Sources were 5 in 2015 and 2016, 4 in 2017 and 6 in 2018. In terms of activities, 28% of activities were related to prevention followed by surveillance and monitoring and evaluation from 2015 to 2018. There were few variations between mobilized, allocated and expenditures over time. In terms of expenditures, more than 85% of allocated resources were spent. Activities were mainly concentrated in Lymphatic filariasis, onchocerciasis and schistosomiasis.

Conclusion

The findings highlighted the persistent dependence of health financing on donors' funds. This situation questions the sustainability of activities for vector-borne diseases control and the achievement of elimination of vector-borne diseases in low incomes countries.

Application Of Decision Analytical Models To Diabetes In Low- And Middle-Income Countries: A Systematic Review

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Background:

Decision analytical models (DAMs) are used to develop an evidence base that is used in impact and health economic evaluations, including to evaluate interventions to improve diabetes care and health service—an increasingly important area in low- and middle-income countries (LMICs), where the disease burden is high, health systems are weak, and resources are constrained. Compared with large-scale real-life randomised control trials and cohort studies, DAMs can produce evidence of the health and economic benefits of interventions in an affordable and timely manner, while overcoming ethical issues, by using mathematical and logical relationships to abstract vital aspects of reality/systems for analysis.

Objective:

This study examines how DAMs, Markov, system dynamic, agent-based, discrete event simulation models, and hybrid of these models have been applied to investigate non-pharmacological (NP) policy interventions, what gaps exist in their use, and how to advance

their adoption to diabetes research in LMICs.

Method:

We conducted a systematic search of peer-reviewed articles published in English between 2000 and 2020 in PubMed, Cochrane, and the reference list of reviewed articles. Articles were appraised based on publication details, model design and processes, modelled interventions, and model limitations.

Key Findings:

Thirteen studies were included (six Markov, six microsimulation and one agent-based model), most of which modelled interventions in the Chinese subpopulation. All studies, except one, assessed health-targeted interventions. Almost half did not report on the type of model validation conducted Among the six studies reporting model validation, four conducted external validity and two combined four validation types: face-validity, internal, external, and cross validity. Twelve out of the thirteen reviewed studies reported uncertainty analysis. Most studies do not report on model validation or economic evaluation of interventions. Only four studies modelled policy interventions among diabetes patients; most studies were on sub-populations at risk and only one fiscal policy (tax increment) was evaluated. All studies reported limitations with obtaining sufficient data for modelling.

Conclusion

: This review provides a summary of DAMs used in studying NP diabetes interventions in LMICs to identify existing gaps in their adoption and how to advance the development of appropriate DAMs for studying NP policies intervention for controlling diabetes. The study recommends that LMICs should leverage the usefulness of DAMs for developing evidence to support economic evaluation of population-wide NP policy interventions, particularly fiscal policies, for controlling their escalating diabetes burden.

Optimizing Health Investments Through Health Benefits Package Modelling: A Case Study Of The Nigerian Ward Health System

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Background:

Policy makers must make choices about the allocation of scarce resources given budget constraints. Decisions have become increasingly pressing since the COVID-19 pandemic with weak efforts at ring-fencing. To influence budgetary decisions, policy must be evidence-based. Health Benefits Packages (HBP) are a tool frequently used in low-resource settings for priority

setting to ensure more can be delivered given resource constraints.

Aim:

Using a framework for HBP design to assess the cost-effectiveness of interventions currently included in Nigeria's Ward Health Service (WHS) package. Modelling the optimal benefits package for Nigeria based on the current budget and using a feasibility study to assess the net health losses that could be resolved through systems strengthening and additional PHC investments.

Methods:

A model was created in Microsoft Excel. Incremental Cost-Effectiveness Ratios (ICERs) were applied to interventions based on the current WHS package, using the Tufts Global Cost-effectiveness Analysis Database. Interventions were then compared to a Cost-effectiveness Threshold (CET),[1] and those with an ICER below the CET were deemed cost effective. Per patient costs and DALYs averted for each intervention were estimated with inputs from the One Health Tool, and then scaled up to population estimates. The Net Health Benefit (NHB) of the total service package was estimated to understand the health gain which can be achieved by providing services at capacity utilisation (100%) with the implicit budgetary requirement. Varying feasibility constraints were applied to reflect different levels of health system utilisation. This was used to estimate the consequences of Nigeria's current health systems constraints, primarily from under-investment, i.e., how much NHB is being lost from not having a fully functioning health system.

Results:

The model estimates the optimal HBP for Nigeria given the current health budget and expected impact of population health; whilst also indicating the cost to the health system of current constraints (both supply and demand side) as demonstrated by the loss of net economic benefit. The model also highlights where investments in scaling-up interventions could be made versus investment in system strengthening to enable increased coverage. This can inform effective resource allocation decisions based on current HBP expenditure; and influence new investments in system strengthening.

Conclusions:

Findings can be used to prompt further discussion between government, donors and stakeholders around the trade-offs involved in the provision of health services, increased health investment, and resource allocation.

[1] Estimated CET for Nigeria is based on Ochalek et al. (2018) range of $214-$291

Peer Effects And Quality: Neighbouring Facilities Responsiveness To Quality Changes

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Background

An increasing number of LMIC health systems are developing, standardising and routinely measuring quality indicators in order to evaluate quality standards and indicate areas – both geographic and thematic – of poor performance. While measuring quality can reveal shortcomings, it is debatable whether, without accompanying material incentives, this is sufficient to improve quality in circumstances it is revealed to be sub-par. Recent evidence has suggested that performance measurement may be able to induce health care quality improvements through intrinsic motivation and reputational concerns

Aims and Objectives

We investigate whether health facilities in South Africa adapt their quality in response to changes in quality measures of their 'peer' health facilities, even in the absence of material incentives for doing so. Specifically, we examine whether public reporting of a standardised measure of facility quality can induce a form of yardstick competition based on comparative performance information.

Methods

Using a census of public primary health facilities in the country, we exploit data on ten structural and process components of quality, examining how these measures change from 2014/15-2016/17. We examine facilities strategic interactions using both a spatial econometrics approach and a more traditional approach exploiting a quality improvement programme as a source of exogeneous variation to estimate the response of facilities to changes in the quality of their peers.

Key Findings

Our results suggest that even without accompanying financial reforms, linking facilities reimbursement with quality indicators, measurement and reporting may be sufficient to stimulate quality improvements.

Main Conclusions

These findings strengthen the case for improving data collection systems and suggests there may be alternatives to health financing reforms for improving the quality of health care delivered. An increasing number of health care systems in low- and middle-income countries are introducing and routinely measuring quality indicators at health facility-level, however,

much focus for improving the quality of health care supplied has been on financial reforms. This suggests that peer-to-peer quality reporting may have similar quality improvement potential. Further research is required into the precise mechanisms such quality reporting acts upon to understand if public reporting is a potential substitute or complement to financially induced quality improvements.

Economic Evaluation, Its Role And Possible Impact In The Public Health Emergency Management Of Disease Outbreaks And Response In Africa

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Backgrounds:

The COVID-pandemic significantly affects the global economy and in particular the African continent. As part of the response to this pandemic, a continental based organization, Africa CDC, has developed a wide range of response and mitigation strategies. To curve the pandemic, there exist theoretical understandings that economic evaluation (EE) can play an important role in priority setting at the different levels. There exists limited EE applicability within the contexts of public health emergency management (PHEM) which are characterized by recurrent and unexpected disease outbreaks as well as its impact on resources for managing health consequences of natural and human-made disasters, emergencies, crises, and conflicts.

Objectives:

This qualitative analysis aims to highlight the role of EE within the context of public health emergency management (disease outbreak warning and response) setting and assess the possible impact in the public health emergency management of disease outbreaks and response in Africa.

Methods:

A purposive sample of twelve key informants within Africa CDC was selected, and the participants have acquired an extensive work experience within Africa CDC and were nominated in line with the study purpose. A qualitative analysis technique, employing a key informant guide, was used for the interview sessions and a series of consultations made to shape the themes. Supplementary document reviews such as strategic documents, policy guidelines and statements were conducted. Four themes from the qualitative analysis were identified and employed the logic model to illustrate further the casual link and possible impact chain of EE within the PHEM settings.

Findings:

With a continuing COVID-19 global pandemic and future possible global health security concerns, EE could play a wide range of roles highlighted across the public health emergency management cycle (PHE preparedness, early warning, response and recovery) for the continental decision-making as well as to strengthen country's public health emerging outbreaks response decisions. The role of EE was defined for generating evidence related to the value-for-money, for investing in the emergency management of the disease in the continent, relevance to consider resource/economic cases in outbreak preparedness and response and synthesizing evidence to inform policy decision-making.

Conclusion:

A huge potential role of EE can be maximized in the public health emergency management sitting to effectively and efficiently use the limited resource in the continent, and there is a need to widen the applicability of EE tools and methods across the emerging disease outbreak management at different levels.

Parallel Session 1-4: Oral

Impact of COVID on Health Services

Impact of Covid-19 on public healthcare access in Madagascar

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Introduction:

Having caused unprecedented damage to the healthcare service delivery systems in Madagascar, the Coronavirus (Covid-19 pandemic), remains a major public health threat. The first case of Covid-19 in Madagascar was declared on March 19, 2020, and by the end of September 2021, the country had over 42,392 confirmed cases and 928 recorded deaths. This study describes the impact of the Covid-19 pandemic on the users of community public healthcare facilities during the period 2019 – 2020 in Madagascar.

Methods:

We used data from the Information System of the Ministry of Public Health, DHIS2 covering the period from January 1, 2019, to December 31, 2020. We analyzed the indicators of the use of community healthcare facilities including the rates of use of family planning services, vaccination coverage (DTP3), antenatal-care services, delivery at the health center, and outpatient consultation services

Results:

A decrease of 3.2% points in the contraceptive prevalence rate was observed, falling from 27.6% in 2019 to 24.4% in 2020. The coverage rate of DTP3 dropped from 92.2% in 2019 to 86.4% in 2020. Prenatal care declined from 35.1% to 29.2%. Outpatient visits (47.3% in 2019 to 46.3% in 2020) and childbirth at health centers dropped from 33.7% in 2019 to 28.9% in 2020.

Conclusion & Recommendation:

This study demonstrated that access to healthcare facilities during the early stages of the COVID-19 pandemic impacted community healthcare service users particularly for child and maternal healthcare. Devising effective strategies for maintaining access to healthcare services as Covid – 19 continue to play out during this epidemic are recommended.

Impact Of Covid-19 On Use Of Maternal Healthcare Services In Malawi

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Background

The COVID-19 disease has been very disruptive to all health systems across the globe. Malawi reported her first three COVID-19 cases in April 2020 in Lilongwe soon after Government declaring a State of national disaster to manage the COVID-19 pandemic. Being a novel disease, its impact on service use is not clear but it is possible a rational being would shy away from using healthcare services either in anticipation that healthcare providers are overwhelmed with taking care of COVID-19 patients or be afraid of contracting the disease as healthcare facilities are congested with COVID-19 patients.

Objective

This study assessed the impact of the COVID-19 pandemic on use of maternal care services in Malawi.

Methods

Using interrupted-time-series analysis of monthly administrative data between January 2017 and March 2021, the study assessed whether the level and trend of number of pregnant women with at least four ANC visits, number of pregnant women with their first ANC visit in the first trimester, and facility delivery changed.

Results

At the national level, while the level remained unchanged, the trend of ANC visits per pregnant woman decreased by 100 women every month (p=0.045). There was no observed impact on number of pregnant women with their first ANC visit in the first trimester, and facility delivery. In the Northern Zone, the level and trend of number of women with at least four ANC visits decreased by 223 (p=0.009) and 13 (p=0.034), respectively. The level of facility delivery decreased by 347 (p=0.009). For the Central Eastern Zone, the level of the number of women with at least four ANC visits decreased by 265 (p=0.018) while the trend in women who delivered at a health facility decreased by 83 women per month (p=0.003). In the Central Western Zone, the number of women who had at least four ANC visits decreased by 34 women per month (p=0.008). Lastly, in the Southern Eastern Zone, the number of women who had at least four ANC visits decreased by 348 women per month (p=0.038).

Conclusion

The findings suggest the pandemic suppressed service use implying that while it is very important to attend the needs coming with the pandemic, efforts should be made to ensure those in need of other healthcare services are attended to otherwise the potential negative effects could be devastating, especially in contexts like Malawi where maternal healthcare outcomes are sub-optimal.

Impact Of Covid-19 Lockdown On The Economy Of A Low-Resource Setting

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Background:

The lockdown policy imposed in response to the COVID-19 pandemic has restricted various businesses, including trading, interstate travel for purchasing/selling and supplying goods and services, hospitality industries, and state revenue generation. This study assessed the impacts of COVID-19 lockdown on the economy of a Nigerian low-resource community.

Methods:

This study was a descriptive cross-sectional survey conducted in Ado-Odo Ota local government area (LGA) of Ogun State, Nigeria. A structured questionnaire was used to collect data on the economic impacts of COVID-19 lockdown from 383 participants aged 20 to 60 years in January and February. Data analysis was done using IBM-SPSS version 25.

Results:

Only 29.2% were doing their main works during the lockdown, 26.1% lost their jobs, 34.5% experienced salary cuts, only 6.5% got regular salaries, 6.0% worked from home and received full payment. Concerning livelihood during COVID-19 lockdown, more than half (53.8%) said they could not meet basic needs. All respondents (100.0%) said food prices and other necessities were higher during the lockdown than before. The rate at which people lost their jobs during the lockdown was 18.74 [95%CI-6.20 – 56.60; p<0.001] and 4.32 [95% CI-1.50 – 12.43; p<0.001] higher among the staff of private organizations and those doing personal businesses than among government workers. The rate of clients/customers loss was 15.21 [95% CI-7.59 – 30.51; p<0.001) and 7.07 [95% CI- 3.26 – 15.34; p<0.001] higher among self-employed and private companies than government establishments.

Conclusion:

Every worker should have job security to mitigate job and income loss during a crisis. The government should also make loans and grants available for small businesses, particularly during times like this. Government should provide food security by subsidizing goods and providing palliatives to help meet the daily needs of hard-hit during crises, which would help limit the emergence of criminal activities.

Keywords: COVID-19, lockdown, economy, pandemic, coronavirus

Socio-Economic Impact Of The Measures Accompanying The State Of Health Emergency Declared Following The Declaration Of The Covid-19 Epidemic In D. R. Congo

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Introduction

Since the beginning of 2020, the COVID-19 epidemic has spread around the world. In all affected countries, governments have taken strong measures to stop the spread of the epidemic. In the DRC, where the first case of Covid-19 was notified on 10 March 2020, the President of the Republic declared a state of health emergency from 24 March to 21 July 2020, accompanied by measures to reduce interaction and population movements (closure of borders, suspension of flights from high-risk countries, ban on gatherings of more than 20 people, ban on the opening of discotheques, bars, terraces, restaurants, etc.). The application of these measures has had an impact on the lifestyle of the population, more than 80% of whom live from economic activities in the informal sector.

Objective

This study was to determine the socio-economic impact of the measures taken against the Covid-19 epidemic during the state of health emergency.

Methodology

This is a case study based on a literature review, combining grey and scientific literature complemented by in-depth interviews with health authorities and opinion leaders.

Results

The DRC has suffered a serious shock from the Covid-19 pandemic: Less than 6% of companies in three major cities of the DRC (Kinshasa, Goma, Lubumbashi) have put employees on technical leave since April 2020. In Goma, 13% of economic units have given technical leave to their employees, 59% of whom are women. The measures taken against the pandemic are having a significant impact on local import-dependent activities and on the informal sector. Approximately 55% of households have seen their incomes fall. There has been an estimated loss of revenue of $40 million for the airline company Congo Airways; $3.3 million for the Congo National Railway Company; and $6.68 million due to the closure of bars, restaurants and terraces. There was also an economic recession. A very sharp depreciation of the national currency was noted, from 1,750 to 1,850 FC/USD.

Conclusion

In the DRC, the health emergency against covid-19 has jeopardised the informal sector on which the majority of the population depends. As a result, they should be rethought in their implementation to mitigate the deleterious effects on the population.

Keywords: Covid-19, effects, informal economy, DRC

Healthcare Utilization In Ghana And Associated Factors During The Covid-19 Pandemic – A Cross-Sectional Public Survey

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Background: Decline in healthcare utilization in low-and-middle-income countries (LMICs) due to the Covid-19 pandemic could reverse decades of progress in improving health outcomes and further put people at increased risk of avoidable illness and death. Understanding healthcare utilization during pandemics is crucial to inform policy and to prepare health systems for future pandemics. This study examined healthcare utilization among the general public and associated factors during the first wave of the Covid-19 pandemic in Ghana

Methods:

A cross-sectional public survey using a structured self-reported questionnaire was conducted between May 23 and July 11, 2020, during the first wave of confirmed COVID-19 cases and after the fifth week of a partial lockdown in Ghana. A convenience sampling approach was used to recruit the respondents virtually through advertising on social media platforms. A total of 643 respondents consented to the study by completing the survey. Data were analysed in Stata version 15. Descriptive, bivariate and binary logistic regression analyses were carried out. A value of P<.050 was considered to be statistically significant.

Results:

The prevalence of healthcare utilization among the general public during the first wave of the COVID-19 pandemic was 27.4%. About 15.9% of the respondents reported unfair treatment at the health facilities while 16.5% were not satisfied with the services provided. About 15.6% of the respondents did not utilize healthcare for fear of getting the virus at the health facility. Fair treatment by health providers (adjusted OR = 1.80; 95 % CI = [1.025, 3.165]; P < 0.05), drinking of alcohol (adjusted OR = 1.80; 95 % CI = [1.025, 3.165]; P < 0.05) or taking of drugs (adjusted OR = 1.80; 95 % CI = [1.025, 3.165]; P < 0.05) to help get through the fear caused by the Covid-19, marital status (P < 0.05) and possession of valid health insurance (adjusted OR = 1.80; 95 % CI = [1.025, 3.165]; P < 0.05) were statistically significantly associated with health service utilization.

Conclusion:

A resilient health system that ensures fairness in treatment of all is needed to improve healthcare utilization among general public during pandemics especially in LMICs. Timely public education to alleviate fear at the health facility level and promote early health seeking treatment during pandemics are needed.

Organized Session 2-1

Decentralization: Friend Or Foe To Public Financial Management In Health?

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Description

In recent decades, most countries around the world have embarked on decentralization processes that affect health service delivery. Concurrently, public financing has grown faster than any other source of health expenditure, leading to increased attention to how effectively, efficiently, and equitably governments spend public money on health. As a result, public financial management (PFM) systems are increasingly recognized as key enablers of effective health financing reforms towards universal health coverage. In many settings, health system performance depends on coherence among decentralization, PFM, and health financing reforms—where they are disconnected or poorly coordinated, service delivery can suffer. Despite these important relationships, only recently have there been focused efforts to systematically assess how decentralization affects PFM processes and, in turn, health service provision. There remains a lack of understanding among many health stakeholders about how PFM operates and how functional and financial roles are distributed and fulfilled in decentralized contexts. Consequently, to guide suitable policy responses, there is a need to further unpack PFM processes and identify bottlenecks affecting health service delivery in decentralized countries.

This session will explore how decentralization has shaped PFM processes in the health sector, including budget development, approval, execution, and accountability. It will draw on a learning initiative undertaken by ThinkWell and the World Health Organization to document the decentralization and PFM dynamics shaping the health systems of eight counties: Burkina Faso, Indonesia, Kenya, Mozambique, Nigeria, the Philippines, Tanzania, and Uganda. The session will open with a cross-country analysis of key PFM bottlenecks resulting from decentralization in the eight countries, highlighting the implications of misalignments between PFM and decentralization reforms for health financing and service delivery. Next, case study authors from Burkina Faso, Mozambique and Tanzania will share insights from their countries, elaborating on the implications of decentralization and PFM reforms for health system performance. Two expert discussants will then reflect on the policy implications of the featured countries' experiences. Finally, the chair will moderate a discussion among the panelists and discussants, including questions and comments from the audience.

Implications Of Decentralization For Public Financial Management In Health: Lessons From Burkina Faso, Kenya, Indonesia, Mozambique, Nigeria, The Philippines, Tanzania, And Uganda

Michael Chaitkin, MPH, ThinkWell, Kampala, Uganda

Background

Public financial management (PFM) systems are increasingly recognized as key enablers of effective health financing. As countries strive toward universal health coverage, there is growing attention to whether governments spend public funds effectively, efficiently, and equitably. Additionally, most countries have decentralized a range of public functions. How decentralization affects service delivery depends on how well it coheres with health financing and PFM reforms.

Study Aims And Objectives

This study describes how decentralization has shaped PFM processes in health, examines bottlenecks and their effects on health service delivery, and offers policy lessons based on the experiences of eight countries.

Methods

A synthesis analysis was conducted of case studies commissioned on the eight countries. Each case study combined extensive document and data review with semi-structured interviews and consultations with purposively selected experts and health system stakeholders. Country findings were collated by phase of the budget cycle and analyzed for common and divergent practices, challenges, and policy solutions.

Key Findings

Bottlenecks and remedies were categorized by budget stage.

- **Budget development:** Decentralization complicates health budgeting. Disparate budget structures and fragmented financing hinder collaboration across levels, contributing to disjointed sector plans and low budget prioritization for health. Countries can implement more flexible budget structures and better align them across levels.
- **Budget approval:** Budget approval practices often diverge from guidelines. Decentralized countries can benefit from further formalization and transparency of approval processes.
- **Budget execution:** Overestimated revenue forecasts undermine budget performance, as do convoluted procedures for moving money throughout the system. Countries can develop more realistic budgets and streamline funds release. Additionally, decentralization does not guarantee autonomy at the provider level; in fact, facilities often lose independence in the early stages of decentralization reforms. Over time, countries recognized these harms and started putting more money under facilities' direct control.
- **Budget accountability:** Information systems remain weak and fragmented, hindering timely, efficient, and comprehensive reporting and analysis of spending. Countries can

deploy robust, digitalized financial and health management information systems.

Main Conclusions

Decentralized countries need to scrutinize PFM bottlenecks and tailor politically feasible reforms to their context, at times embracing paradigm shifts and confronting thorny governance challenges. The varying needs and capabilities of health system actors will lead to different policy designs. Where the need for change has yet to gain traction, building understanding of PFM issues among national and sub-national policy makers is an urgent next step.

Local Governments Readiness For Devolution Of Health Financing: The Case Of Communes In Burkina Faso

Marie-Jeanne Offosse, ThinkWell, Ouagadougou, Burkina Faso

Background

Burkina Faso's 1991 Constitution shifted governance in the country from a centralized system to a devolved structure. It set the stage for the transfer of decision-making authority related to four sectors including health from the central government to communes, the lowest local government unit in the country. Yet, three decades later the devolution of substantive and effective decision-making has yet to be fully implemented.

Study Aims And Objectives

The aim of this study is to assess Burkina's readiness for effective health financing devolution and highlight public financial management (PFM) requirements for a successful transition.

Methods

We undertook a detailed desk review of the literature on health financing arrangements, devolution in the health sector, and PFM systems and practices at different levels of government in Burkina Faso. Next, we conducted key informant interviews at the national and commune level.

Key Findings

The bulk of central government resources for health flow from the national government to public providers and the district health offices, which function as the local representatives of the Ministry of Health. In contrast, health spending by communes remains minimal, and is limited to covering some of the operating costs of public facilities. For example, in 2017, 75% of Burkina's health spending occurred at the subnational level, but only 3% of that was controlled by communes.

Several PFM constraints complicate the transfer for more health resources to communes. For example, communes are still using line-item budgeting whilst the central government has moved to program-based budgeting (PBB). Health sector funding transferred to communes

will be recorded as government spending for decentralization rather than health expenditure. More importantly, the lack of accountability structures and safeguard measures for PFM at the commune-level pose a challenge to ensuring that health spending levels are sustained.

A full transfer of health spending functions to the communes may be inefficient and impede health workers recruitment in primary health centers. The transfer of health sector payroll to communes may lead to additional cost for the government and administrative burden for rural communes given the human resource challenges they face.

Main Conclusions

Devolution of public health expenditure to subnational levels in Burkina Faso appears challenging owing to weak PFM systems at the commune level. Devolution of health financing functions is likely to be partial, implemented in a phased manner. Activities such as payroll management could remain centrally managed, while all non-wage spending transferred to communes that adopt PBB.

What Are The Implications Of Decentralization And Public Financial Management Reforms For Delivery Of Services At Primary Care Level? Findings From Mozambique.

Salomão Lourenço, ThinkWell, Mozambique

Background

In Mozambique, the decentralization process began in the 1990s, following the opening of the political arena, under the 1990 Constitution and the end of the civil war. The process is based on the administrative and fiscal decentralization under the scope of the 2003 Law on Local State Bodies and political decentralization in the context of creating local authorities and of the approval of the decentralization package in 2019 and 2020.

Study Aims And Objectives

This study explores how decentralization has shaped public financial management processes in the health sector in Mozambique.

Methods

We collected data through desk review supplemented with insights from health financing and policy experts in the country. The desk review entailed a purposeful review of documents and data that could be accessed online, including from the Government of Mozambique, international organizations, development assistance projects, and peer-reviewed literature. When clarifications were needed, we consulted health financing and policy experts.

Key Findings

In 2018, Mozambique's Constitution was revised to create decentralized bodies at provincial level. Therefore, there are now two provincial bodies specific to the health sector: the Provincial

Directorate of Health, the decentralized body, and the Provincial Health Services, the extension of the national power. This highlights the need for increased coordination between the two bodies to achieve health targets. Each provincial body develops its own budget. While the budget of provincial directorates of health is approved by the Provincial Assembly, the budget of provincial health services is submitted for discussion and approval by the National Assembly. In parallel, district health offices develop their own budgets within in the ceilings provided by provincial ministries of finance. Their budgets are consolidated with provincial health services budgets for eventual presentation and approval of the National Assembly. This situation generates bottlenecks in funding of primary care facilities as they fall under the competence of the decentralized provincial body which sets health priorities. However, primary care facilities rely on financing from district health offices, which are expected to be decentralized in 2024. Therefore, primary care facilities do not receive enough financial resource to provide quality services and to achieve the targets set at provincial level.

Main Conclusions

The decentralization process in Mozambique is not complete. There are often misalignments between the different subnational government levels, each one with its own budget and priority interventions. This impacts the way primary care facilities are financed hampering service delivery and achievement of health goals.

Tanzania's Experience Implementing Direct Facility Financing In The Health Sector

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Background

In 2017, Tanzania introduced direct facility financing (DFF) reforms in the disbursement of health sector basket fund (HSBF) money from the Treasury system. Before, HSBF money was disbursed to local government authorities (LGAs), which were responsible to plan, budget and procure inputs for health facilities. Facilities received inputs in kind, which in most cases were not aligned with community needs. Through DFF, funds were disbursed directly from Treasury to health facilities' bank accounts, marking a critical change in the core public financial management (PFM) system.

Study Aims And Objectives

This study documents Tanzania's experience in the implementation of DFF and highlights the enabling factors of country-wide implementation, focusing on the extension of PFM systems to health facilities.

Methods

This is a descriptive paper explaining how the extension of PFM systems to health facilities enabled successful implementation of DFF under a rigid PFM system. The study draws from

available literature and the experience of the authors during the process of DFF design and implementation.

Key Findings

Funds disbursed by Treasury follow strict PFM rules, among which is the requirement to develop plans and budget and use government financial management systems for accounting and reporting. Prior to 2017, these systems were only used up to the level of LGAs, and facilities were not visible in the PFM system. The introduction of DFF required the extension of planning, budgeting, and financial management systems to ensure that use of funds disbursed from central Treasury directly to facility bank accounts followed PFM rules. This was done through the revision of the chart of accounts in the electronic planning system (PlanRep) to include all health facilities' provider codes, thereby creating space for all facilities to develop their own plans and budgets. Further, a simple Facility Financial Accounting and Reporting System (FFARS) was developed to facilitate budget execution at the service provider level. Extending these systems to facility level helped to build trust that funds disbursed to facilities through a capitation payment mechanism would be efficiently managed within the PFM system.

Main Conclusions

The experience from Tanzania shows it is necessary to build trust within the Treasury system to be able to implement direct facility financing. Such trust may be gained by ensuring that sound planning, budgeting and financial management system are implemented at health facility level to ensure efficient management of public funds.

Organized Session 2-2

How Can Country Public Finance Management Systems Enable Better Response To Future Epidemics: What Lessons Have African Countries Learned From Covid-19

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Description

The COVID-19 pandemic has demonstrated that many health systems are currently not adequately equipped to anticipate, prevent or mitigate health threats and resulting economic crises. For countries to respond to COVID-19 and ultimately navigate themselves back to the path for Universal Health Coverage, there is need for better prioritization of public spending, both in the immediate and the medium-term. Immediate action is needed to ensure access to and delivery of the necessary population-based and individual services as part of the response along with building systems for long term sustainability and accountability. This requires financing actions that focus beyond delivering biomedical interventions but also strengthening (and in some situations establish) core population-based functions as foundations to support preparedness for health security. Achieving this will require reorienting budgetary arrangements to; enable the countries to roll out response interventions including delivery of vaccines, therapeutics, and diagnostics and to sustain the capacity to prevent, mitigate and respond to health threats in the short, medium, and longer term. While resource needs have been estimated for COVID-19 response including vaccine roll out, there is a dearth in information on how (and whether) these have inform budgetary process/budget re-orientation on adequate financing response for COVID-19 response and enable preparedness for future pandemics across health and enabling sectors. This session will focus on answering the following questions based on country Public Finance Management (PFM) systems and their experiences/lessons in the response to COVID-19;

What should be financed?-key functions and budget inputs that need to be prioritized for both preparedness and response

Who should be financed?-budget-holding agencies that are responsible for ensuring these functions are delivered based on the identified funding areas (both health and non-health and also non state actors)

How should they be financed? -Fiscal instruments available to finance preparedness and more broadly capacities to enable health security? Which are feasible and what are their implications? What changes in budget formulation and execution processes may be needed to enable the efficient delivery of the key functions in the medium term

How to account for spending and outputs?-Tracking and accountability so that the flexibility required for an agile response does not result into abuse.

Predictability And Timelines Of Health Care Resources From The National Level To Health Facilities In Kenya: What Are The Implications For Emergency Response?

Brendan Kwesiga, WHO Kenya Country Office, Nairobi, Kenya

Background

In 2013, Kenya implemented fiscal devolution Kenya as part of new constitutional reforms from the 2010 constitution. This changed how resources flow through the health system and who makes decisions on the use of resources. The resulting changes in the Public Finance Management (PFM) laws also affected how planning and budgeting, budget execution and accountability, and reporting are done. To examine the effectiveness of flows of resources for health care services from the national level to health facilities within the counties, we assessed the predictability and timeliness of funds for health services at government facilities.

Methods

The study undertook Public Expenditure Tracking Survey (PETS) which used a mixed-methods approach. Quantitative data were collected from the national level, a sample of 18 counties, and 564 health facilities within these sampled counties. Quantitative data were collected for FY 2017/18 and FY 2018/19 with a focus on all health sector resources within the PFM system from both government and donors.

Results

While all disbursements from the national level were received at the county level, there were significant delays in the disbursement of resources from the national to the county level. The percentage of resources transferred from county to national varied across different grants based on discretion to reallocate exercised at the county level. For some of the counties, expenditures were incurred at the county level with almost no funds remitted to the facilities while in some instances where resources flow to the facilities, there was limited autonomy to spend. There was an additional delay at this level adding to the delay at the national level. This was found to affect the ability of the health sector to spend the resources allocated to improve the delivery of quality health services at the facility level.

Conclusion/Recommendations:

Lack of predictability and delays in the flow of resources is likely to limit effective utilization of the allocated resources. This was a hindrance to Kenya's response to COVID-19 and is likely to also affect preparedness for future epidemics.

Budget Structure And Emergency Response: Leveraging Uganda's Transition To Program Based Budgeting To Improve Preparedness And Response

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Background

Since the 1990s, Uganda has undertaken various reforms in the way public resources are budgeted for and utilized to ensure effective management of revenue and expenditure. One of the most recent reforms that have been undertaken is the transition from output-based to program-based budgeting through the program-based budgeting (PBB) system where Ministries and government agencies (MDAs) are supposed to budget according to outcomes. This is meant to harmonize budgeting within and between MDAs across government. This study set out to document the experience of transitioning to program-based budgeting in the health sector in Uganda at both national and sub-national levels.

Methods

Data was collected through document review and key informant interviews at the central level and in 2 districts selected purposively based on their involvement in the first phase of roll out of PBB.

Results

The transition to program-based budgeting has been challenging pertaining to the complexity of the health financing system and aspects specific to the program-based budgeting reform hence affecting full alignment with the principles of PBB. When fully implemented, the objectives of PBB in Uganda can achieve the required budget re-orientation necessary for effective preparedness and response. However, we find that there is still pervasive fragmentation (silos in implementation) and rigidity that hinder effective preparedness and response. The indicators used for reporting still capture processes and outputs, rather than outcomes.

Conclusion/Recommendations

Based on the lessons learned in response to COVID-19, there is a need to ensure Uganda's health sector transition to PBB emphasizes clear program structures that enable coordinated government action if the country is to fully realize the potential of this reform.

Effect of Public Finance Management (PFM) System on COVID-19 Response and Preparedness in Kenya

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Background

Before the COVID-19 global pandemic, Kenya had expressed commitment to Universal Health Coverage. With the health system disruptions caused by the pandemic, the country has to set itself on a path to ensure it not only recovers from the current pandemic but also is prepared for any emergency future outbreaks. One of the key ways of achieving this is understanding

how the current Public Finance Management (PFM) systems hindered/enabled the countries' ability to respond and what needs to be done to address these bottlenecks.

Methods

The assessment used both qualitative and quantitative data at both national and sub-national levels (3 counties) to explore the budget formulation, structure and composition, execution, and reporting in the context of epidemic response and preparedness.

Findings

While health emergencies require an "all of government" approach, who is financed (budget holder) and what is financed (budgetary inputs or even broader programs) was not often clearly reflected in the budgets at the national and sub-national levels. There is also a challenge in terms of flexibility/re-allocation within health programs which limits the agility of a response to the pandemic. There were also challenges in ensuring accountability in the utilization of allocated resources.

Conclusions/Recommendations

There is a need to re-orienting budgetary and accountability arrangements to ensure alignment to the twin agenda of health security and UHC. Countries could utilize the routine budget dialogues at the national and county levels to transform this ambition into actual resource allocation decisions.

Accountability For Covid-19 Extra-Budgetary Funds In Africa

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Background

The Covid-19 pandemic presented an unprecedented health and economic crisis globally. Given the scale of the pandemic, countries employed several mechanisms to finance the COVID-19 response including re-allocation away from non-priority areas, the release of supplementary budgets, and the creation of special extra-budgetary funds. The establishment of such funds is premised on ensuring an agile response to address existing delays and rigidities in public financial management systems. We examined the accountability mechanisms used in the 22 African countries that reported to have established extra-budgetary funds as part of their initial response to COVID-19.

Methods

Data was obtained from the WHO COVID PFM database which compiled information generated through a PFM web survey designed and administered in April-May 2020 by WHO and other primary and secondary sources of information on emergency spending measures, enactment of spending plans, formulation of spending plans, spending modalities, and reporting mechanisms). For a review of accountability mechanisms, we focus on; the presence and nature of the management and oversight structures, and spending and accountability

modalities

Results

Fourteen (14) out of the twenty-two (22) countries that allocated extra-budgetary COVID-19 funds did not provide any information on at least one of the three parameters analyzed, namely the presence and nature of the management and oversight structures, and spending procedures. The management and oversight of Covid-19 extra-budgetary funds were held by ministries of health and the treasury in only 3 countries. Eleven countries employed Adhoc measures including setting up independent committees and structures to manage Covid-19 funds. The lack of explicit transparency and weak oversight given the funds involved and the scale of the response was reported to have exacerbated fraud and mismanagement of these public funds. This affected public trust in the government's response to the pandemic.

Conclusion/Recommendation

Responding to a major pandemic in the context of fragile institutions well as low public distrust in governments requires strong public finance systems. Lessons learned from setting up and managing extra-budgetary funds provide an opportunity for an agile response but require an empowered citizenry and overall good governance if they are to function effectively in improving the country's ability to respond.

Parallel Session 2-1: Oral

Strengthening Community Health Care Systems

Willingness to enrol and pay for Community Based Health Insurance, decision motives and associated factors among rural households in Enugu state, Southeast Nigeria.

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Background

Nigeria's population profile is characterized by a large informal sector and many poor rural people. Over 70% of the population lacks financial risk protection, affecting primarily informal and rural populations. Community-Based Health Insurance (CBHI) may be an essential intervention strategy for ensuring that quality healthcare reaches the informal and rural populations.

Aim/Objectives

This article explores the willingness to enrol and pay for CBHI by community members, their decision considerations, and associated factors in Enugu state, Nigeria.

Methods used

We adopted a descriptive cross-sectional survey design. 510 respondents were enlisted with a multi-stage sampling approach using a validated questionnaire. Willingness to enrol (WTE) and willingness to pay (WTP) for CBHI was determined using the bid contingent valuation method. A test of correlation/association (Chi-square and Ordinary Least Square regression) were conducted to ascertain the relationship between WTP for CBHI and other variables at a 95% confidence interval. The Socioeconomic status (SES) index was generated using principal component analysis (PCA). A test of association was conducted between the demographic characteristics and WTE and WTP variables.

Key Findings

A total of 501 households were included in the study, yielding a return rate of 98.2%. The finding showed that most (92.4%) of the respondents indicated a willingness to enrol for CBHI. 86.6% indicated a willingness to pay cash for CBHI, while 84.4% indicated a willingness to pay for other household members for CBHI. There were significant association between gender, marital status, education and location and willingness to pay. 81.6% of the respondent stated that qualified staff availability motivates their willingness to enrol/pay for CBHI. 78.1% would be willing to enrol and pay for CBHI if services were provided free, and 324 (74.6%) stated that proximity to a health facility would encourage them to enrol and pay for the CBHI.

Main Conclusions

For equity in health services, concerns by respondents need to be given adequate attention by the government. The NHIS and ENSUHCA should establish a pool of funds to subsidize and exempt the poorest and other disadvantaged individuals from enrolling in CBHI. The study cannot be generalized to all urban areas due to the mixed nature of the LGA in which it was done.

Efficiency in Utilization of the Resources Allocated to Lower Level Health Facilities in Uganda: A Case Study of Health Centre IVs

Ezrah Trevor Rwakinanga, *World Health Organization, Kampala, Uganda*

Background

Everyone has a right to quality life with good health of the household and, thus, health sector financing should be a top priority because when the population is healthy, it is very productive and wealthy. In Uganda, Health Centre IVs (HCIVs) created under Uganda National Minimum Health Care Package provide curative, prevention and promotion services and thus efficiency of these HCIVs is as critical as people's health.

Aims and Objectives

To assess efficiency in resource utilisation at the lower levels in Uganda based on the fact that many researches on efficiency in Uganda have concentrated on hospitals or tertiary level of healthcare and thus there is little knowledge on efficiency on lower levels and if the quantitative methods like Data Envelopment Analysis (DEA) can be applied to lower level facilities.

Methods Used

The study used Hospital and HCIV Census data for 2014 and health sector data for FY2015/16 reported by MOH in the Annual Health Sector Performance Report. STATA software was used to perform DEA for a preferred model was out-put oriented that optimizes variable returns to scale and efficiency scores for every HCIV were calculated. Also, Tobit regression model was run to estimate the factors contributing to the adjusted inefficiency scores for HCIVs.

Key Findings

Overall, 7 HCIVs (23.3%) were operating under constant returns to scale, implying that they were efficient (both pure technical and scale efficiency) while the 19 (63.3%) were operating under increasing returns to scale, implying that their health service outputs would increase by a greater proportion compared to any proportionate increase in health services if more inputs were added in the facility. Four HCIVs (13.3%) were operating at decreasing returns to scale meaning an additional input to the HCIVs would produce a less proportional change of outputs. The study identified catchment population, average length of stay, bed occupancy

rate, and outpatient department visits as a proportion of inpatient days as the main factors of efficiency among HCIVs.

Main Conclusions

This study has shown how DEA methods can be applied at the HCIV level of the health system to gain an insight into variation in efficiency across health centres using routinely available data. And, with the majority of HCIVs operating at increasing returns to scale, it showed that there is a need to increase inputs like staff, medicines and beds to achieve the desired optimal scale in case of constant returns to scale.

Level and Determinants of County Health System Technical Efficiency in Kenya: Two Stage Data Envelopment Analysis

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Background:

Improving health system efficiency is a key strategy to increase health system performance and accelerate progress towards Universal Health Coverage. In 2013, Kenya transitioned into a devolved system of government granting county governments autonomy over budgets and priorities. We assessed the level and determinants of technical efficiency of the 47 county health systems in Kenya.

Methods:

We carried out a two-stage data envelopment analysis (DEA) using Simar and Wilson's double bootstrap method using data from all the 47 counties in Kenya. In the first stage, we derived the bootstrapped DEA scores using an output orientation. We used three input variables (Public county health expenditure, Private county health expenditure, number of healthcare facilities), and one outcome variable (Disability Adjusted Life Years) using 2018 data. In the second stage, the bias corrected technical inefficiency scores were regressed against 14 exogenous factors using a bootstrapped truncated regression.

Results:

The mean bias-corrected technical efficiency score of the 47 counties was 69.72% (95%CI 66.41-73.01%), indicating that on average, county health systems could increase their outputs by 30.28% at the same level of inputs. County technical efficiency scores ranged from 42.69% (95% CI 38.11%-45.26%) to 91.99% (95% CI 83.78%-98.95%). Higher HIV prevalence was associated

with greater technical inefficiency of county health systems, while higher population density, county absorption of development budgets, and quality of care provided by healthcare facilities were associated with lower county health system inefficiency.

Conclusions:

The findings from this analysis highlight the need for county health departments to consider ways to improve the efficiency of county health systems. Approaches could include prioritizing resources to interventions that will reduce high chronic disease burden, filling structural quality gaps, implementing interventions to improve process quality, identifying the challenges to absorption rates and reforming public finance management systems to enhance their efficiency.

Developing the community health system in Benin: an analysis of the 2020-2024 National Community Health Policy

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Background: Community health workers (CHW) are effective in alleviating the global challenge of health workforce shortage. They contribute to improve health outcomes and access to care. Scaling up CHW programmes is a key step on the pathway towards universal health coverage (UHC), especially in low and middle-income countries such as Benin.

Objective: This work analyses the Benin's 2020-2024 National Community Health Policy (NCHP), and identifies and addresses potential challenges which may hamper its proper implementation.

Methods: We deductively analysed the newly designed community health system of Benin, and specifically its community health workforce, through a document review, using as framework, respectively the Institute of Tropical Medicine (ITM) Health System Dynamics Framework and the Community Health Worker Assessment Improvement Matrix (CHW AIM). The analyses was highly informed by the "WHO guideline on health policy and system support to optimize community health worker programmes".

Results: According to the new NCHP, the governance and the functioning of the community health system is ensured through a multisectoral collaboration, based on the "One Health" approach. A "Local Component of the Health System" (CoLoSS) is intended to be the extension of the health system in each village or neighbourhood, and to provide a space for effective community participation.

Regarding the workforce, the NCHP designated two CHW cadres: the qualified community health agent (ASCQ) and the community relay (RC). Both of them are intended to be integrated into the overall health workforce, with formal remunerations. However, there is no institutional or legal basis to support the CHW formal status. In addition, RCs are selected from their community where they should provide promotional and preventive care through home visits, community outreaches and campaigns. The ASCQ, covering each arrondissement, is a skilled health worker who supports and supervises RCs under his/her responsibilities and provides first-line curative care at a post.

Some potential implementation challenges have been identified, with specific recommendations to help to overcome them. One important challenge is related to the sustainability of the programme, requiring a strong political and financial commitment from the government. Other challenges concern the non-optimal workload for CHWs and their unclear training process, which may impede their performance and long-term retention.

Conclusion: The new NCHP of Benin is ambitious and promising in its design, and could help to effectively improve population health outcomes, if the identified challenges are early and adequately addressed.

Parallel Session 2-2: Oral

Primary Health Care

Primary Health Care versus Universal Health Coverage: Towards Achieving "Health for All".

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The year 2015 marked a key turning point in the global development agenda, as the UN General Assembly on 25 September 2015 adopted the Sustainable Development Goals (SDGs), aimed at inducing inclusive and sustainable development in member states towards overcoming the limitations of the Millennium Development Goals (MDGs) viz. a limited focus, resulting in verticalization of health and disease programmes, a lack of attention to strengthening health systems, the emphasis on a "one-size-fits-all" development planning approach, and a focus on aggregate targets rather than equity. The SDGs comprise 17 goals and 169 targets, including one specific goal for health with 13 targets, to wit: *"Ensure healthy lives and promote well-being for all at all ages."* SDG 3.8 states: *"Achieve universal health coverage, including financial risk protection, access to quality essential health-care services and access to safe, effective, quality and affordable essential medicines and vaccines for all."*

Paragraph 26 of the 2030 agenda addresses health as follows: *"To promote physical and mental health and wellbeing, and to extend life expectancy for all, we must achieve universal health coverage and access to quality health care. No one must be left behind. We commit to accelerating the progress made to date in reducing newborn, child and maternal mortality by ending all such preventable deaths before 2030... We will equally accelerate the pace of progress made in fighting malaria, HIV/AIDS, tuberculosis, hepatitis, Ebola and other communicable diseases and epidemics, including by addressing growing antimicrobial resistance and the problem of unattended diseases affecting developing countries. We are committed to the prevention and treatment of noncommunicable diseases, including behavioural, developmental and neurological disorders, which constitute a major challenge for sustainable development."*

Universal health coverage (UHC), is the vehicle adopted for the implementation of the broad and ambitious health agenda in all countries. It is necessary that policy makers integrate Primary Health Care in the global discourse towards guaranteeing the achievement of the SDG targets, considering observations made from the local context of the Cameroon health system. The author believes that Comprehensive Primary Health Care remains a valuable and integrated approach that could guarantee the health of all populations universally, not merely a concept to be neglected, as it has been the case during the last two decades.

Keywords: Primary health care, Universal health coverage, Health system strengthening, SDG, Community health, Access, Equity

Marketplace aspect of Primary Health Centres in Nigeria and its implication for health care delivery

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Background

Healthcare facilities are routinely regarded as fundamentally an institution or establishments housing local medical services or practices. In that sense, the enduring human interactions and economic transactions in these spaces are often overlooked. Yet, this could pose challenge to healthcare delivery and the overall intent to meet health-related goals.

Objective

In this study, we narrate how health facilities operate like a marketplace, and drew attention to its implication to healthcare delivery. Our description of marketplace follows an economic anthropological perspective, which see them as sites for complex social processes, instigators of cultural activity and realms for economic exchange.

Methods

The study was based on eight weeks of observations of six Primary Health Centres (PHCs) and two local government headquarters by four fieldworkers in Enugu State, Nigeria. The data was supplemented with semi-structured interviews with health workers, service users, and health managers. The data were analysed using NVivo, and followed a narrative analytical approach.

Findings

The narrative showcases that health facilities are not just centres for health delivery but are hubs for economic activities, intertwined with social and cultural processes that in turn affect access to care. Beside pharmaceutical products, snacks, wears and drinks are sold by marketers and health workers on duty within the premises. Sometimes, this interfere with care when health workers absent from duty to attend to their private business. Our narrative also demonstrated that access to pharmaceutical products as well as other medical services can be influenced by social relations and perceived ability to pay while services that are free can be offered for a fee. These activities were made possible by weak institutional structures that hardly communicate policies or regulate health workers' activities.

Conclusions

The study concludes that beside serving as a centre for healthcare delivery, health facilities also sustain social and economic activities which sometimes interfere with service delivery. Health

managers must manage informal structures within this space to improve health care delivery.

Keyword: Marketplace, Primary Health Centres, Economic, Absenteeism, Informal payment.

Level and correlates of willingness to pay for rapid COVID-19 testing delivered through private-retail pharmacies in Kenya.

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Background:

The COVID-19 pandemic has increased the global morbidity, mortality, social and economic burden. While most developed countries have made progress in developing vaccines and vaccinating their citizens, developing countries such as Kenya still struggle with ensuring the whole population can access COVID-19 testing with existing testing approaches being either too expensive, inaccessible or both. Pharmacy-based testing of COVID-19 is an essential component of the response strategy. However, it is not clear how much people would be willing to pay for such approaches in Kenya. This study examined the level and correlates of the willingness to pay (WTP) for rapid COVID-19 testing delivered through private retail pharmacies in Kenya.

Methods:

We conducted a cross-sectional double-bounded dichotomous choice contingent valuation survey across 341 clients visiting five private retail pharmacies in Nairobi, Kisumu and Siaya counties in Kenya. We computed the mean and median WTP, demand curves alongside the correlates of WTP.

Results:

Our results indicate a mean WTP of KES 611 (US$ 5.5) (95% CI: 418 – 666) and a median WTP of KES 506 (US$ 4.6) (95% CI: 385 – 572). Furthermore, the study shows that the client's WTP increased with household income and interest in getting the COVID-19 test at a private retail pharmacy.

Conclusion:

These findings provide some insights into the price setting for COVID-19 testing delivered through private retail pharmacies in Kenya. This analysis emphasizes the role of private-retail pharmacies in extending the COVID-19 testing capacity in Kenya and the utility of clients' WTP in price setting. Policymakers and other actors can adopt these estimates to design and implement subsidization and adequate price setting that takes into account clients' WTP which could enhance COVID-19 testing uptake in Kenya.

Role of Actor Networks in Primary Health Care Implementation in Low-And Middle-Income Countries: A Scoping Review

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Background: Low-and-middle-income countries (LMICs) responded to the Alma Ata declaration on Primary Health Care (PHC) by adopting community-based strategies. The implementation of these strategies has largely remained poor. Myriad of factors in management and utilization of the services have been attributed to the implementation challenges. Far less attention has been paid to the actors involved in the implementation, the networks they form through their interactions and the roles these networks play, either as barriers or enablers in the implementation process. However, implementation of PHC require the working with and through set of actors or networks and across relations to communicate policy objectives, paying attention to the actors' interests and the structured relationships between them. This scoping review sought to identify actor networks and their roles in PHC implementation in LMICs and also \to understand from existing experience how networks add to our understanding of implementation processes.

Methods: The study followed the five-stage scoping review methodological framework by Arksey and O'Malley. We searched four bibliographic databases to identify all relevant scholarly and gray primary research studies reported in the English language, regardless of publication status and with no date limits. We also searched reference lists, and hand searched selected journals and websites. To be eligible for the review, primary studies had to describe and report the results that determined relationship between networks (actor networks) or social networks and any aspect of PHC in LMICs. All references were exported to Mendeley library. Title and abstract screening were carried out and duplicates were removed. Narrative synthesis was applied to describe the included studies and the results.

Results: We identified 13 primary studies. The different papers examined different networks. Ten different networks types were identified: professional support networks, friendship networks, referral networks, inter-sectoral collaboration networks, community health committee networks, peer networks, health coordination and emergency referral networks, partnership networks, inter-organizational networks and communication networks. Professional advice networks of healthcare workers in PHC units were observed to provide better change in health provider practices; peer networks increase the probability of early antenatal check-up and antenatal completion. It was also observed that intersectoral collaboration networks enhance organization's ability to serve as gatekeepers of information and communication networks enhance the flow of information among PHC implementers.

Conclusion: Our review provides evidence that relational elements such as networks exist and they influence PHC implementation in LMICs. Leveraging actor networks in PHC could drive its effective implementation in LMICs.

Toward more resilient primary health care systems in Benin: Lessons from the experiences of primary care physicians facing COVID-19

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Introduction

COVID-19 is challenging African health systems, particularly the first line of healthcare, which is responsible for operationalizing much of primary health care. This paper analyzes the experience of physicians working at this level of the system and draws lessons for improving primary health care.

Methodology

We conducted a mixed-method, sequential, explanatory study between April and July 2020. Quantitative data were collected from 90 primary care physicians (PCPs) in four health districts in Benin. We performed descriptive and bivariate analyses on these data. We then conducted thematic content analysis on the qualitative data, collected from 14 PCPs. Quantitative and qualitative results were triangulated.

Results

According to the PCPs, their health facilities had implemented 74.8% of the COVID-19's control measures, with no significant difference between the public and private sectors. However, several important measures were poorly implemented. In addition, only 54.7% of the PCPs felt confident to manage a suspected case of COVID-19 effectively, with a lower proportion in the private sector. While 80.2% of PCPs reported being stressed, only one-quarter reported receiving adequate support from local health authorities. This support appeared to be weaker for private PCPs. Finally, almost three-quarters of the PCPs stated that the pandemic had reduced service attendance and impacted their daily work. There were negative impacts such as decreased quality of care or decreased availability of services. But there were also positives points such as innovations to maintain the essential services, strategies to reduce costs for the patients, and the role PCPs played in strengthening the capacities of the non-medical primary care workforce.

Conclusions

Our results reminded the need to improve the primary health care organization in our settings. Indeed, the pandemic seems to have exacerbated existing dysfunctions such as the low quality of care or the absence of a structured mechanism to support health workers, especially in the private sector. However, the study also showed several opportunities. If properly utilized, these opportunities could constitute levers for action to strengthen primary health care.

Parallel Session 2-3: Oral

Maternal, Adolescent and Child Health Interventions 1

Burden of childhood and adolescence Asthma in Nigeria: Disability Adjusted Life Years

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Background: A better representation of the burden of childhood asthma should rely on both morbidity and mortality, not only mortality. This will reduce the dearth of information on burden of childhood asthma, and enhances evidence-based decision-making. In this study, burden of childhood asthma was estimated, using disability-adjusted-life-years (DALYs), factoring in the disability weights for asthma, age at mortality and life expectancy.

Methods: The study was conducted at the University of Nigeria Teaching Hospital, Enugu. Interviewer administered questionnaire was used to collect information from parents of children with asthma who presented to respiratory clinic on: the level of their asthma control (controlled, partially controlled and poorly controlled asthma), their age distributions, and sex. The prevalence of asthma, prevalence of associated disability, and case-fatality were obtained from previous publications. The DALYs were estimated by adding together the years lost to disability (YLDs) and years lost to life (YLLs) to asthma (DALYs = YLD + YLL). DALYs were dis-aggregated by age group and by whether their asthma were controlled, partially controlled and poorly controlled.

Results: A total of 66 children with asthma were studied. The proportion of the subjects with controlled, Partially controlled and poorly controlled asthma were 26 (39.4%), 31 (47%), and 9 (13.6%) respectively. The subjects that have some form of asthma-related disability were 16 (24.3%). The childhood asthma caused 23.6 to 34.24 YLLs per 1000 population, 0.01 to 1.28 YLDs per 1000 population and 24.23 to 34.41 DALY per 1000 population. There was minimal difference in DALYs across the three clinical categories, but was consistently higher among older children 12 to 17 year. The estimated national DALYs was 407,820.2 about of 1.6% of the global all age (children and adults) DALYs of 24.8 million.

Conclusion: The DALYs due to childhood asthma was high and did not vary much across the clinical categories, but increased with age. This imperatively necessitates the de-emphasis on just clinical responses as an indicator of the efficiency of childhood asthma control interventions but rather a holistic approach should be adopted considering the limitations the child suffer as component of both life and environmental modification in a deliberate attempt to prevent attacks. The ability of the child to function optimally while on treatment should be considered in the treatment impact review.

Extension of Seasonal Malaria Chemoprevention to children aged over five: a quasi-experimental evaluation of effectiveness and externality effects

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Background:

Malaria remains a global priority, with 229 million cases worldwide in 2019. Several promising strategies are being implemented to fight malaria, including seasonal malaria chemoprevention (SMC). SMC is typically administered to children under five years of age, however, few previous studies have considered the impact of extending this to other age groups. We assessed the effectiveness of extending SMC to children under 10, and the potential externalities of treating this age group on younger children.

Methods:

We conducted a quasi-experimental difference-in-differences evaluation of an SMC intervention in Mali in 2020. Three control villages in Koulikoro received standard treatment with SMC given to children aged 0-4, while six intervention villages received SMC treatment for children aged 0-9. In regression analyses of outcomes for 6,908 children, we compared differences in the presence of malaria blood parasites between treatment and control villages using rapid diagnostic tests, before and after the intervention.

Results:

Prevalence of malaria parasites were substantially reduced in intervention villages compared to control villages after the intervention, with an odds ratio for the presence of any blood parasites in a rapid test of 0.23 (95% CI .08 - 0.63). We found some evidence of externality effects among younger children with a similar, albeit less precisely estimated, reduction in parasites for those under five in villages where children over five received treatment. Although we did not measure it in this study, treating young children with SMC may also have positive externalities for adult members of the community, through reduction of the number of gametocyte carriers in the community.

Conclusions:

Extending SMC to older children is a promising approach for helping achieve global malaria eradication, especially given the positive externalities we document in this paper. Research should assess cost-effectiveness to examine feasibility of scaling up future interventions.

Keywords: Seasonal malaria chemoprevention (SMC), quasi-experimental methods, difference-in-differences methods, health externalities, child health, Mali.

Understanding the impact of the COVID-19 pandemic on maternal and child health services in Nigeria: lessons learnt for future pandemics

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Aim:

To analyse the effects of the COVID-19 outbreak on essential health services in Nigeria, examining how the pandemic impacted the delivery and utilisation of maternal and child health (MCH) services within the country. Understanding the extent to which MCH services have been affected can help guide policy makers in responding to future shocks, especially in policies to maintain essential services.

Rationale:

Prior to the pandemic, MCH indices in Nigeria were poor. The COVID-19 pandemic further threatened these services as it impacted the availability of essential health care, as well as the health seeking behaviours for both emergency and preventive care. Understanding the direct and indirect impact of COVID-19 on essential health services can help guide policymakers in building back more resilient health systems and help to better respond to future pandemics and future health crises.

Method:

National quantitative data from the DHIS2 Platform was used to analyse monthly service utilisation data from select primary health care facilities, focussing on several key MCH services (*deliveries; pre- and post-natal checks; diagnosis and treatment of key illnesses malaria, HIV, TB; child vaccinations; nutrition and family planning services*). This data was used to analyse changes in essential health care service indicators both before and after COVID-19 outbreak to understand how the pandemic has affected service delivery.

Key Finding:

Analysis of trends in utilisation of essential health services across Nigeria were undertaken, to shed light on which MCH services were most disrupted by the pandemic. The magnitude of disruption to service delivery compared to pre-COVID trends were examined, in comparison to trends in previous years. Further analysis of the service utilisation in rural areas compared with urban areas was undertaken. The effect of COVID-19 on the structure of health care delivery was also examined, such as the trends in the nature and location of service delivery, to understand the changes in facility-based, outreach and home deliveries preferences.

Conclusion:

The findings from the study can be used to inform policy decisions which will contribute to more resilient health systems following the impact of COVID-19. The study further discusses methods to strengthen the PHC system to be more prepared to provide and maintain MCH services in the face of future pandemics, as well as improve the response to future health

crises, calling for more research on how to identify and mitigate the causes of falling MCH service utilisation in the future.

Multilevel governance collaboration aspirations and reality: insights from a maternal neonatal and child health Policy process in Nigeria

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Background

Nigeria became a federation in 1954 and currently administratively decentralized into the national level, mid level 36 states & federal capaital territory (FCT) and 774 local governments (lower level). Healthcare is a constitutionally concurrent responsibility of the three levels, however specific roles and responsibilities are not constitutionally prescribed. Governance arrangements, level of inter-governmental collaboration, actors and implementation context, influence subnational policy adoption and implementation of national policies. States as federating units can adopt, re-shape or reject national policies and can also make state level policies. This study historically (2007-2019) explores three national programmes of the integrated maternal, neonatal and child health (IMNCH) strategy, which had inter-governmental collaborative aspirations within the outlined multilevel governance (MLG) structure.

Methods

This study was in a national setting (Abuja-FCT) and two sub-national (Anambra and Ebonyi states) in the southeast zone. MNCH burden varies across the country, underpinned by cultural and socio-economic differences. A qualitative case study design was employed, triangulating information from documents (69) and in-depth interviews (44), to produce a description of findings. Data was organised and coded with NVivo 11. Analysis was guided by the Integrated Collaborative Governance (CG) framework. System context and drivers (leadership, uncertainty, interdependence & incentives) generate collaboration dynamics (joint capacity, shared motivation & principled engagement) which interact iteratively to generate collaborative actions. Collaboration dynamics and actions make up a CG Regime (CGR).

Results

The key collaborative activity (signing of and committing to MOUs) was not honoured during implementation, in both study states, despite MNCH contextual variations. Leadership and incentives were not adequately distributed to span collaborative boundaries despite a constitutionally determined interdependence of the governance levels. Actor power practices were predominantly contestations rather than collaborative. This was underpinned by the existing governance structure. First two programmes were not adequately collaborative to ensure collaborative action and outcomes. Lessons learnt contributed to a different design of the third programme, which was more consultative of sub-national stakeholders but

implementation was also undermined by the subnational governance structure.

Discussion /Conclusions

CG brings stakeholders to engage in con-census oriented decision-making. Dialogues, trust building, commitment and shared understanding are crucial, to overcome conflict and contestations and enable collaborative actions. Hence, a CGR was not achieved. We however, note that CG has high transaction costs (time and resources), and not easily attainable in Nigeria and other LMICs with weak health systems. This study proposes an interim structure of Coordination and Cooperation in these contexts.

Decomposing socioeconomic inequalities in antenatal care utilisation in 12 Southern African Development Community countries

Keolebogile Selebano, *Health Economics Unit, University of Cape Town and John Ataguba, University of Cape Town, Cape Town, South Africa*

Although many countries are making progress towards achieving the global sustainable development goals, sub-Saharan Africa (SSA) lags behind. SSA bears a relatively higher burden of maternal morbidity and mortality than other regions despite existing cost-effective interventions. This paper assesses antenatal care (ANC) service utilisation among women in the Southern African Development Community (SADC) countries, one of the four SSA regions. Specifically, it assesses socioeconomic inequality in the number of ANC visits, use of no ANC service, between one and three ANC visits and at least four ANC visits, previously recommended by the World Health Organization (WHO). Data come from the most recent Demographic and Health Surveys in twelve SADC countries. Wagstaff's normalised concentration index (CI) was used to assess socioeconomic inequalities. Factors explaining these inequalities were assessed using a standard method and similar variables contained in the DHS data. A positive CI means that the variable of interest is concentrated among wealthier women, while a negative CI signified the opposite. The paper found that wealthier women in the SADC countries are generally more likely to have more ANC visits than their poorer counterparts. Apart from Zambia, the CIs were positive for inequalities in at least 4 ANC visits and negative for between 1 and 3 ANC visits. Poorer women are significantly more likely to report no ANC visits than wealthier women. Apart from the portion that was not explainable due to limitations in the variables included in the model, critical social determinants of health, including wealth, education and the number of children, explain socioeconomic inequalities in ANC coverage in SADC. A vital policy consideration is not to leave any woman behind. Therefore, addressing critical social determinants explaining inequalities in ANC utilisation, such as women's education and economic well-being, can potentially redress inequalities in ANC coverage in the SADC region.

Estimating the economic burden of typhoid in children and adults in Blantyre, Malawi: a costing cohort study

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Background

Typhoid fever causes high morbidity and mortality in low- and middle-income countries. The World Health Organization recommends introduction of typhoid conjugate vaccine (TCV) into countries with high incidence of disease or high burden of antimicrobial-resistant *Salmonella* Typhi (*S.* Typhi). Data on disease burden, cost of illness, delivery costs, and cost-effectiveness are crucial to inform decisions on TCV introduction. We estimated the household and healthcare economic burden of typhoid fever in Blantyre, Malawi.

Methods

A prospective facility-based costing cohort study was undertaken at two large government primary healthcare facilities, and a referral district hospital. Household illness costs consisted of direct medical, direct non-medical, and indirect costs borne by blood culture-confirmed typhoid fever patients and their families. Healthcare provider costs were the total direct medical and non-medical costs of managing a confirmed case of typhoid fever at the three health facilities. Mean costs, in 2020 U.S. dollars, were reported separately for outpatients and inpatients.

Results

From July 2019 through March 2020, of 109 patients presenting with culture-confirmed *S.* Typhi, 63 (58%) were less than 15 years old and 44 (40%) were admitted to hospital. The mean length of hospitalization was 7.7 days (standard deviation 4.1). For inpatients, the mean total household and healthcare provider costs were $93.85 (95% Confidence Interval (CI): 68.87, 118.84) and $296.52 (95%CI: 225.79, 367.25), respectively. For outpatients, these costs were $19.05 (95%CI: 4.38, 33.71) and $39.65 (95%CI: 33.93, 45.39), respectively. Direct medical costs for households were low. Since care is free at government healthcare facilities, the cost burden for households was due mainly to direct non-medical and indirect costs. Catastrophic illness cost, defined as cost > 40% of non-food monthly household expenditure, occurred in 48 (44%) case-containing households.

Conclusions

Typhoid fever and its sequalae can be catastrophic for families, causing major economic

hardship despite widely available free medical care. Typhoid is also costly for government healthcare provision. These data make an economic case for TCV introduction in Malawi and the region and will be further used to more fully define vaccine cost-effectiveness.

Poster Session 1-1

Health Financing Poster Session 1

Challenges to Informal Sector Enrollment on the Lagos State Health Scheme: Findings from a rapid assessment

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Introduction:

Lagos State located in South West Nigeria is a cosmopolitan state with an informal sector economy estimated to account for 65% of the working population and approximately 42 percent of the economic activities in the State. This portrays the relevance of the sector in the journey to achieve universal coverage. This rapid assessment was conducted to understand the drivers of the limited enrolment of the informal sector groups on the Lagos State Health scheme (LSHS) and proffer recommendations for addressing the challenges to expansion of informal sector enrolment on the Lagos State Health Scheme.

Methodology:

We conducted key informant interviews with complimentary desk reviews. Key informants were purposively selected based on their expertise and experience with informal sector enrollment and included program managers from the State Health Management Agency (LASHMA) and implementing partner organizations. The interviews captured how respondents understood the current challenges of expansion for informal sector enrollment. Interviews were conducted in English using interview guides. Audio recordings were transcribed, cleaned, and reviewed for quality purposes. Interviews were coded and analyzed to identify themes bordering on challenges to informal sector enrollment.

Findings:

The demand side challenges include the inadequate enforcement of the mandatory nature of the scheme due to weak regulation capacity, inadequate mobilization of trade associations due to the existence of multiple umbrella bodies requiring multiple engagements with attendant human resource and administrative costs, affordability of premiums, socio-cultural factors such as risk perception for ill health and religious beliefs about health insurance. The supply side challenges include perceived poor quality of care, unattractive tariffs and limited benefits package

Recommendations:

This will include the implementations of strategies to include on the demand side, capacity building for the regulation arm of the state health insurance agency, targeting the informal non-poor through mandates for health insurance enrollment as a pre-requisite for access to public services such as tax permits, business registrations, strengthening of affordability arrangements through installment payment of premiums, behavior communication to address socio-cultural beliefs, advocacy for more government funding to cover the poor and

vulnerable in the informal sector. On the supply side, improve quality of care and operationalize performance-based payments/ incentives and disincentives for quality, increase patient voice by engaging and utilizing civil society organizations (CSOs) as patient advocates, strengthen existing complaint redress mechanisms for enrollees taking into cognizance the educational levels and preferences of enrollees for reporting service experience.

Key words: challenge, enrollment, informal, health insurance

Pursing National Health Insurance in the (Post) Covid-19 Era: Policy Implications and options for UHC advancement in Uganda

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Introduction

In response to the COVID-19 pandemic, the World Health Organisation, other global health actors and national governments adopted control measures to reduce the virus's spread and its impacts. The COVID-19 pandemic rose against a backdrop of global development efforts towards universal health coverage (UHC). However, previous analyses highlighted that contextual, health systems, and design issues facilitate or constrain successful UHC reforms.

Aims of the research

This study aimed to establish the effects of the COVID-19 pandemic on Uganda's social protection context and its implication on designing and implementing the national health insurance schemes (NHIS) -a major UHC intervention in the country.

Methods

Desk review of key government documents and published and unpublished literature was conducted. Content analysis was undertaken.

Results

Regarding social protection, the COVID-19 crisis exposed and exacerbated the vulnerabilities of some population groups such as informal workers and urban poor that have often been less visible. The COVID-19 related lockdowns negatively affected business operations and the general revenue collections for the country. Other effects included increased unemployment among formal and informal workers. Health systems-related effects included disruption of

health services delivery, adoption of new health insurance policies by some private health insurances, and financial risk protection mechanisms to enable the population to access health care, particularly prevention, testing, and treatment services. New social protection initiatives such as providing food supplies to vulnerable groups, especially in urban areas, were established. The COVID-19 pandemic demonstrated the weaknesses and risks of linking the NHIS enrolment and benefits to formal employment. Policy implications included deliberate considerations for the inclusion of vulnerable groups and harnessing the private sector's contributions.

Conclusion

The COVID-19 pandemic led to unprecedented challenges and opportunities for UHC related policy reforms. Uganda and similar countries should reconsider the role of NHIS in advancing health system goals in the short to the medium term. Integrating and repositioning the NHIS into the expanding social protection agenda will be crucial.

Keywords: Covid-19, Social Protection, UHC, National Health Insurance Scheme, Uganda.

Integration of Family Planning Services into Social Health Insurance Scheme: Experience from Lagos, Nigeria

Tolulope Oyekanmi, *Nkata Chuku, Oluwatosin Kolade, Emmanuel Ndenor Sambo and Kingsley Adimabua, Health Systems Consult Limited, Abuja, Nigeria*

Background/Objectives

Lagos state government has commenced implementation of the state social health insurance scheme as a pathway for universal health coverage for residents of the state - estimated at 25million. Until recently, the benefit package of the scheme covered most maternal and child health services, but family Planning (FP) services were excluded, limited to only counselling. Evidence from other countries showed that access to and increase in FP services is key to improving overall health indices, reduce pressure on health systems and drive economic growth.

This paper presents the pathway which led to the successful integration of the full complement of FP services into the Lagos State Health Scheme (LSHS)- Ilera Eko.

Methods

The integration pathway was developed as an output of benchmark reviews conducted to glean learnings from other countries, key informant interviews with relevant state actors, and series of brainstorming sessions with relevant stakeholders working in the field of FP within the state.

Key Findings

We designed a 4-stage integration pathway which include advocacy and stakeholder management; acceleration of FP readiness in all LSHS empanelled facilities; health benefit package review and actuarial analysis, and full integration. The result of the actuarial study showed no significant additional cost to the premium for the proposed integration which led to inclusion of modern FP methods into the benefit package of the LSHS. Factors that aided the success of the integration plan are buy-in from relevant state agencies, donors, stakeholders, and State political leadership. A sustainable FP supply chain system for public and private providers will ensure uninterrupted supply of commodities across all facility types.

Key Conclusion

It is expected that the integration and mainstreaming of FP services into the LSHS will increase the state's Contraceptive Prevalence Rate with increased access and uptake of modern contraceptive methods. This will yield significant health benefits for women and children, averting unintended pregnancies, and reducing maternal and infant deaths. In addition, it will result in cost savings on Maternal and newborn health, while women and girls will be better able to pursue education, get paid job, increase their earning potential, and build household savings. These will in turn translate into a stronger and more prosperous society.

From project mode to routine business: Uganda's efforts to institutionalize results-based financing in government purchasing of primary health care services

Eric Tabusibwa[1], *Espilidon Tumukurate*[2], *Collins Kityo*[3], *Gideon Olaja*[2], *Tapley Jordanwood*[4], *Michael Chaitkin*[5], *Angellah Irene Nakyanzi*[6] *and Sarah Byakika*[1], *(1)Ministry of Health, Uganda, (2)ThinkWell Uganda, (3)Ministry of Finance, Planning and Economic Development, Uganda, (4)ThinkWell USA, (5)ThinkWell, Kampala, Uganda, (6)ThinkWell Uganda, Kampala, Uganda*

Background

The Uganda Intergovernmental Fiscal Transfers (UgIFT) Program for **Results** is led by the Ministry of Finance, Planning and Economic Development (MOFPED), with funding from the Government of Uganda and World Bank, to ensure adequate financing for and equitable access to public services. Under UgIFT, the Government of Uganda is working to institutionalize results-based financing (RBF) within public purchasing of primary health care services. Thanks to funding from the World Bank and USAID, all public and private not-for-profit Health Centres III and IV and General and Regional Hospitals currently participate in RBF.

Study aims and objectives

This study shares insights from Uganda's experience transitioning from a project-based RBF scheme to one embedded in the country's routine public financial management and intergovernmental fiscal transfer systems. It describes how lessons from initial RBF implementation are informing the development of a mainstreaming strategy, as well as reflect

on ongoing policy discussions related to sustainability and performance management. Finally, it highlights key features of the mainstreaming strategy and how RBF will be implemented within government systems.

Methods

All data came from official and draft policy documents and the authors' recollections and personal records. All contributing authors were directly involved in the review of RBF performance and experiences during project mode and the development of the mainstreaming strategy and accompanying operational manual.

Key findings

Promising results across a range of monitoring indicators—including ANC attendance, availability, availability of caesarean section, client satisfaction, quality, and community participation in facility governance—motivated policy makers to institutionalize RBF within government systems. A Ministry of Health–led consultative process was undertaken to take stock of RBF experiences across the country, extract lessons, and develop a mainstreaming strategy and operational guidelines. Key features of the strategy include embedding RBF financial planning in the national budget cycle; redesigning intergovernmental grants for PHC to include an enhanced base fund and a variable performance-linked fund; and clear assignment of roles across relevant government entities. Cost projections indicate ABC.

Main conclusions

Sustaining RBF beyond project life cycles requires evidence of impact, careful review of implementation experience, and strong leadership to translate operating modalities to government systems and practices. Public finance and civil service rules can force adaptations of common RBF design features, such as the direct payment of bonuses to health workers.

Poster Session 1-2

Innovative approaches to health system strengthening Poster Session 2

Innovating critical interpretive approaches to synthesis literature on factors influencing cancer treatment service access in Ghana

Chloe Tuck[1], *Robert Akparibo*[1], *Laura Gray*[1], *Richmond Aryeetey*[2] *and Richard Cooper*[1], *(1) University of Sheffield, Sheffield, United Kingdom, (2)University of Ghana, Accra, Ghana*

Background:

Despite policy interest in enhancing cancer service coverage through the Ghanaian National Health Insurance Scheme, multiple social-cultural, economic and health system factors influence how patients first contact, negotiate and accept suitable cancer care in Ghana, hindering efforts to alleviate inequality. Understanding such factors and how they relate is important to enable policy-makers to plan future services and understand associated cost-efficiency and equity impacts. However, these factors have not been mapped and analysis of the most appropriate methods to explore them from a systems perspective has not yet been undertaken.

Aims:

To systematically review and critique literature to understand factors influencing cancer treatment service access in Ghana and the most suitable methods to research this.

Methods:

A critical interpretive synthesis approach was used to incorporate multiple types of evidence. Multi-level literature searches were conducted using Medline via Ovid, Web of Science, CINAHL and African Index Medicus. Supplementary searches were conducted in six Ghanaian and African Journals, and by checking references and following up citations. Screening was conducted using the PerSPECTiF framework by the lead author and checked by a review author. The socioecological model (intrapersonal, interpersonal, community, health system, and policy) guided data extraction and synthesis to identify themes. **Findings** were mapped against the candidacy framework (reframing access to encompass negotiation and acceptance). A critique of the assumptions, methodology and interpretation within the evidence body was conducted to identify themes in research gaps.

Findings:

From 312 initial citations identified, 203 abstracts and 78 full texts were screened after duplicate removal. A further 16 abstracts were screened following citation and reference searching. Twenty-five articles were selected for inclusion.

Multiple dynamic and interacting factors were identified at each socioecological model level

and across the candidacy framework stages, which influenced how patients access cancer treatment services. Preliminary analysis revealed barriers included costs and misconceptions relating to traditional spiritual views, influenced by community networks. Literature highlighted acceptance of services was complex, involving delays, breaks and loss to follow up, and not fully reflected in the current candidacy framework.

Limitations were identified in how access to cancer care was defined and explored. Most quantitative studies used retrospective hospital records without individual psychosocial information and qualitative studies sampled predominantly from tertiary clinics, under-representing the most neglected populations.

Conclusions:

Future research should focus on populations under-represented in tertiary clinics to understand the barriers and inequities they face that policy innovations could seek to tackle.

Weighted Goal Programming Approach for Solving Budgetary HIV Treatment in Uganda

Kizito Mubiru, *Kyambogo University, Kyambogo, Uganda*

In today's fast paced and competitive market, optimal allocation of budgeted expenditure poses a critical concern among healthcare practitioners worldwide. As the demand on health systems increase due to HIV patients, constraints on healthcare budgets are significant due to budgetary constraints in less developed countries. In low income countries, the costs of seeking and obtaining care is considerable due to prevalence of charges for services and distances people often have to travel to obtain healthcare.

In this study, a goal programming model was developed to allocate budgetary expenditure for treating HIV patients at Mulago hospital in Uganda

The relevant cost components under consideration included drugs, materials, labor and miscellaneous costs. The weighted goal programming model proposed initially defines the objective function. The model seeks to minimize the deviation variables from actual expenditure; subject to the goal values of budgeted expenditure for HIV treatment. The sum of weighted deviations is minimized so that actual expenditure on drugs, materials, labor and miscellaneous costs meets the budgeted expenditure. The simplex method for linear programming is used to solve the goal programming model; and a numerical example is presented to determine the overachievement or underachievement of budgetary priorities.

The results obtained from the model developed aim to provide empirical evidence and insights to decision makers and policy analysts for budgetary planning in healthcare facilities. Certain goals on drugs, materials, labor and miscellaneous costs can be fully, partially or not achieved at all. This however depends upon the priority levels and cost targets set in line with budgeted expenditure on resource inputs for HIV treatment. Results also indicate that the priority-based weighted goal programming solution for budgetary HIV treatment is more

sensitive to the highest priority objective function.

The numerical example presented provides useful insights for effective financial planning towards HIV treatment. Based on the results, budgetary planning for HIV treatment is crucial for sustainable healthcare service provision in order to allow hospitals to identify satisfactory allocation of expenditure; based on the priority levels or goals set for targeted expenditure on HIV treatment. The results associated with the model indicate that a given priority in one budgetary expenditure may not necessarily cause a significant sacrifice in another expenditure. The model can however be effective; where relevant cost categories can be prioritized if necessary.

Informing product development for health benefit in Africa: a generalisable approach and application to a leishmaniasis vaccine

Sakshi Mohan[1], *Paul Revill*[2], *Stefano Malvolti*[3], *Melissa Malhame*[3], *Mark Sculpher*[4] *and Paul M. Kaye*[5], *(1)Center for Health Economics, University of York, York, United Kingdom, (2)Centre for Health Economics, University of York, York, United Kingdom, (3)MMGH Consulting, Zurich, Switzerland, (4)Centre for Health Economics, University of York, United Kingdom, (5)York Biomedical Research Institute, Hull York Medical School, University of York, United Kingdom*

Background

A pressing need exists to develop new health products, such as vaccines for neglected diseases such as leishmaniasis, that have potential to offer population health gains. Product development is dependent on value as seen my two key players – product developers/ manufacturers, who need to have confidence in the global demand in order to commit to research and production; and governments (or other international funders) who need to signal demand based on the potential public health benefits and affordability.

Methods

A detailed global epidemiological analysis is rarely available for new products before they enter market, due to lack of resources as well as typically insufficient global data necessary for such analyses. This study seeks to bridge this information gap by providing a generalisable approach to estimating the commercial and public health value of a vaccine for leishmaniasis in development relying primarily on publicly available Global Burden of Disease (GBD) data. Based upon estimates of incidence in selected countries, potential for individual health improvement (measured using DALYs) and estimates of countries' abilities to pay for health-improving intervention, a global demand curve is constructed to demonstrate market size and spur investment in product development. This simplified approach is easily replicable and can be used to guide discussions and investments other new health products.

Results

The maximum ability-to-pay of a leishmaniasis vaccine (per course, including delivery costs), given the current estimates of incidence and population at risk, is higher than $5 for nearly half of the 24 countries considered, with a median value-based maximum price of $4.4-$5.3, and

total demand of over 560 million courses.

Conclusion

The results indicate the commercial viability and potential for cost-effective population health improvement. They are being used to support continued development of the most promising vaccine candidate. Further development of this generic modeling approach is ongoing.

COVID-19 Vaccine Health Technology Assessment in African Countries

Principle organizer: *Justice Nonvignon, Head of Health Economics Unit Africa CDC*

Co-organizers: *Tom Drake, Centre for Global Development, Anna Vassall, London School of Hygiene and Tropical Medicine*

Upgraged to plenary

Description

Covid vaccination remains a critical issue for African countries and tough decisions remain for African governments on how to obtain sufficient vaccine supply without jeopardising essential services and how to effectively and equitable deliver the supply available. In this session we present outputs from a programme of work on Health Technology Assessment (HTA) on Covid-19 vaccines, coordinated by the Health Economics Unit in Africa CDC and the International Decision Support Initiative. The presentations will include applied HTA's in Nigeria, Ethiopia and Kenya, including assessments of the comparative cost-effectiveness of different Covid vaccines. There will be a presentation of optimal delivery strategies in African countries, assessed using advanced economic and epidemiological modelling. Finally, there will be an introduction to a toolkit for African countries seeking to collect evidence to inform Covid-19 vaccine procurement decision making. The toolkit was published by the Center for Global Development in November 2021 and can be found here. Technical presentations will be followed by a panel discussion. The final list of panellists is to be determined but currently agreed participants include Prof Justice Nonvignon (Africa CDC) and Dr Raymond Hutubessey (WHO).

Summary of presentations:

A. Health Technology Assessment of Covid-19 Vaccines in Nigeria (Professor Benjamin Uzochukwu, University of Nigeria)
B. Health Technology Assessment of Covid-19 Vaccines in Ethiopia (Firmaye Bogale, Ethiopian Institute of Public Health)
C. Economic and Epidemiological Modelling of Covid Vaccine Delivery Strategies in African Countries (Dr Yang Liu, London School of Hygiene and Tropical Medicine)
D. Collecting Evidence to Inform COVID-19 Vaccine Procurement Decisions: A Toolkit

for African Countries (Dr Tom Drake, Center for Global Development)

E. Health Technology Assessment of Covid-19 Vaccines in Kenya (Stacey Orangi, KEMRI)

Health Technology Assessment of Covid-19 Vaccines in Nigeria

Presenter: *Benjamin S.C. Uzochukwu, University of Nigeria*

Introduction

The COVID-19 pandemic has had varying impact at many levels in Nigeria. As part of its control, three highly efficacious COVID-19 vaccines (Moderna, Oxford-Astra Zeneca, and Johnson and Johnson) have been rolled out in Nigeria. However, access to these vaccines have been limited and deployment slow. There is also limited evidence in Nigeria on the comparative clinical and cost-effectiveness of alternative COVID-19 interventions including vaccination against COVID-19 in the Nigerian context. Therefore, there is an urgent need to support key national and regional policy priorities on COVID-19 by presenting evidence-based approaches in Health Technology Assessment (HTA) to conceptualize and evaluate COVID-19 vaccine strategies in Nigeria.

Aim

The aim of this HTA is to provide decision makers with evidence on the optimal strategy for COVID-19 vaccination to support policy priorities arising from a Nigerian context. The HTA focused on four vaccines: Moderna, Pfizer-BioNTech, Oxford-Astra Zeneca, and Johnson and Johnson. And the *de novo*cost-effectiveness analysis (CEA) focused on the following questions:

- Which Covid-19 vaccines should be bought and how much? What is the maximum price to pay?
- Which is the best way to deliver each/ all vaccines?
- What is the cost and cost-effectiveness of vaccinating those aged 18-49 years old?

The cost-effectiveness analysis assumes a 12-month implementation period for all scenarios and delivery strategies (campaign, targeted campaign, health facility).

Key Findings

The results showed that the COVID-19 vaccines evaluated in this HTA can be highly effective and cost-effective, although an important determinant of the latter is the price per dose and the age groups prioritised for vaccination. Taking a health system perspective only, the *de novo* CEA presented would suggest that the vaccines produced by AstraZeneca and Johnson & Johnson may represent optimal choices from the Nigerian perspective. If funds are being drawn from current health budgets vaccines priced under 10 USD/ dose and preferable 6 USD/dose or less compare favourably with other technologies that could be provided within the health budget. Furthermore, it is more cost effective to prioritise age group 50+ cohort during phase 2 of the roll-out. However, different types of delivery strategies make little difference to the results.

Implications For Policy And Implementation

Costs for each of the delivery strategies (campaign, targeted campaign, health facility) differ only slightly and do not appear to impact on relative cost-effectiveness. However, costs are not adjusted for different scale up scenarios and there may be unmodelled constraints affecting implementation.

Health Technology Assessment of COVID-19 Vaccines in Ethiopia

Presenter: *Firmaye Bogale, Ethiopian Institute of Public Health*

Aim:

Like all countries, Ethiopia has suffered large economic and health consequences form COVID-19 and is hoping to use vaccinations to alleviate most of its effects. However, questions around which vaccines to purchase and who to vaccinate still don't have a clear answer.
Given the uncertainties around COVID-19, there is a need for a health technology assessment to make informed decisions on COVID-19 vaccine. This should inform the national vaccine strategy and ensure they get the best value for money out of their campaign.

Accordingly, this project aims to respond to the three policy questions below:

1. Which COVID-19 vaccines should be bought, and how much?
2. What is the best way to deliver the vaccines—fixed posts, vaccination campaigns, or outreach posts?
3. What is the cost and cost-effectiveness of vaccinating different target groups?

This was modelled for four vaccines, Pfizer-BioNTech, Oxford-Astra Zeneca, Johnson and Johnson, and Sinopharm. The cost-effectiveness analysis assumes a 24-or 36-month implementation period for all scenarios and delivery strategies.
Additionally, interpretation of the evidence was contextualized taking into consideration equity/access, vaccine hesitancy, budget impact, implementation issues, and wider benefits and harms.

Key Findings:

Taking a health system perspective, this research found that some vaccines were highly cost effective in Ethiopia. In some scenarios the impact that the vaccines had on reducing hospitalisation and other COVID-19 related treatment costs was cost saving for the entire health system.
This research found that the cost of the vaccines was a much bigger driver than efficacy in determining which vaccines offered the best value for money in Ethiopia. This suggests that the vaccines made by Johnson and Johnson or AstraZeneca might provide the optimal choice. However, if other suppliers were to reduce the price they are willing to sell their vaccines at in Ethiopia that could lead them to become comparable.

The Impact and Economic Evaluation of COVID-19 Vaccine Strategies in Different Population and Outbreak Contexts among African Countries

Presenter: *Dr Yang Liu, London School of Hygiene and Tropical Medicine*

The enormous disease burden resulting from the COVID-19 pandemic has driven unprecedented efforts to develop and distribute COVID-19 vaccines. By the end of 2021, nearly 30 vaccines have been approved in at least one country. As vaccine demand continues to rise (as a result of the emergence of Variants of Concerns (VoCs) or the potential waning immunity), vaccine production and supply have struggled to catch up. Making the most of limited numbers of vaccines remains a policy question relevant for public health decision-makers around the world.

Through our project, we evaluated the health and economic outcomes associated with different vaccine strategies in a wide range of population and outbreak contexts among African countries. Existing evidence is predominantly based on high-income and resource-abundant settings with good access to and ability to distribute large volumes of vaccines. However, one size may not fit all. The settings that have already been explored often share key features (e.g. population age structure, vaccine supply conditions) that affect COVID-19 transmission dynamics but are not applicable elsewhere in
the world. Here, we have addressed this issue by parameterising such features with local contexts. We have also examined the unique challenge of rolling out vaccines as VoCs (e.g. Omicron) spread.

On the country level, we used population sizes, age structures, and synthetic contact matrices to construct the baseline population dynamics, and then Google Mobility and the Oxford COVID-19 policy Stringency Index to approximate the deviation in human behaviours from the aforementioned baseline. We fit an age-specific transmission dynamics model to observe COVID-19 mortality to estimate the sizes of existing outbreaks before (and during) vaccine roll-out. We considered five types of vaccine effects (i.e. preventing infections, disease, severe disease, mortality and onward transmission) and explored a range of potentially feasible dosing dynamics.

We projected the health outcomes associated with different vaccine dosing dynamics strategies and presented the total costs, disability-adjusted life-years (DALY) and quality-adjusted life-years (QALY) losses averted both on the national and the regional levels.

Collecting Evidence to Inform COVID-19 Vaccine Procurement Decisions: A Toolkit for African Countries

Presenter: *Dr. Tom Drake, Center for Global Development*

Vaccines are key to controlling COVID-19 in Africa, but available supplies across the continent remain extremely low—in most countries, doses are not even enough to vaccinate 1 in 10 people. Global, regional, and national institutions have created mechanisms to procure vaccines and deploy them to their populations. Those organizations face important decisions, with the potential to protect societies and economies from further COVID-19 shocks, but also present a risk to essential services if the cost of COVID-19 vaccines depletes scarce health budgets.

We have developed a toolkit which aims to support technical staff and decision-makers in countries that are interested in using Health Technology Assessment (HTA) to inform the procurement of COVID-19 vaccines. After introducing the HTA process, it focuses on evidence collection, outlining the types of information useful to make informed decisions, and options for frameworks to harness data. The toolkit also points to relevant existing evidence, resources and key considerations from experiences garnered since the beginning of the pandemic.

The presentation will briefly outline the purpose and structure of the toolkit, highlighting what is can be used for and what it cannot. The toolkit is available here.

Health Technology Assessment of COVID-19 Vaccines in Kenya

Presenter: *Stacey Orangi, KEMRI-Wellcome Trust*

Background:

The Kenyan Government has prioritized vaccination as a vital public-health measure to contain the COVID-19 disease within the country. However, resource constraints necessitate a cost-effective analysis of the implementation of various vaccination strategies within the country.

Methods:

We used an age-structured SEIRS SARS-CoV-2 transmission model with vaccination to project the epidemiological outcomes of implementing various vaccination strategies within the country. Subsequently, the cost effectiveness of the various vaccination strategies was estimated. We compared 3 vaccination scenarios against a no vaccination case: 30% (minimal), 50% (median) and 70% (optimistic) coverage of the adult population by June 2022 initially prioritizing high-risk age groups. These were evaluated under two contexts: 1) without an immune escape variant and with an immune escape variant, and 2) a rapid vaccination roll-out and non-rapid vaccination roll-out. The incremental cost-effectiveness ratio (ICER) of each option compared to the no vaccination case was estimated by calculating the incremental cost of a strategy per Disability-Adjusted Life Years (DALYs) averted. A strategy is deemed cost-effective if the incremental cost per DALY averted is less than 50% of the Kenyan GDP per capita (USD 919.105).

Findings/Interpretation:

In the absence of a new variant in Kenya, minimal coverage (30%) with rapid roll-out achieves the lowest cost per DALY averted because such a policy rapidly vaccinates all the most at-risk population. In the event of a fifth wave due to an immune escape variant ICERs are reduced since there are more cases to be prevented for the same level of coverage. Investments in the COVID-19 vaccine programme to increase coverage will result in fewer hospitalizations and deaths, but the benefits come at a high financial burden. The current situation in Kenya after four waves of COVID-19 is that over 80% of the population are believed to have experienced natural infection and high-level population immunity. The present study shows that the role of vaccination in such a setting favors rapid roll-out to those most at risk of severe disease, that is, older age groups and those with co-morbidities.

Organized Session 3-1

The Impact of COVID-19 on Health Financing in Low- and Middle-Income Countries: Findings from Burkina Faso, Kenya, and Uganda.

Anooj Pattnaik, ThinkWell, Edwine Barasa, Health Economics Research Unit, KEMRI-Wellcome Trust Research Programme, Nairobi, Kenya, Marie-Jeanne Offosse, ThinkWell, Ouagadougou, Burkina Faso and Orokia Sory, Recherche pour la Santé et le Développement (RESADE), Ouagadougou, Burkina Faso, Stacey Orangi, Institute of Healthcare Management, Strathmore University, Nairobi, Kenya, Angela Kairu, Kemri-Wellcome Trust, Nairobi, Kenya and Ileana Vilcu, ThinkWell, Geneva, Switzerland, Freddie Sengooba, Department of Health Policy, Planning & Management, Makerere University School of Public Health, Uganda

Description

COVID-19 has resulted in substantial health, social, and economic impacts globally. A key dynamic of the pandemic is its bi-directional interaction with the health system. On the one-hand, the capacity of health system functions affects the effectiveness of the country's response to the pandemic, and on the other hand, the nature, scale, health and non-health impacts of the pandemic, and country response strategies affect health system functions in ways that influence the resilience of health systems. This is especially the case in low-and middle-income countries (LMICs) that have fragile health systems. Resilience reduces the vulnerability of health systems to crisis and ensures they adapt to support the continued delivery of good quality services and address emerging health needs appropriately. Understanding this interaction between the pandemic and health system functions is important in providing evidence on how to a) strengthen health systems to better respond to the pandemic and b) shape government response to the pandemic in ways that minimize unintended and harmful health and social economic impacts. In other words, such evidence is useful in informing ways to strengthen the resilience of health systems to COVID-19 and other future pandemics.

This cross-country study conducted in three LMICs African countries (Burkina Faso, Kenya, and Uganda) focuses on the health financing function of the health system and examines a) how the COVID-19 pandemic and government response to it has impacted their health financing systems, and b) how existing and adapted health financing arrangements have affected the capacity of these countries to respond to the pandemic.

Using Burkina Faso, Kenya, and Uganda as country case studies, this session will explore how the COVID-19 pandemic and LMICs health financing systems have influenced health system resilience. KEMRI-Wellcome Trust will open the session of with a presentation of the cross-country study and its key findings. Next, speakers from ThinkWell and Recherche pour la Santé et le Développement (RESADE) in Burkina Faso, KEMRI-Wellcome Trust in Kenya, and Makerere University School of Public Health in Uganda will share insights from their countries, elaborating on how the purchasing and public financial management arrangements have

been adapted to respond to COVID-19 and how these influenced the pandemic response in their country. ThinkWell will moderate a “question and answer” session, channeling audience questions to the speakers.

The Impact Of Covid-19 On Health Financing In Kenya, Burkina Faso, And Uganda

Edwine Barasa, Health Economics Research Unit, KEMRI-Wellcome Trust Research Programme, Nairobi, Kenya

Background

The COVID-19 pandemic has resulted in substantial health and social-economic impacts globally. A key dynamic of the pandemic is its bi-directional interaction with the health system. On one end, the capacity of health system functions affects the effectiveness of the country’s response to the pandemic; and on the other, the pandemics’ impact, and country response strategies test the resilience of health systems and their functions. One such function is health financing, which plays a critical role in the pandemic response and maintaining the delivery of core health services. We carried out a study in Burkina Faso, Kenya, and Uganda that focused on the interaction between the pandemic and the health financing function of their health systems.

Aims and Objectives

We aimed to examine a) how the COVID-19 pandemic and government response to it has impacted their health financing systems, and b) how existing and adapted health financing arrangements have affected the capacity of these countries to respond to the pandemic.

Methods

We used a comparative case study approach that employed quantitative and qualitative methods. Quantitative data (e.g., budget and expenditure data) was extracted from document reviews and descriptively analyzed in MS Excel. For the qualitative, we purposively sampled national and regional health sector policy makers and managers, health facility level managers and frontline staff (at referral and primary care levels) from each country. We collected data using a combination of semi-structured in-depth interviews and document and administrative record reviews. Triangulation of qualitative and quantitative data was used to enhance the study rigor. A thematic approach was used for the analysis.

Findings

This cross-country study highlighted (1) how governments in Burkina Faso, Kenya, and Uganda mobilized resources to respond to the pandemic, (2) what COVID-19 services were purchased, and the purchasing arrangements used, (3) the evolution of purchasing rules and practices during the pandemic and the opportunities seized and/or missed, and (4) lessons on public financial management adaptations especially during emergencies such as the COVID-19 pandemic.

Conclusion

Understanding the interaction between the pandemic and the different aspects of the health financing function is important to provide evidence on how to a) strengthen the health financing system to better respond to crises and b) shape government response to pandemics in ways that minimize unintended and harmful health and social economic impacts. This cross-country analysis enhances the transferability of these findings to similar contexts in sub-Saharan African countries.

PFM reforms and COVID-19 management in the health sector: the case of Burkina Faso

Marie-Jeanne Offosse, ThinkWell, Ouagadougou, Burkina Faso and Orokia Sory, Recherche pour la Santé et le Développement (RESADE), Ouagadougou, Burkina Faso.

Background

The first COVID-19 cases in Burkina Faso were confirmed on March 9, 2020. In early May, the government set up the National Response Management Committee. Five-line ministries, including the Ministry of Health (MoH), were involved in the implementation the COVID response plan. To respond to the pandemic whilst continue to provide other essential health services, the Government of Burkina Faso adopted swift health financing reforms, specifically on public finance management (PFM) for revenue mobilization.

Aims and objectives

This study aims to assess key changes in health financing arrangements in relation to Burkina Faso's response to the COVID-19 pandemic.

Methods

The study is part of a cross-country assessment with a standard questionnaire adjusted to focus on relevant stakeholders in Burkina Faso. A detailed desk review of the literature on PFM systems and practices at different levels of government in Burkina Faso was undertaken, followed by key informant interviews on changes in revenue mobilization arrangements and practices at the national level. A thematic approach was used for the analysis.

Key Findings

The 2020 MoH budget was revised to allocate 78 million USD to fund the pandemic response, including incentives to motivate health workers. The new budget line was co-funded by the government by repurposing some funds allocated to the MoH and other line ministries, and by donors through direct budget support. The budget amendment resulted in an additional 43 million USD to the initial 335 million USD in the 2020 MoH budget.

For further resource mobilization, a treasury account (MoH COVID-19 account) was created for direct deposit and bank transfers. MoH organized fund-raising events to collect cash and checks from private companies and individuals. These funds were then deposited in this treasury account.

To facilitate the implementation of the COVID-19 response plan, the government streamlined MoH procurement procedures. Single source (direct agreement) was allowed and resulted in shortening procurement processes for COVID-19 treatment equipment.

Conclusion

Though the COVID-19 pandemic has disturbed services delivery in Burkina Faso, especially preventive services, it has paved the way for reforms in PFM arrangements in the health sector. Reallocation of government general budget to respond to a health crisis, innovative approaches for public and private funds mobilization, as well as streamlining procurement procedures are reforms that can be employed in future health crises.

The Impact Of Covid-19 On Health Financing In Kenya

Stacey Orangi, Institute of Healthcare Management, Strathmore University, Nairobi, Kenya, Angela Kairu, Kemri-Wellcome Trust, Nairobi, Kenya and Ileana Vilcu, ThinkWell, Geneva, Switzerland

Background

By late October 2021, there have been over 252,000 confirmed COVID-19 cases and more than 5,000 reported deaths in Kenya. In the face of the pandemic, the Kenyan health system has had to continue to perform and deliver core services while ensuring there is capacity to respond to the pandemic. Health financing is a key health system function whose performance impacts both of these objectives.

Aims and objectives

This study examined how the Government of Kenya adapted its purchasing and public financial management (PFM) arrangements to respond to COVID-19 and how these influenced the pandemic response in the country.

Methods

To better understand this, we conducted a qualitative and quantitative cross-sectional study at the national level and in three purposely sampled counties in Kenya. We collected qualitative data using in-depth interviews (n=55) and carried out document reviews to extract quantitative budget data. Qualitative data was analysed using a thematic approach, while qualitative data was analysed descriptively in MS Excel.

Key Findings

COVID-19 services offered in the counties include testing, isolation and case management, as well as vaccination. Across the three counties, these services are purchased by the county health department and national ministry of health and provided largely through public healthcare facilities. The COVID-19 services are paid for using program-based budgets. Although the National Hospital Insurance Fund (NHIF) has not formally incorporated COVID-19 services into its benefit package, there are efforts to include COVID-19 case management in

some of its schemes and reimburse through existing payment methods (capitation, fee for services, case-based payments, and daily per diems).

Existing PFM systems across the three counties remained unchanged, however, the budgeting process was flexible to include COVID-19 related activities. Counties (two of the three) where health facilities lacked operational and financial autonomy were less able to respond to the urgent needs of the facilities resulting in delays in procurement.

Conclusion

Our findings show that there is need to increase access of COVID-19 services by including it in the NHIF benefit package and including more private and faith-based facilities to offer these services. Further, although the current public finance management systems have been flexible in responding to the pandemic, adaptations such as ensuring facility financial autonomy are key to making the health financing system more resilient to pandemics.

Purchasing arrangements and adjustments adopted to finance Uganda's COVID-19 response: Insights from local governments and the frontlines

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Background

Like many countries, Uganda's decentralized system transmits the responsibility for health service delivery to local governments. The capacity of these local governments to withstand pandemics and sustain health service delivery is key. At the beginning of the COVID-19 pandemic, the Government of Uganda (GoU) mobilised funds to finance national and local government responses. Effective resource mobilization, allocation, and use is key to health system resilience during health emergencies, and much can be learned from the interactions between Uganda's COVID-19 pandemic response and its public financial management (PFM) systems and what adaptions were undertaken in this crisis.

Aims and objectives

This study assesses Uganda's COVID-19 funding mechanisms, documenting how its health purchasing arrangements were adapted and comparing the de jure versus de facto autonomy levels for fiscal and operational decision-making by districts and health facilities. The study describes how COVID-19 financing evolved during the pandemic, with attention to how funds were mobilized and used to pay providers, and how they were accounted for.

Methods

A cross-sectional study was conducted across 43 health facilities in 8 districts. In-depth interviews at the national level helped to clarify purchasing decisions for COVID-19. Descriptive and comparative statistics were calculated to show implementation progress, and qualitative data collected through open-ended questions were analyzed using conventional content

analysis (CCA) to determine the pattern of financial flows and spending priorities for COVID-19 interventions. Supplementary information was extracted from relevant laws, policies, and guidelines.

Key findings

This study determined the fiscal and operational autonomy sub-national governments and facilities have within the public health system. Findings highlighted (1) how GoU mobilized resources to respond to the pandemic, (2) what COVID-19 services were purchased, and the purchasing arrangements used, (3) the evolution of rules and practices for strategically purchasing during the pandemic and what opportunities were seized and/or missed, and (4) lessons on adaptations about vital adjustments in PFM especially during emergencies like COVID-19.

Conclusion

The COVID-19 pandemic prompted rapid efforts by the GoU to mobilize funds and allocations to service providers. New approaches to purchasing emerged, prompting adjustments to PFM practices. Uganda's experience sheds light on whether health emergencies can increase government willingness to grant greater fiscal and operational autonomy to local governments and frontline facilities.

Organized Session 3-2

The Use Of Data And Evidence For Decision Making In Hta: Adopting An Evidence Deliberative Process As A Mechanism For Strengthening Decision Making In Health Technology Assessment.

Authors: *Mr. Gavin Surgey, Radboud University Medical Center, Nijmegen, Netherlands, Brian Asare, Ministry of Health, Accra, Ghana, Tommy Wilkinson, World Bank, Washington, DC, Warren Mukelabai Simangolwa, HEARD, Health Economics Aids Research Division, UKZN, Lusaka, Zambia.*

Description

The use of data and evidence for decision making in HTA: Adopting an evidence deliberative process as a mechanism for strengthening decision making in Health Technology Assessment.

Panel Abstract

With limited resources, tough choices must be made about what gets covered.

There has been increasing use of Health Economics evidence to support decision making however, it is being realized that decision making needs to rely on more than Cost-Effectiveness (CEA) and that a countries' value criteria needs to be incorporated such as disease and intervention criteria; criteria related to characteristics of social groups and; those related to protection against the financial and social effects of ill health.[1]

There is a need for fair processes and procedures to capture multiple considerations and navigate the tensions and tradeoffs. Given that people will disagree about which tradeoffs ought to be made, a commitment to fair processes can help navigate these challenges. It is within this context that an evidence-informed deliberative process can help navigate these tradeoffs resulting in fairer and more legitimate decision making.

Different countries use and consider different evidence in their decision making. What evidence do they consider and how? This session will reflect on what and how different countries consider different types of evidence for legitimate decision making.

Structure of Session

The session will start with the moderator setting the scene with an overview of experiences with priority setting and evidence that is used for decision making. There will be comment on the role of value criteria and how this is derived and used in different country HTA processes. After that the five panellists will present their work relating to the use of evidence in HTA in the different countries followed by a Q&A.

Outcomes and Objectives

The objectives of this panel will be to share the experiences of using different criteria as countries move toward the institutionalization of HTA for priority setting.

[1] Norheim, O.F., Baltussen, R., Johri, M. et al. Guidance on priority setting in health care (GPS-

Health): the inclusion of equity criteria not captured by cost-effectiveness analysis. Cost Eff Resour Alloc 12, 18 (2014). https://doi.org/10.1186/1478-7547-12-18

The Use Of Evidence And The Hta Process In Ghana

Brian Asare, Ministry of Health, Accra, Ghana

Ghana is committed to achieving Universal Health Coverage (UHC) and has been working to encourage evidence-based decision making to ensure the National Health Insurance Scheme (NHIS) works for Ghana's 30 million citizens by establishing HTA. In order to achieve Sustainable UHC, Ghana has recognized that this requires developing frameworks for priority setting. On the path towards UHC, Ghana needed to make choices in the design of the HTA frameworks and processes. It was agreed that an evidence-informed deliberative process (EDP), adapted to the country-context based on lessons learnt from the use of evidence and negotiation in the review of national standard treatment guidelines and essential medicines list would be followed. Work was done with the with the Ghana HTA committee on the types of criteria that could be used for decision making which included factors additional to clinical and economic evidence such as ethical, legal, or social issues. Throughout the development of HTA, work has been done with stakeholders in the country to increase the understanding of choices in processes and the theoretical framework of EDPs. This work will present the process that Ghana followed in designing its framework for HTA, from the inception of its HTA structures, to the drafting of each step in the HTA process guidelines by the country HTA structures, to the implementation of initial HTA-related projects to inform policy making. We find that incorporating ideals from existing processes and involving decision-makers in the design plus may contribute to success of HTA. Also, that incorporating evidence beyond exclusively focusing on cost-effectiveness will result in fairer priority setting processes.

Evidence and a decision-making process in Tanzania

Mr. Gavin Surgey, Radboud University Medical Center, Nijmegen, Netherlands

HTA has increasing recognition of its role as an important component to achieving UHC through more efficient allocation of resources. There is no formalized priority-setting mechanism in Tanzania, and current decision-making processes do not incorporate health economic analysis (efficiency, effectiveness, value and behaviour). Decisions are taken by the leadership at the national level and are made in a bureaucratic fashion, with little or no evidence to underpin them. Very hot debates among the researchers, politicians and in the communities called for more systematic discussions at the ministry level. As Tanzania moves toward universal coverage reforms, are focused on improving efficiency. Health services are not well defined and there is desperate need for HTA to help define priority services as well as a process for doing so, in order to ensure best value for money and broader stakeholder

buy in of coverage decisions. This work aims to present, as a case study, the successful establishment of the Tanzania HTA committee in 2017/18. It aims to answer the question: How does one introduce HTA such that HTA becomes an integrated part of routine decision-making for planning and operational policy within the health care system when there are a lack of capacity and data. The presentation will highlight how decisions are made and how evidence is used in an evidence scarce environment. We will show how the HTA process has been simplified, but by using the available evidence we can improve the decision making process leading to a more efficient health care system.

Evidence and HTA Methods For Medicines Selection In South Africa

Tommy Wilkinson, World Bank, Washington, DC,

The Essential Drugs Programme (EDP) in South Africa aims to ensure that affordable, good quality essential medicines are available at all times, in adequate amounts, in appropriate dosage forms, to all citizens. New health technologies introduce additional costs to the health system, meaning their availability introduces challenges for priority setting, resource allocation, and patient care choices. Choices need to be made between alternative interventions for a given disease and treating or preventing it. In order to make these complex choices, the EDP aims to utilise the best available evidence using an approach that is systematic, unbiased, and transparent.

An HTA process was developed for the EDP which focuses on the methods for the production and use of evidence for medicines. This is nested in the context of South Africa's developing health technology assessment (HTA) system. This system of HTA in South Africa goes beyond a technical exercise and incorporates a series of social and scientific value judgments to inform an accountable approach to determining what health technologies are funded in the public health system. This presentation outlines the HTA methods used within the existing decision-making in the current South African context and in future structures under National Health Insurance.

Integrating EDP's and HTA in the revision of Zambia's HBP

Warren Mukelabai Simangolwa, HEARD, Health Economics Aids Research Division, UKZN, Lusaka, Zambia

Background

The Ministry of Health in Zambia has recently initiated a process to revise the 2012 National Health Care Package (NHCP). This is a part of the broader health allocative efficiency process to improve value for money for its health spending. To achieve this, a roadmap defining a stepwise process contextualised from the international decision support initiatives ten steps

what's in and what's out has been adopted for implementation. Applied economic evaluation, measuring costs of health interventions, budget impact analysis, decision analytic modelling and measuring health utilities and preferences are key health economics concepts that are relevant to this process.

Approach: This article reviews processes that Zambia is undertaking to improve in-country expertise in health economics so as to revise its benefits package. In particular, we explore two critical stages of it stepwise revision process and ascertain what capacity development initiatives are being undertaken for the multi-stakeholder group appointed by Government to lead this process. The multi-stakeholder group is an inclusive forum for cooperating partners, academia, civil society groups, local and international NGOs, the private sector, regulatory institutions, other government line ministries, patient groups, and public representatives. Their roles are to generate evidence to inform decision making on benefit package processes and steer consensus on the revision. The stages reviewed are the evidence collection and synthesis and the appraisal stages, corresponding to steps 4 and 5 on the ten stepwise process. The outcomes to these processes will include synthesis and appraisal of evidence on intervention costing, fiscal space, budget impact, CEA , equity and FRP evidence synthesis.

Results.

The Government of Zambia has initiated a monthly 60-90 minutes webinar for the multi-stakeholder group to strengthen their Health economics capacity for the revision process. These webinars host experts drawn from the iDSI network with expertise in health economics. The Government has further been collaborating with the International Decision Support Initiative, the World Bank, UNICEF and WHO to support health economics capacity. To adequately and systematically achieve this, the Government is undertaking a capacity assessment for the multistakeholder group to review specific capacity development needs for stakeholders so as to target the health economic developments imitative better.

Parallel Session 3-1: Oral

Impact Of Health Expenditures

Expanding State-level Fiscal Space in an era of health sector reform: Evidence from Abia and Osun states of Nigeria

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Introduction:

Despite a plurality of funding mechanisms for health in Nigeria, gross under-funding compared to projected need, inefficiency and waste reduce the effective functioning of the health system. To support the process of strategic reforms in healthcare financing that are currently ongoing and push more funds to the state level, there is a need for evidence to inform policies that mobilize and then help utilize funding for health and support the engagement of critical actors.

Methods:

We conducted a public expenditure review (PER), fiscal space analysis (FSA), and assisted state governments in developing Resource Mobilization Plans (RMPs) in two states: Abia and Osun. The PER and FSA surveyed GDP growth, government revenue, budget and expenditure indicators from official sources over the five-year period 2013–2017. Based on this, we projected three fiscal space scenarios for health (baseline, moderate and optimistic), using assumptions to account for uncertainty in prioritization of health and macro-fiscal conditions in each state. The output from these analyses guided the development of RMPs that target increasing health funding from four sources: (1) discretionary government health expenditure, (2) earmarks, (3) external assistance and private sector, and (4) efficiency gains. Results were validated through stakeholder-led working sessions.

Results:

In both states, public funding for the health system fell below the 15% Abuja declaration target. The proportion of government health expenditure to general government expenditure ranged from an average of 5% in Abia to 7% in Osun for the period. Budgets prioritize personnel costs (historical average of 69% of the health budget in both states) which crowds out other inputs into health service delivery; while capital expenditure is poorly prioritized (average of 27%-28%). Effectiveness of the capital spending is further reduced by poor execution (average of only 8%-10% in both states). The final Osun state RMP aims to mobilize 85 billion Naira over the period

2020–2024; building on underlying FSA scenarios and accompanying strategies. In Abia, the RMP will yield 61 billion Naira within the same period.

Conclusions:

In their RMPs, each state health sector committed to greatly improve both health prioritization and budget performance through enhanced financial data tracking and consequent evidence-based advocacy efforts. In addition, RMP strategies targeting non-poor informal sector enrolment into the state insurance schemes have great promise to mobilize additional domestic resources. Together, this approach to linking health financing output to strategic planning should be considered in other Nigerian states aspiring for UHC.

Catastrophic health care spending and impoverishment in Tanzania: evidence from the recent national household survey

Peter John Binyaruka[1], *August Kuwawenaruwa*[2], *Mariam Ally*[3], *Moritz Piatti*[3] *and Gemini Mtei*[4], *(1)Ifakara Health Institute, Dar Es Salaam, Tanzania, (2)Ifakara Health Institute, Dar es salaam, Tanzania, (3)The World Bank Tanzania, (4)Abt. Associates Inc., Public Sector Systems Strengthening Plus (PS3+) Project, Dar es Salaam, Tanzania.*

Introduction:

Achieving universal health coverage (UHC) goal by ensuring access to quality health service without financial hardship is a policy target in many countries. Thus, routine assessments of financial risk protection are required in order to track country progress towards realising this universal coverage target. This study aimed to undertake a system wide assessment of catastrophic health spending by using the recent national survey data in Tanzania.

Methods:

We used cross-sectional data from the national Household Budget Survey 2017/2018 covering 9,463 households and 45,935 individuals cross all 26 regions of mainland Tanzania. This data includes information on service utilisation, health care payments and consumption expenditure. Two measures of financial risk protection (i.e., catastrophic health expenditure (CHE) and impoverishing effect of health care payments) were estimated. Prevalence of CHE was estimated from the fraction of healthcare costs in relation to household consumption expenditure. We used 10% threshold of total expenditure and 40% threshold of non-food expenditure. Poverty headcount was estimated using the total household consumption expenditure considering both with and without out-of-pocket expenditure for healthcare in comparison with the national poverty-line.

Results:

About 2.6 percent of Tanzanian households suffered from financial catastrophe because they spend more than 10 percent of their total expenditure on health care. Also, 1 percent of Tanzanian households suffered from financial catastrophe because they spent more than

40 percent of their non-food expenditure on health care. Similarly, about 1 percent of the population was impoverished as a result of out-of-pocket payments.

Conclusions:

Tanzania should prioritize expanding pre-payment mechanisms such as health insurance and progressive taxation to ensure financial protection among vulnerable groups, specifically the poor, the elderly, those suffering from chronic illness. Further monitoring assessment are needed especially in comparing financial protection with the performance on service coverage in the premise of achieving UHC.

Socio-Economic Inequalities and Determinants of Catastrophic Health Expenditure in Nigeria

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High out-of-pocket (OOP) payments is one of the major factors hindering healthcare access in Nigeria and other low- and middle-income countries. Available information indicates a rising trend in OOP, putting many in risk of catastrophic health expenditure (CHE) and impoverishment, especially among poor individuals. As most of the studies are limited only to the amounts paid out-of-pocket this may lead to an underestimation of the phenomena for the households that cannot afford these payments. There have been limited studies examining the extent of inequality and determinants of CHE in sub-Saharan Africa. Using data from Nigeria General Household Survey panel (GHSP) for 2018-2019, this study examines socio-economic inequalities and determinants of CHE. The catastrophic effects of OOP payments in this study were measured using Ataguba method, applying an initial threshold of 10% and y=0.8, a parameter of aversion to inequality. Multiple corresponding analysis (MCA) was used to generate the wealth index and concentration indices for assessing inequality were derived. Logistic regression was used to analyse the association between CHE and socio-demographic variables. The results indicate that 22.3% of the households incurred CHE at 10% threshold. 6% of outpatients and 4% of inpatients patients were impoverished or went below poverty line due to OOP for health care. The computed concentration indices for both outpatients and inpatients healthcare services were negative, indicating that CHE was concentrated among the poor households. Furthermore, the results suggested that lack of health insurance (OR=3.41, SE= 2.38, $p<0.001$), living in rural areas (OR=2.01, SE= 1.02, $p<0.005$) and low socio-economic status (OR=1.48, SE= 0.57, $p<0.005$) were the variables associated with CHE. These findings have some policy implications for different stakeholders such as ministers for health, health providers, insurance firms. Policies to enhance financial risk protection, particularly among the poor households and rural dwellers, are required to enhance equity and improve healthcare access in Nigeria.

The impact of out-of-pocket expenditures on missed appointments at HIV care and treatment centers in Northern Tanzania

Carl Mhina[1], *Hayden Bosworth*[1], *John Bartlett*[2] *and Chalres Muiruri*[1], *(1)Duke University-Department of Population Health Sciences, Durham, NC, (2)Duke Global Health Institute, Durham, NC*

Background

Missed clinic appointments negatively impact clinic patient flow and health outcomes of people living with HIV (PLHIV). PLHIV likelihood of missing clinic appointments is associated with direct and indirect expenditures made while accessing HIV care. The objective of this study was to examine the relationship between out-of-pocket (OOP) health expenditures and the likelihood of missing appointments.

Method

Totally 618 PLHIV older than 18 years attending two HIV care and treatment centres (CTC) in Northern Tanzania were enrolled in the study. Clinic attendance and clinical characteristics were abstracted from medical records. Information on OOP health expenditures, demographics, and socio-economic factors were self-reported by the participants. We used a hurdle model. The first part of the hurdle model assessed the marginal effect of a one Tanzanian Shillings (TZS) increase in OOP health expenditure on the probability of having a missed appointment and the second part assessed the probability of having missed appointments for those who had missed an appointment over the study period.

Results

Among these 618 participants, 242 (39%) had at least one missed clinic appointment in the past year. OOP expenditure was not significantly associated with the number of missed clinic appointments. The median amount of OOP paid was 5 100 TZS per visit, about 7% of the median monthly income. Participants who were separated from their partners (adjusted odds ratio [*AOR*] = 1.83, 95% confidence interval [*CI*]:1.11–8.03) and those aged above 50 years (*AOR* = 2.85, 95% *CI*: 1.01–8.03) were significantly associated with missing an appointment. For those who had at least one missed appointment over the study period, the probability of missing a clinic appointment was significantly associated with seeking care in a public CTC (*P* = 0.49, 95% *CI*: 0.88–0.09) and aged between > 25–35 years (*P* = 0.90, 95% CI: 0.11–1.69).

Conclusion

Interventions focused on improving compliance to clinic appointments should target public CTCs, PLHIV aged between > 25–35 years, above 50 years of age and those who are separated from their partners.

Catastrophic health expenditure amongst people living with HIV seeking care at two tertiary care and treatment centers in North Tanzania

Carl Mhina[1], *John Bartlett*[2], *Chalres Muiruri*[1] *and Hayden Bosworth*[1], *(1)Duke University-Department of Population Health Sciences, Durham, NC, (2)Duke Global Health Institute, Durham, NC*

Introduction

Catastrophic health expenditure (CHE) means that the health spending of an individual exceeds their ability to pay. People living with HIV (PLHIV) incur CHE due to out-of-pocket (OOP) expenditures made while accessing HIV care. CHE is associated with access and adherence barriers that negatively impact health outcomes and risk transmission of HIV. We assessed CHE and its associating factors among PLHIV in two care and treatment centers (CTC) in North Tanzania.

Methods

We interviewed 618 PLHIV who were older than 18 years and assessed data on their demographics, clinical characteristics, socio-economic status, monthly income, direct medical, non-medical and indirect expenditures, and coping strategies while accessing HIV care. We assessed CHE due to HIV as health expenditures exceeding 10% of total monthly income. A multivariate logistic regression model was used to determine the predictors of catastrophic health expenditures.

Results

The mean total OOP health expenditure per HIV visit was TZS 7242 (standard deviation [SD] 2998). CHEs were experienced by almost half (45%) of the PLHIV attending the two CTCs. Attending a private CTC (AOR 1.77; 95% CI 1.19-2.64) was associated with CHE while being in the upper socio-economic status (AOR 0.42; 95% CI 0.23-0.79) and employment (AOR 0.19; 95% CI 0.13-0.29) were protective against CHE. Borrowing money (AOR 3.69; 95% CI 2.46-5.52) and reducing number of meals to pay for HIV care (AOR 1.57; 95% CI 1.05-2.32) were significant CHE coping strategies.

Conclusion

Implementing long-term economic protection schemes in HIV programs such as income generating projects is key in ensuring PLHIV are protected against CHE. Future studies should longitudinally assess how CHE and its coping strategies may impact health outcomes among PLHIV.

Parallel Session 3-2: Oral

Impact of COVID on Health Services_FR

Impact of a free care policy on the utilization of health services during an Ebola outbreak in the Democratic Republic of Congo: an interrupted time-series analysis

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Background

In previous Ebola Virus Disease (EVD) outbreaks, the use of health services decreased, delaying health-seeking behaviour and affecting the health of the population.

From May to July 2018, the Democratic Republic of Congo experienced an outbreak of EVD. The Ministry of Health introduced a policy of free health care (PGS) in affected and neighbouring health zones. We assessed the impact of this policy on health service utilisation.

Aims

The aim of this study was to determine the impact of MVE on health service utilisation and health system performance in affected and unaffected areas where financing strategies are being piloted.

Objectives of the research

(1) Integrate routine health information into responses to Ebola in DRC and draw lessons for future public health crises

(2) Identify drivers and barriers to health system performance that may be relevant to future public health emergencies in DRC

Methodology used

We used a controlled interrupted time series analysis with a mixed effects model to estimate changes in service utilisation rates during and after the free healthcare policy (FHP)

Key findings

Overall, service utilisation increased compared to control health areas, including areas affected by EVM. The total number of visits for pneumonia and diarrhoea initially more than doubled compared to control areas ($p<0.001$), while assisted deliveries and antenatal first aid increased between 20% and 50% ($p<0.01$). DTP visits, fourth antenatal care visits and postnatal care visits were not significantly affected. During the GSP, visit rates followed a downward trend. Most of the increases did not persist after the GSP ended.

Major conclusions

The GSP was effective in rapidly increasing the use of some health services in both EVM-affected and unaffected health areas, but this effect was not sustained. Such policies can mitigate the negative impact of infectious disease outbreaks on population health.

Factors Associated with People's Knowledge of Covid-19 in Abidjan

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AKA Lepri Nicaise, HOUNSA Alla Annita, SABLE Stéphane, EKRA Kouadio Daniel

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Introduction :

The health system's response to Covid-19 must involve the population because their knowledge of this pathology has a significant effect on the pandemic. Côte d'Ivoire, which recorded its first case on 11 March 2020, has taken numerous actions to deal with this pandemic.

The objective of this study was to analyse the factors associated with people's knowledge about Covid-19.

Material and Methods:

The cross-sectional study with a mixed quantitative and qualitative approach took place from 01 to 06 June 2020 in the Greater Abidjan health region constituting the epicentre of the epidemic in Côte d'Ivoire. This survey concerned people from households aged 18 years or older. Quantitative data were collected using a questionnaire. The data was entered using CSpro software and analysed using R software for the quantitative survey. For the qualitative part, the interviews were recorded and a content analysis was performed. Logistic regression was used.

Results:

There were 165 respondents with a sex ratio of 0.57 M/F. The majority of respondents were between 40 and 49 years of age with an average age of 39.5 ± 13.2 years. In terms of education, 14.5% of the respondents had no education and 27.3% had primary education. The average knowledge scores were low. Indeed, the expected mean was 6, but the mean for our

population was 4.5 and the median was 4.8. Logistic regression showed that advanced age was the only factor favouring poor knowledge. The qualitative survey revealed 3 representational forms of the etiology of the disease, namely the biomedical type etiology where the disease is due to a virus, the traditional type etiology where the populations link this pathology to a divine sanction and a fatalistic approach.

Conclusion :

Some local people in Abidjan doubt the existence of the disease and advocate the use of traditional health care to recover health. The results of this study could help to develop appropriate interventions.

Key words: Knowledge, Covid-19, Abidjan

Economic impact of the Covid-19 pandemic in Africa: the case of Côte d'Ivoire

Zohore Olivier Koudou, *Félix Houphouët University, Boigny Cocody, Abidjan, Côte d'Ivoire*

The coronavirus (COVID-19) disease has spread rapidly from its Chinese epicentre to all parts of the world, causing a global health and economic crisis. It has literally and figuratively translated the famous popular saying that "When China sneezes, the rest of the world catches a cold"! By the end of October 2020, the number of COVID-19 cases in Africa had exceeded 1.5 million. The limited existing literature on the economics of pandemics focused on the epidemics of Spanish flu, acute respiratory syndrome in Asia and Ebola in Africa. Discussions often focused on mortality, with little detail on the economic consequences of a pandemic. A few studies have examined the macroeconomic impact of pandemics (Lee and McKibbin, 2003 and Edwards, 2005), but despite their important implications for policy-making, they have not explicitly focused on Africa. More recently, the Economic Commission for Africa (2015) assessed the macroeconomic impact of Ebola in affected West African countries.

Studies rarely look at the economic effects of the COVID-19 pandemic, which have often been underestimated or downplayed, focusing more on mortality. COVID-19 has shown how economic activities can be disrupted, how important it is to understand the economic effects of pandemics, and what economic policies can be adopted to mitigate the health and economic consequences. Our paper attempts to fill this gap by studying the macroeconomic effects of the COVID-19 pandemic in Africa in general, and in Côte d'Ivoire in particular, using a continent-wide aggregate macroeconometric model.

Our analysis shows that GDP growth in 2021 will be less than 6.2% compared to the baseline situation without COVID-19. The fiscal deficit will have widened and public debt will have increased, but trade deficits will have improved slightly.

We first present a conceptual framework that examines the channels of transmission and the ways in which the pandemic might affect economic activity in the short term. The Economic

Commission for Africa's macroeconomic model is briefly discussed as a methodology for studying the impact of the pandemic on African economies. This is followed by a presentation of the macroeconomic effects of the pandemic. The final section examines policies that could mitigate the negative effects of the pandemic and accelerate the recovery process from the crisis.

Contributions to the response against the coronavirus in Burkina Faso, dynamics towards a resilient system: results of a living mapping

Dr. Fadima Yaya Bocoum, PhD[1], *Siaka Lougue[2], Djamina Diallo[2] and Maxime Drabo[2], (1) African Population Health Research Center, Dakar, Senegal, (2)Institut de Recherche en Sciences de la Santé, Ouagadougou, Burkina Faso*

Background

The Covid-19 crisis started in Wuhan, China, and quickly spread to all continents. To address the pandemic, a response plan with a budget was developed in Burkina Faso. Supporting the response efforts required mobilising more resources from various actors. National initiatives have made it possible to mobilise financial and material resources. The aim of our study was therefore to carry out a living map of the mobilisation of the various actors.

Method

Our study consisted of a review of all contributions made in the framework of covid19 from March 2020 to March 2021 in Burkina Faso. An exhaustive census of the contributions was carried out through the use of key words for the search, which were "donation", "covid-19", "coronavirus" and "Burkina Faso". A monitoring system was set up from October 2020 on Burkinabe websites. Variables concerning the date of the donation, the nature of the donation, the name of the donor and beneficiary, the nature of the donor and beneficiary and the amount of the donation were collected. The data was then compiled in a grid created in Excel and analysed using SPSS version 20.

Results

A total of 252 donations were recorded over the period. The majority of donations were in kind (72%) and few in cash (13%). The financial estimate amounts to more than 17 million euros. The private sector is the largest contributor (30.5%) to the response to covid 19, while traditional health sector funding partners accounted for 17%. The main contributors from the private sector were mainly private companies (20%), mining companies (6.1%) and financial companies (4.5%). The main beneficiaries were the public administration (45%) and the population (19%).

The challenge of responding to covid-19 has seen an unprecedented mobilisation in Burkina Faso. The private sector is the main contributor. This could explain the effects of the crisis on this sector. This dynamic of contributions must be understood as a lever for mobilising domestic financing in order to make it a basis for building a resilient financing system in

Burkina Faso.

Poster 2-1

Pricing and Procurement Practices Poster Session 3

Price Structure Of Medicines In Côte D'ivoire And Price Comparison In The Countries Of The West African Monetary And Economic Union

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Structure and Comparison of Drug Prices

Background

Many people do not have access to life-saving products, years after their discovery, particularly in Africa. Importing medicines to cover more than 90% of needs limits the ability to negotiate prices and adds to the burden on patients. Thus, unaffordable drug prices remain a barrier for patients and health systems on the way to universal health coverage.

Aims and objectives

To determine the price structure and contribution of charges in the supply of medicines in Côte d'Ivoire

To identify differences in drug pricing in WAEMU countries

Methods

A study was carried out in 2020 in four health care institutions, one health district, four private pharmacies, four private wholesaler-distributors and the public purchasing centre, from the patient to the importers, and also with the WAEMU National Pharmaceutical Regulatory Authorities, on 26 pharmaceutical presentations. Data were collected for the original branded product and the cheapest generic equivalent. Prices were compared on a purchasing power parity basis using Actual individual consumption Purchasing Power Parities, with the United States serving as the base with USD equivalent to 1.

Key findings

Between the Wholesale Duty Free (WDF) or Delivery at Destination (DAD) price and the final price paid by the patient, twenty-two (22) charge items were identified overall. The contribution of each charge to the patient price varied between the public and private sectors, and between imported and locally produced products. The charges were superimposed for brand-name and imported generic drugs. For local generics, the import charges were shifted to the percentage of the HGV. Five values of Public Selling Price (PSP) to HGV ratios were found mainly in UEMOA countries. There was no statistically significant difference in price per unit of dosage form at purchasing power parity on either the PVP or the PGHT.

Main conclusion

These results show the heavy burden of imports on the accessibility of medicines. They make it possible to identify levers for action at different levels for a pricing policy.

Determinants for pricing induced abortion services in licensed health facilities in Ghana

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Background

The economic impact from COVID-19 is being felt worldwide; yet the number of women seeking safe abortion care is rising even in countries with abortion restrictions. Ghana has a liberal abortion law aimed to enhance access to safe abortion services, yet there are limited studies and no elaborate policies on pricing abortion services in the various health facilities. Although abortion seekers in Ghana can access some level of care under the National Health Insurance Scheme, the cost of induced abortion care is not usually covered in Ghana Health Service facilities. For many women and girls, the deciding factor to access safe abortion care is the financial cost.

Aims and objectives

In this study the author examined determinants of pricing abortion services across various licensed health facilities in Ghana.

Methods

This was a facility-based, mixed-method study design involving the collection of both quantitative and qualitative data from primary and secondary sources within identified health facilities owned by public, private and Non-Governmental Organizations (NGOs) that are registered to provide safe abortion services in Ghana. Questionnaires and in-depth interview guides were used for data collection between 2017 and 2020.

Key findings

There is a significant difference between the price of abortion services across private, public, and NGO facilities in Ghana. There are also significant differences in pricing abortion services in private and NGO facilities ($p=0.0201 < 0.05$) as well as private and public facilities ($p=0.0108 < 0.05$), but there are no differences in the cost of abortion services in NGO and public facilities ($p=0.127 > 0.05$). It was generally observed that pricing abortion services in Ghana is unregulated and there are no national policy guidelines to determine the pricing of induced abortion services across the various service delivery channels.

Conclusion

The determinants of pricing abortion services are very subjective, facility-based, and subject to the inputs for service delivery as well as the drive for sustainability. A national guideline on pricing abortion care is required.

Identifying inefficient pharmaceutical procurement practices at the tertiary level of care in Nigeria.

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Background:

Pharmaceutical procurement take up a large proportion of health financial resources, and multiple actors are involved in the procurement process. The scale of funds, and the multiplicity of actors involved in procurement creates opportunity for corruption. Poor procurement practices negatively impact the quality and price of pharmaceutical supplies, and thus affect universal health coverage.

Aims & Objectives:

To identify the procurement practices that contribute to inefficiencies and corruption in tertiary-level facilities in Nigeria. We examined the procurement process across 2 tertiary-level health facilities in Nigeria, seeking to current practices that drive inefficiencies and corruption.

Method:

Participants were staff directly or indirectly involved in the procurement process. They included 2 key administrative staff, pharmacists (n = 13), physicians (n = 5) and drug sales representatives that bid to supply pharmaceuticals (n = 10) to the health facilities. In-depth interviews were conducted using an interview guide. Interviews were audio recorded and transcribed. Transcribed text was analysed using thematic analysis.

Key findings:

There were no comprehensive guidelines for pharmaceutical procurement across the facilities. Respondents who were not in the procurement committee doubted the transparency of the procurement process as they had limited information about the standard procedures. Even though respondents indicate that an open bidding system is in place across the facilities studied, practices that drive inefficiency/corruption abound. Because pharmaceutical procurement is prescription driven, sales representatives of pharmaceuticals target and influence doctors and procurement officials with gifts/bribes to prescribe or recommend

their specific brands. Procurement committee in one of the facilities allowed the use of brand names in bidding citing the avoidance of fake and substandard drugs. Sales persons also seek to influence key members of the procurement committee to get privileged information and treatment in the bidding process. Emergency procurements, which was quite common during the COVID-19 pandemic, gave committee members discretionary powers to by-pass standard procurement protocols, which then gives opportunity to sometimes favor specific bidders.

Main Conclusions:

A documented guideline for pharmaceutical procurement is required in facilities, and awareness of the process should be beyond the procurement committee. The use of generic names in procurement should be encouraged. In cases where fake or substandard drugs pose problems, quality control mechanisms could be used to identify and include a list of quality brands to retain bidding competitiveness.

Compliance Indicators of COVID-19 Prevention and Vaccines Hesitancy in Kenya: A Random-Effects Endogenous Probit Model

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Vaccine hesitancy remains a major public health concern in the effort towards addressing the COVID-19 pandemic. This study analyzed the effect of indicators of compliance with preventive practices on willingness to take COVID-19 vaccines in Kenya. The data were from the COVID-19 Rapid Response Phone Surveys that were conducted between January and June 2021 as the fourth and fifth waves. The data were analyzed with the random-effects endogenous Probit regression model, with estimated parameters tested for robustness and stability. The results showed that willingness to take vaccines increased between the fourth and fifth waves. Compliance with many of the preventive practices also improved, although utilization of immune system promoting practices were very low. The panel Probit regression results showed that compliance indicators were truly endogenous and there was existence of a random effects. Immune system boosting and contact prevention indicators significantly increased and reduced willingness to take vaccines, respectively ($p<0.01$). Experience of mental health disorder in the form of nervousness significantly influenced vaccine hesitancy ($p<0.01$). Willingness to take vaccines also significantly increased among older people and those with formal education ($p<0.01$). Different forms of association exists between vaccine hesitancy and the prevention compliance indicators. There is the need to properly sensitize the people on the need to complement compliance with COVID-19 contact prevention indicator and vaccination. Addressing mental health disorders in the form of loneliness, nervousness, depression, hopelessness, and anxiety should also become the focus of public health, while efforts to reduce vaccine hesitancy should focus on individuals without formal education, males and youths.

Poster 2-2

Resource Allocation Poster Session 4

Allocating resources to support universal health coverage: development of a geographical funding formula in Malawi

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Background

Universal health coverage (UHC) requires that local health sector institutions—such as local authorities—are properly funded to fulfil their service delivery commitments. In this study, we examine how formula funding can align sub-national resource allocations with national priorities. This is illustrated by outlining alternative options for using mathematical formula to guide the allocation of national drug and service delivery budgets to district councils in Malawi in 2018/2019.

Methods

We use demographic, epidemiological and health sector budget data with information on implementation constraints to construct three variant allocation formulae. The first gives an equal per capita allocation to each district, and is included as a baseline to compare alternatives. The second allocates funds to districts using estimates of the resources required to provide Malawi's essential health package of priority cost-effective interventions to the full population in need of each intervention. The third adjusts these estimates to reflect a practicable level of attainable coverage for each intervention, based on the current configurations of health services and demand for interventions.

Findings

Compared with current district allocations, not underpinned by an explicit formula, the formulae presented in this study suggest sizeable shifts in the allocations received by many districts. In some cases, the magnitude of these shifts exceed 50% reductions or doubling of district budgets. The large shifts illustrate inequities in the current system of budget allocation and the potential improvements possible.

Conclusion

The use of mathematical formulae can guide the efficient and equitable allocation of healthcare funds to local health authorities. The formulae developed were facilitated by the existence of an explicit package of priority interventions. The approach can be replicated in wide range of countries seeking to achieve UHC.

Health financing policy reforms for universal health coverage in Eastern, Central and Southern Africa (ECSA) – Health Community: Any lessons learned on how to finance COVID-19 pandemic from domestic resources?

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Background

Prior to the COVID-19 pandemic, countries in the ECSA-Health Community had introduced various health financing reforms in order to achieve Universal Health Coverage (UHC) as a response to increased disease burden and growing demand for quality health services, amidst limited economic resources, and high population growth rates.

Aims and Objectives

Document and share experiences across the region in regard to health financing reforms for achieving UHC so as to avoid common mistakes during and post-COVID-19 pandemic; and also learn from best practices across the region that could be used to make health system more resilient during and post COVID-19 pandemic.

Methods

A scoping review of peer reviewed manuscripts and grey literature; and key informant interviews in regard to three key health financing policies for achieving UHC: removal of user fees in public facilities, implementation of national health insurances schemes, and innovative financing mechanisms. Data were analysed using the WHO framework of health financing function (2000): revenue collection, pooling, and purchasing; and further expounded by two other frameworks: McIntyre framework (2007): feasibility, equity, efficiency, sustainability; and Walt & Gilson framework (1994): Policy Analysis Triangle – content, process, actors, and context.

Key findings

User fees removal in public facilities, although there are likely to have been some benefits, the process was characterized by haste, inadequate planning, and policy inconsistence leading to serious challenges including deteriorating quality of care. Further, the equity impact on the poor was mixed; mainly with little change in catastrophic/impoverishing spending among the poor and continued overcharging of unofficial user charges, none availability of funds to pay for the free care, and still with long distances to travel to health facilities in rural areas. The implementation of national health insurance schemes were found to be unfeasible – failing to increase coverage through use of voluntary approach to informal sector employees; exacerbated inequities in financing and utilization of health services; inefficient with multiple pools and high administrative costs; and unsustainable. Some innovative financing mechanisms, were found to be an efficient and sustainable source of health financing in times of financial crises.

Conclusions

Much as each country's context and identified reform is unique, the experience of ECSA-Health Community provides valuable lessons as to what could be implemented or avoided during and post COVID-19 pandemic in order to achieve UHC. Sharing of experiences on successes and missteps could aid countries in navigating the potential complications in implementing health financing reforms.

Health Sector Budgetary Allocations and their Implications on Health Service Delivery and UHC in Uganda

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Authors. Richard Ssempala[1], Francis Kintu[2], Boniface Okuda[2], Freddie Ssengooba[1] Christine K. Tashobya[1].

Introduction

Inadequate funding for health remains a crucial constraint facing the health sector in many developing countries. The situation is not unique to Uganda, given the country's commitment to achieving Universal Health Coverage (UHC). This has generated debate among health sector policymakers, managers, and civil societies who have urged that low budget allocations have resulted in poor health services quality and coverage. Tracking financing trends is crucial to inform policy and advocacy efforts, especially in the advent of the COVID-19 pandemic.

Aims and objectives

This study analyzed trends in the health sector funding, emphasizing budgetary allocations for FY 2010/2011-FY2018/19 to inform policymakers, particularly Members of Parliament, about the interventions and alternative strategies to finance the health sector for the achievement of UHC.

Methodology

Financial data was extracted from different government documents and analyzed descriptively using Microsoft Excel to summarize data into various tables and graphs. Stakeholder validation through a workshop was conducted. The implications of the budget trends to health services delivery elicited from the documents and workshop deliberations were analyzed thematically.

Results

The government budget allocation to the health sector was low, with per capita allocation (USD17.85) far below the minimum US$84 per capita recommended by WHO. The government

contribution to the total health expenditure was dismal at 15.7%. Fluctuations were noted over time, mainly explained by changes in government funding priorities towards infrastructures and energy sectors. The low budget allocation manifested as 1) inadequate and poorly motivated health workers and b) stockouts of essential drugs. These financing gaps reportedly contribute to poor access to services, increase catastrophic health expenditures and undermine national UHC efforts.

Discussion and conclusion

Several policy considerations for stronger health systems include a substantial and sustained increase in the government health budget, optimizing the available resources by addressing wastages and prioritizing health promotion. The influence of the COVID-19 pandemic on the health financing should be explored. Reforms such as the national health insurance scheme should be pursued to address financial risk protection gaps especially related to the ongoing COVID-19 pandemic.

Keywords: Budget allocations, health financing, Universal Health Coverage, Health Service Delivery, COVID-19.

The Contrat unique in Lualaba Province: Analysis of the implementation of a resources allocation's policy at the decentralized level in the Democratic Republic of the Congo.

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Background

The DRC health system, organized thru its 26 provinces, is under reforms that aim at improving the health sector performance through decentralization. Timely deployment of the necessary resources is a key action to achieve expected results. To improve the resources allocation, Stakeholders at the provincial level agreed to plan together and to cover specific budget lines to avoid duplication. Emphasis on increased domestic resources is also part of this contract. The *Contrat unique*, an innovative financial approach, represents a *virtual* basket fund putting together all identified stakeholders' financial resources to implement the annual provincial operational plan of the health provincial division through predictable and secured funds from financial and technical partners including the government counterpart.

Goal and Objectives

To assess the implementation of the *contrat unique* in Lualaba province (121,308 km²; 2,570,000 inhabitants in 2020) between 2017 and 2021 and evaluate the progress of the domestic

resources' contribution.

Methods

Identifying the proportions of partners' contributions in relation to the total contract budget and the trends made over time. Grouping partners according to their affiliations and tracing resources according to their origin. Tracking funds disbursement and/or other related indicators as health performance improvement, the assessment of the level of commitments' achievements as included in the *contrat unique* by the various stakeholders.

Results

Resources allocation doubled in four years (2017-2021), increased from $1,002,650.7 up to $2,585,301.8. However, failure to capture all partners' disbursements due to poor coordination and communication.

Stakeholders' resources allocation in Lualaba Province, 2017-2021 (Graph 1)

Percentage of disbursement over the time, on quarterly basis (Graph 2)

Conclusions

1. Overall resources allocation increased over the time along with the decentralized entity's contribution.
2. Even the level of resources remains low at the provincial level, the *contrat unique* as an instrument of health reforms succeeded to draw the attention of the local government in its role in health budget planning and contribution.
3. Further efforts of coordination are needed to improving funds disbursement and tracking.
4. The effect of the Covid-19 in the provincial budget allocation and disbursement needs further evaluation.

Organized Session 4-1

Building Back Better Health Systems: Planning to Invest in the Health Workforce in Africa

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Description

Africa has faced and continue to face significant health threat amidst a myriad of health system weaknesses to respond to the threats adequately. The health workforce (HWF) continues to be one of the weakest links in the health systems in Africa. Before the pandemic, it was projected that by 2030, Africa would face a shortage of 6.1 million doctors, nurses, and midwives, but sadly, some 29% of trained health workers could be either unemployed or underemployed - a phenomenon of paradoxical surplus that is already hard-hitting many countries, such as Lesotho, Ghana, Kenya, and Ethiopia.

The speed with which health systems may recover from the protracted COVID-19 pandemic is hinged on the contribution of its health workers and the investments made in them. More than 2,000 health workers in the African region[1] have died of COVID-19 by the third quarter of 2021, contributing to a reduced stock of health workers, weakening health systems' capacity to respond to the disease. The economic shock imposed by COVID-19 and its response measures adopted by countries has also constrained both governments and the private sector's ability to mobilize resources and expand fiscal and financial space to recruit newly trained health workers. This has exacerbated the unemployment and out-migration of health workers amidst the COVID-19 situation, which instead required more health workers to be recruited and retained.

Addressing the pre-pandemic and pandemic related HWF challenges in Africa requires a good understanding of the dynamics of the challenges and a paradigm shift in making the HWF an investment priority. This organized session will present five (5) papers from various pieces of analytical work undertaken by the HWF unit of the Universal Health Coverage – Life Course Cluster of Africa Regional Office of the World Health Organization to make a case for better planning to investing to vert the current and looming HWF crisis and shaping the health workforce for the future in Africa.

[1] The impact of COVID-19 on health and care workers: a closer look at deaths. Health Workforce Department – Working Paper 1. Geneva: World Health Organization; September 2021 (WHO/HWF/WorkingPaper/2021.1). Licence: CC BY-NC-SA 3.0 IGO.

The State of the Health Workforce in Africa: Where Do We Stand in the Middle of a Pandemic?

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Background:

African countries have made modest gains in their health indicators, which the role of the health workforce (HWF) cannot be overstated. However, the evolving health needs of the population and the need for resilience against acute and chronic shocks continue to strain the existing HWF. This paper provides deep insights into the state of the health workforce in Africa and offers considerations for developing the future workforce.

Methods:

The Africa Regional Office of the World Health Organization conducted a HWF survey in 47 Member States between 2018 and 2020. It covered HWF stock, distribution, training, recruitment, and working conditions, among others. To address the varying nomenclature of occupations/cadres HWF occupations in different countries, the International Standard Classification of Occupations (ISCO-08) was used to harmonize occupation classification for the analysis. Using the updated dataset, various estimations of the HWF was made.

Findings:

The Africa region have 3.6 million HWF (of all cadres/occupations) or approximately 3.6 health worker per 1,000 population – 1,315,801 nurses/midwives, 372,236 community health workers 334,167 medical doctors, 370,104 laboratory technicians, 94,098 pharmacists, and 45,047 dentists. Nine countries (19%), each of them had more than 100,000 health workers, but seven countries (~15%) had less than 5,000. Africa's HWF stock is increasing by 12% per annum, but nurses and doctors are at rates lower than the average. The private sector contributes 45% of the training of HWF but less so (only 12%) of their employment. Nine countries (19%) had more than 2.28 density of doctors, nurses, and midwives per 1000 population (the MDG minimum density threshold), but only four countries (8.5%) had reached the SDG density threshold of 4.45 per 1000 population. Considering all health workers (excluding health managers and support staff), the average regional HWF density was 2.9 per 1,000 population, but 13.4 was determined to be necessary for the progressive realization of at least 70% of the UHC targets (10.9 if CHWs are excluded), a benchmark that only Seychelles had met. There was an increase in the number of health workers recruited in the public sector from 48,482 in 2015 to 89,763 in 2016, but a 14.5% decline to 76,693 in 2017. The highest decrease in recruitment was observed for nurses and midwives.

Conclusion:

The HWF stock and density in Africa is improving but at a pace that still leaves the region vulnerable. More significant investment is needed to address gaps and disparities within and across countries.

Planning for Needs-based Investments in the Health Workforce: Framework, Tools, and Insights from an Empirical Application in Ghana

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Background:

The health workforce (HWF) is critical for developing responsive health systems that address routine population health needs and respond to health emergencies, including outbreaks and pandemics. However, defective health workforce planning has been the weakest link in health systems planning over the years. One approach that is valid for HWF planning is the population needs-based method. This method combines the population's health status with professional standards of care and measures of health worker productivity to determine the number and calibre of health workers needed to serve the population and the associated cost. Methodological gaps and lack of simple tools limited its real-life application for policy and planning. Ghana's HWF density has improved significant since 2005 but inequitable distribution, shortages of some cadres and unemployment of other remain pertinent challenges, which need-based analysis was used to explore.

Methods:

We conducted a systematic scoping review of empirical applications of the need-based HWF planning approach. We synthesized six critical considerations that we built upon to develop a conceptual and empirical model with accompanying open-access Microsoft® Excel-based tool. We triangulated data from multiple sources to systematically apply the model to forecast the needs and supply of HWF in Ghana.

Results:

This paper will discuss the imperative of a need-based approach for health workforce planning to address current and future disease burdens, including health emergencies. The underpinning conceptual and empirical framework, end-user tools, data requirements and processes for its application will be discussed with demonstrations. An applied example from Ghana demonstrated that the health professional's stock meets about 74% of the overall need in 2020, but a gap of 26% persisted, which translated into 51,841 health workers across 11 occupations. Without any corrective intervention, the supply will be 77% of the needs by 2030, with an absolute shortage of 83,657. Beneath the aggregate are huge imbalances as the supply of 5 out of the 11 health professionals (~45.5%) cannot meet even 50% of the needs by 2035, but enrolled nurses and midwives seem overproduced. About US$ 2.7 billion, investment is required in education and employment to correct the projected mismatches by 2035, without which inappropriate skill mix and unemployment of trained health workers will be enormous.

Conclusion:

A need-based approach to health workforce planning promotes equity and support the attainment of UHC. Ghana's case study showed that it could be used to generate fit-for-

purpose evidence for making a case for health workforce investments.

Investing in the Current and Future Health Workforce: An Analysis of Fiscal Space in Eastern and Southern Africa

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Background And Objective:

The health workforce (HWF) is at the core of ensuring an efficient, effective, and functional health system. There have been increased calls to raise adequate funding from domestic sources to make appropriate HWF investments. To generate sustained advocacy towards more significant and smatter investment in the HWF, this paper presents a fiscal space analysis of twenty countries in East and Southern Africa.

Methods:

We adapted an established empirical framework for fiscal space analysis and applied it to country-specific data triangulated from publicly available datasets and government reports to model the fiscal space for the HWF in each of the twenty countries in Eastern and Southern Africa. Based on current knowledge, three scenarios (business-as-usual, optimistic, and very optimistic) were modelled and compared.

Findings:

The business-as-usual scenario analysis shows that the cumulative fiscal space across the 20 countries was estimated to be US$12.09 billion, likely to increase by 29% to US$15.6 billion by 2026. This is likely to be highest in Kenya (83%) and Tanzania (82%), but a decline by 10% is expected in Zambia. Under optimistic assumptions (assuming that economies will grow as projected and health expenditure as a proportion of GDP will increase by 1.5%), the cumulative fiscal space would increase by 39% from US$12.09 billion to US$16.82 billion by 2026. Thus, allocating an additional 1.5% of GDP to health even without further prioritizing the proportional allocation to the wage bill could boost the cumulative fiscal space by US$4.73 billion. In a very optimistic scenario (assuming economics will grow as projected, health expenditure as a proportion of GDP will increase by 1.5%, and HWF will be highly prioritized within the health expenditure), the cumulative fiscal space for HWF is estimated to increase by US$6.35 billion to US$18.45 billion by 2026. This scenario could improve the fiscal space for HWF by some 53% over five years, ranging from 28% in South Africa to 361% in Lesotho. However, Zambia is estimated to record a decline of 3% still.

Conclusion:

Unless the HWF is sufficiently prioritized within the health expenditure budget, only increasing the overall health budget to recommended levels will still leave the HWF heavily

underinvested, with growing unemployment amidst unabating shortages with dire consequences for quality health service delivery.

Making A Case For Health Workforce Investments In Africa Using Health Labour Market Analysis (Hlma): Lessons From 16 Countries

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Background:

Amidst a looming shortage of 6.1 million health workers by 2030, Africa's lingering health workforce crisis has been compounded by rising unemployment among skilled health workers as 20 – 30% of the trained health workers in Africa fail to find appropriate jobs one year after graduation. In large part, the challenges are linked to rigid fiscal policies and insufficient budgetary prioritization for HWF investments culminating in a little room for expanding employment, exacerbating the out-migration of highly skilled health workers. This paper demonstrates how countries can translate labour market evidence into policy action for better investment in the HWF.

Methods: From 2017, WHO used state-of-the-art normative approaches to support 16 countries to conduct comprehensive or partial health labour market analyses (HLMA). Different countries took different courses of action (depending on their specific findings and context) and are at various stages of implementation; some have used it for advocacy and policy action that unlocked opportunities to invest more and smartly in the HWF.

Results:

Several countries moved from evidence to concrete policy action that yielded increased investment and/or prioritization of the HWF. For instance, Rwanda moved from evidence generation to action by using the HLMA to contribute to a 10-year HWF development plan and expanding the number of approved posts for health workers. The budget of the Ministry of Health in Ghana was increased to employ about 54,000 unemployed health workers, based on labour market evidence. In 2018, Mali used HLMA evidence to mobilize external resources to recruit more staff for PHC facilities. The Ministry of Health and Social Services in Namibia used HLMA to justify the return on HWF investments, resulting in adopting a new structure and increasing budgetary allocation to recruit additional 300 unemployed doctors and nurses and pharmacists. In Lesotho, the outcome of the HLMA 2021 was used to inform a 10-year strategy and to justify a request for a 15% increase in health workforce budgetary increase to absorb 27% of trained but unemployed health professionals.

Conclusion:

Experiences from several countries in Africa have shown that HLMA is a powerful tool for generating state-of-the-art evidence towards policy and strategic dialogue in HWF investments.

Building Back Better Health Systems In Africa Post Covid-19: Innovative Approaches For Enhancing Health Workforce Performance For Health Security And Universal Health Coverage

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Background:

The COVID-19 outbreak has execrated the persistent health workforce issues in the health system of the Africa Region. The pandemic has put pressure on health managers in balancing the availability of health workers with the necessary capacities to meet the high demand for response activities to ensure health security, as well as sustain the provision of quality essential health services towards achieving universal health coverage (UHC). This study explored the innovative strategies implemented by 16 countries in the Africa Region to enhance the health workforce performance in the course of responding to the COVID-19 pandemic and sustaining delivery of quality essential health services.

Methods:

We conducted a document review of 16 country case studies on the impact of COVID-19 on the health workforce. These case studies were developed from January to August 2021 using a mixed-method approach with qualitative and quantitative data obtained through semi-structured interviews and review of national documents on health security, COVID-19 response and continuity of essential health services.

Results:

The 16 countries - Angola, Burkina Faso, Chad, Eswatini, Ghana, Guinea, Guinea Bissau, Ivory Coast, Kenya, Liberia, Mali, Mauritania, Niger, Nigeria, Senegal and Togo – implemented preparedness and response activities to ensure optimal performance of the health workforce. This included joint planning with the Human Resource Departments to fast-track attraction, recruitment and deployment activities, and development of incentives to motivate health workers. All the countries collaborated with Public Health Institutions in the development and conduct of competency-based in-service trainings to build the capacity of health workers in risk assessment and case management of COVID-19. Some countries also partnered with the private sector and other partners (civil society organizations, development partners, non-governmental organizations, professional bodies and religious and traditional institutions). They leveraged their human resource expertise and facilities in increasing access to COVID-19 management services, increasing funding for response activities, expanding risk communication on COVID -19, fostering community participation in response activities, and ensuring continuity of essential health service provision in facilities.

Conclusion:

Health workers are critical in achieving health security and UHC, and achieving both requires coordination and partnership with relevant stakeholders at all levels. The approaches applied by countries in ensuring optimal health worker performance are also pertinent post- COVID

and relevant in ensuring the health system resilience. By extension, they are also fundamental in ensuring global health security and the achievement of UHC in Africa.

Organized Session 4-2

Operationalizing Efficiency: Opportunities, Constraints, And Necessities

Authors: *Susan Sparkes, World Health Organisation, Chambesy, Switzerland. Diane Karenzi Muhongerwa WHO/AFRO, Alexandra Earle, WHO Ama Pokuaa, University of Ghana, Accra, Ghana, Christabell Abewe, WHO Uganda Country Office, Kampala, Uganda, Ghada Muhjazi, WHO EMRO, Cairo, Egypt, Juliet Nabyonga, World Health Organization, Harare, Zimbabwe.*

Description

The COVID-19 pandemic has exposed the underlying weaknesses and fragility of health systems. This fragility stems not only from underinvestment, but also from the way in which investments (both donor and domestic) have been channeled to support health objectives. Programmatically oriented investments that focus on single objectives often at the expense of overall system strengthening have been shown to be neither efficient nor adaptable. As emerging threats arise, whether from pandemics, climate change, or other health problems, health systems and the financing that underpins them, will need to be flexible and nimble to protect and respond.

Given these realities, no country can afford to manage resources inefficiently. All resources need to be used across the system to meet immediate health needs, while preparing and adapting to future demands. This session will focus on these adaptations in how funds are channeled, and systems are organized to promote efficiency, sustainability, and adaptability. Evidence generated through country studies will form the basis of the presentations and related discussions. This concrete evidence about the costs of fragmentation is needed to identify opportunities for reform that can improve the efficient use of resources in a way that best aligns with overall health system-level objectives and needs.

The session will present three papers that assess specific aspects of the efficiency agenda in Ghana, Uganda, and Sudan. The range of these papers highlights different perspectives and issues that can inhibit the efficient use of available resources. These relate to political dynamics, the way in which donor funds are channeled and managed, and to how to balance short-term demands associated with COVID-19 in relation to the overall health system dynamics. It will then pull out the key lessons based on the implementation of cross-programmatic efficiency analysis from seven African countries to highlight cross-cutting areas of undue fragmentation, misalignment, and duplication. The last paper will provide a synthesis of opportunities and constraints to addressing the types of inefficiencies that are discussed and presented in the other papers in the session.

The complete set of papers will provide concrete evidence as to where and how efficiency can be improved at the system-level to align health financing towards more resilient and sustainable systems and related outcomes.

Cross-Programmatic Efficiency Analysis To Support Covid-19 Response In Ghana

Ama Pokuaa, University of Ghana, Accra, Ghana

Background:

COVID-19 brought in its wake unprecedented disruptions. Different countries have managed this challenge differently. From government-imposed restrictions such as quarantines, border closures, workplace closures and social distancing rules to slow the rate of transmission and deaths associated with the pandemic. In Ghana, the national response to the COVID-19 pandemic was initiated when the first two cases were reported on the 12 March 2020. The Government's response to the pandemic was mainly influenced by lessons learnt from some of the countries, which were earlier affected by COVID-19, such as those in Asia and Europe. This was outlined in the National COVID-19 Emergency Preparedness and Response Plan (EPRP) which was largely funded with the US$100million (GH¢560 million) from the World Bank. Inspired by the significant successes from the implementation of the EPRP and considering the lasting impact of the pandemic within the medium-term, the government has rolled out a more holistic plan which is the 'National Strategic COVID-19 Response Plan: July 2020 - December 2024' (NSCRP) (Ministry of Finance, 2021).

These developments have presented constraints on government finances, with increased government expenditures due to COVID-related spending. Additionally, the health system has not been robust enough to deal with the increasing pressure on hospital facilities, especially the lack of medical laboratories in the country, where effective research and placebo testing could be done.

Methodology:

The study uses Cross-Programmatic Efficiency Analysis (CPEA) related to the delivery of COVID-19-related services and interventions within the context of the overall health system. It uses both qualitative and quantitative methods that are anchored in the analysis of health system functions (financing, service delivery, governance/stewardship, and generation of human and physical resources/inputs). The main aim is to identify targeted and feasible options where existing resources and functions can be used, strengthened, and sustained for Ghana's COVID-19 response, as well as where additional resources may be needed. This assessment focuses on effective and efficient delivery of COVID-19 tools that minimize potential distortions on other essential health services. It will also highlight how coordination with other health sector priorities and reform processes have performed.

Outcome:

This system-wide analysis will engage stakeholders across the health sector and beyond to prioritize and develop policy options to reduce areas of duplications, overlaps and misalignments that impact the efficient and effective use of available resources. The findings from this analysis will also have direct implications for sustainability of programmes that rely on external assistance.

Cross-Programmatic Inefficiencies And Implications For Covid-19 Rollout In Uganda

Christabell Abewe, WHO Uganda Country Office, Kampala, Uganda

Background:

Universal health coverage ensures affordable access to high-quality health services for all; however, this will inevitably require governments to find additional budgetary resources and to increase the fiscal space for health. While there are a number of ways of increasing health sector resources, recent attention has been directed to increasing the efficiency in the use of available health resources. This is especially relevant in Uganda where the financial contributions by development partners in health have been declining steadily over the past years, specifically in priority health programs. As Uganda aspires to attain higher middle-income status by 2040 and is transitioning away from donor eligibility, there is a need to identify mechanisms to increase efficiencies in the current resource allocation. As such, the HIV/AIDS, TB, Malaria, RMNCAH, and EPI programs, all programs that rely heavily on external aid, will be analyzed in the context of the overall health system to identify areas of inefficiencies that constrain the ability of the government to deliver priority health services to the population to meet health system objectives.

Methods:

Data collection for this analysis comes qualitative data gathered from key informant interviews and meetings with relevant stakeholders through the use of a semi-structured interview guide. Quantitative data will be collected for financial budget and expenditures, inputs (facilities, health workers, medicines, etc.), health services, outputs, and outcomes using nationally available data as well as from SHA11 National Health Accounts via the Global Health Expenditure Database. Data will be collected at the national and sub-national level wherever possible. Data collected is first organized by health system function (financing, service delivery, governance/stewardship, and generation of human and physical resources/inputs) across the selected health programmes. An across function analysis can then be conducted to identify specific areas inefficiency that constrain the achievement and sustainability of objectives.

Findings:

Results from this analysis show the following identified inefficiencies:

- Separate information systems across health programs
- Multiple disease-specific donor funding streams
- Fragmented human resources salary support mechanisms
- Disjointed and weak supervision regimes across the health system
- Dysfunctional referral mechanisms
- The budget and planning process for health programs are not aligned with overall health sector processes.

Sustainability of HIV, TB and Malaria Services in Sudan

Ghada Muhjazi, WHO EMRO, Cairo, Egypt

Background:

The Eastern Mediterranean Regional Office (EMRO) of the World Health Organization has commissioned case studies of sustainability and transition for Global Fund-supported HIV, Tuberculosis (TB), and Malaria (HTM) programs to maintain or increase the gains made in these countries. In Sudan specifically, the case study will focus on strengthening sustainability with their HTM programs as part of the overall health system with the aim to provide options for action with moving forward. The results also will serve as input into EMRO's draft guidance for countries in the region to initiate early planning for sustainable programs towards a successful transition from Global Fund support to maintain and accelerate gains against priority diseases.

Methods:

Data collection will consist of conducting key informant interviews and reviewing key documents as well as country financial data on macro-economic and programmatic level indicators. Quantitative data will be gathered from the Global Fund co-financing data submitted in country applications, as well as through SHA2011 National Accounts data using the Global Health Expenditure Database. The quantitative data collected will help to inform the qualitative data gathered through the interviews.

Findings:

The findings from this paper will describe the health financing context in the country as well as the current extent of Sudan's reliance on donor support for their HTM programs. It will identify priority areas of inefficiencies across the health programs and the overall health system and how those inefficiencies constrain the sustainability and delivery of priority health services. It will end with a list of policy options for action for the sustainability of the donor supported programs in the country.

Constraints And Opportunities To Address Inefficiency In AFRO

Juliet Nabyonga, World Health Organization, Harare, Zimbabwe

Background:

In the context of donor transition and as responsibility for funding certain health programmes shifts more towards domestic resources, maintaining distinct, separate organizational arrangements by health programme is unlikely to be sustainable. Hence, identifying duplications and misalignments offers an opportunity to re-configure programmes in a way that will enhance the ability of national governments to sustain the delivery of priority services to their populations. To date, this approach has been implemented in 7 WHO/AFRO countries. Even though analyses varied in terms of the motivation for each study, there are lessons to

be learned and shared across these countries on the challenges and opportunities to address identified inefficiencies.

Methods:

A cross-programmatic efficiency analysis was conducted in each of these 7 countries. The core analysis consisted of mapping and describing each of the four health system functions and sub-functions for the overall health system and selected health programmes. This mapping exercise formed the foundation to then identify the critical areas of misalignment, duplication and overlap across the group of health programmes and with the wider health system. Through a workshop, which convenes all relevant countries and focal points in the 7 countries, countries will jointly discuss issues related to how to effectively support reforms to improve sustainability and efficiency. Best practices and highlighted challenges to address will be the focus of this workshop. A summary of synthesized key findings that focus on both cross-programmatic inefficiencies identified, as well as the mechanisms to address them will be the output of this workshop.

Findings:

- Initial results show the following key findings and mechanisms to address them:
- Fragmented governance and lack of coordination across health system and health programmes
- Fragmentation and duplication of resources and inputs
- Disjointed financial flows leads to uncoordinated programme activities and personnel
- Embed analysis within broader health sector reform processes and health strengthening efforts.

Synthesis Of Findings From Cross-Programmatic Efficiency Analyses

Susan Sparkes, World Health Organisation, Chambesy, Switzerland

Background:

Many health systems rely on health programmes to target health interventions for specific diseases or populations. These programmes tend to operate largely autonomously from one another in seeking to optimize the achievement of a specific objective. This organizational approach can constrain efficiency and the evolution of the health system in its ability to adapt to changing morbidity patterns, technological advances, among other issues. Through its application in 7 African countries to date, analysis and data-informed dialogue has been built across programme- and system-components around specific areas for improved integration and coordination to improve efficiency and enable outcomes. Building from this foundation, the next phase of this work programme will continue to focus on country support

Methods:

To identify specific areas of duplication, overlap or misalignment a series of case studies was developed that uses in-depth health system functional mapping. This work uses a mixture

of qualitative and quantitative methods that are anchored in the analysis of health system functions (financing, service delivery, governance/stewardship, and generation of human and physical resources/inputs) across a set of health programmes within each of 7 countries. Once the within program system mapping is completed, an across function analysis is conducted to identify specific areas inefficiency that constrain the achievement and sustainability of objectives. Comparative analysis based on the common methodology applied in each country is then used to develop key cross-cutting findings.

Results show that four key areas of cross-cutting inefficiency have been identified:

- Uncoordinated planning and budgeting processes
- Fragmented inputs (information systems, laboratories, health workers, facilities)
- Misaligned financing mechanisms with service delivery objectives
- De-linked programmatic objectives and priorities from overall health sector reforms

Organized Session 4-3

Strategic Health Purchasing Progress In Sub-Saharan Africa And Adjustments Needed For Health Financing Systems To Become More Resilient To Pandemics

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Description

The COVID-19 pandemic has demonstrated the imperative for strong health systems, that are resilient, effective, and equitable to provide the best care possible to its population. Strategic purchasing aims to make the best use of resources by making evidence-based decisions on what to buy, from whom to buy and how to buy to improve population health and achieve universal health coverage (UHC). Evidence on current purchasing arrangements in sub-Saharan Africa (SSA) and how they lead to improvements in health systems is sparse. The Strategic Purchasing Africa Resource Center (SPARC) and eleven African partners co-created the Strategic Health Purchasing Progress Tracking Framework to create a snapshot of purchasing functions across health financing schemes and their intended and unintended effects on purchasers and providers.

The framework maps the governance arrangements and external factors influencing purchasing, and delves into the core purchasing functions of benefits specification, contracting arrangements, provider payment and performance monitoring. The partners applied an excel based tool based on the framework in nine SSA countries to collect baseline data via document review and key informant interviews to identify where countries are making progress to improve purchasing.

The nine countries have diverse and fragmented health financing systems, including government budget– financed schemes, private and social health insurance, and donor-funded programs, each with their own purchasing arrangements. There is some progress in benefits specification and developing contracting arrangements - particularly with private sector providers. There is least progress in developing out-put based payment mechanisms linked to service delivery objectives and using performance monitoring to incentivize productivity and quality health services. Fragmentation reduces the pool of funds managed by each purchaser and reduces their leverage to improve resource allocation, provide the right incentives to providers and create accountability for quality health services.

Reducing fragmentation is a critical enabler for strategic purchasing and to improve the performance of health financing systems for health system resilience. The partners are using

the results to initiate dialogue on how to improve strategic purchasing, make health financing systems more resilient, and put countries on a sustainable trajectory to UHC.

SPARC proposes an organized session for SPARC partners from Burkina Faso, Rwanda, Tanzania and Nigeria to share their experience applying the framework, discuss lessons and provide reflections to continue progress in the post-COVID era. This session will also launch a Health Systems and Reform Journal special edition. This session will be offered in English with simultaneous French translation.

Strengths and Weaknesses of Purchasing in the five major health financing schemes in Burkina Faso

Joël Arthur Kiendrébéogo, Charlemagne Tapsoba, Yamba Kafando, Issa Kaboré, Orokia Sory, S. Pierre Yaméogo

Introduction

Strategic health purchasing (SHP) is seen as a key strategy to spur countries' progress toward universal health coverage (UHC). Countries have unique contexts that shape existing purchasing arrangements and contribute to incremental change. In this session we present findings from mapping purchasing and governance arrangements in five key health financing schemes in Burkina Faso – Gratuite, Transferred Credits, Delegated credits, Occupational health insurance and Mutuelles.

Methods

Our analysis is guided by the Strategic Health Purchasing Progress Tracking framework for tracking progress in purchasing developed by Strategic Purchasing Africa Resource Centre and its partners. Data were collected from June–December 2019 through a document review that was complemented by in-depth interviews. Data were analyzed manually to examine governance arrangements, purchasing functions and capacities, including their strengths and weaknesses.

Findings

The market structure for all five health financing schemes precludes competition among purchasers and providers. The level of purchaser autonomy is mixed, but legal and regulatory frameworks clearly specify roles and responsibilities and ensure proper implementation of purchasing functions. Many accountability mechanisms have been implemented, but they are poorly coordinated and often depend on external funding, which limits their effectiveness and jeopardizes sustainability. The capacity for selective contracting, reviewing of benefit packages, and modifying of provider payment methods varies by scheme.

Benefit packages are in place, but the design of these benefit packages does not consider citizen preferences, and contracts are not linked to explicit quality standards or treatment protocols. For all schemes, payments are linked to the volume of services provided, which is treated as a proxy for performance. The information used to pay providers is easy to access and

analyze, but it is not disaggregated by individual patient. No specific measures are in place to sanction poor performance. Dissemination of information on the rights and obligations of citizens varies by scheme and mechanisms exist for collecting and responding to complaints and feedback from beneficiaries on the quality of care, but there is room for improvement.

Conclusions

Although there has been progress in defining clear mandates, the implementation of purchasing functions such as benefits specification, contracting arrangements, performance monitoring remains weak and requires strengthening. This requires a proactive approach to regularly evaluate if initiatives implemented to promote strategic purchasing contribute to achieving UHC goals.

Strengths And Weaknesses Of Purchasing In Rwanda To Advance Towards Universal Health Coverage

Stella M. Umuhoza, Sabine F. Musange, Alypio Nyandwi, Agnes Munyua, Angeline Mumararungu, Regis Hitimana, Alexis Rulisa, and Parfait Uwaliraye

Introduction

Rwanda is a low-income country that is well known for achieving good health outcomes in the past two decades, at much lower levels of health spending than many other African countries. In the context of scarce resources and increasing health care costs, strategic purchasing is viewed as a key mechanism to spur progress toward universal health coverage. We examine health financing schemes in Rwanda, by mapping purchasing functions of the Community Based Health Insurance (CBHI) scheme, the Rwanda Social Security Board (RSSB) medical scheme, and performance-based financing to understand where there is overlap, duplication and conflict that hampers progress in strategic purchasing.

Methods

The strategic health purchasing progress tracking framework was applied by populating an Excel–based tool with data collected over seven months (September 2020 to March 2021) through document review complemented by in-depth interviews. We analyzed the data manually, examining governance arrangements, purchasing functions and capacities, including their strengths and weaknesses.

Findings

Rwanda has a strong regulatory framework with mandates for purchasing and engaging stakeholders. We identified some overlapping mandates and functions—for example, benefit specification by both the Ministry of Health and the National Health Insurance Council. CBHI and RSSB schemes have a comprehensive benefit package, but the process for benefits specification is not informed by evidence. Schemes use a mix of line-item budget and fee-for service which bring limited benefit to the health system. Mechanisms to monitor provider performance are used in tandem with provider accreditation to improve quality of care in

public hospitals under the PBF program, but these benefits do not cascade to the CBHI and RSSB schemes.

Conclusion

Rwanda's health system has elements of strategic purchasing, but challenges remain and there is room for improvement, especially to ensure that benefit packages align with the population's needs, provider payment that contains cost, and quality assurance.

Strategic Health Purchasing In Nigeria: Investigating Governance And Institutional Capacities Within The Formal Sector Social Health Insurance Programme And Tax-Funded Health Services

Uchenna Ezenwaka, Agnes Gatome-Munyua, Chikezie Nwankwor, Nkechi Olalere, Nneka Orji, Uchenna Ewelike, Benjamin Uzochukwu, Obinna Onwujekwe

Introduction

Strategic health purchasing enhances health care system performance and attainment of health system goals through efficient use of financial resources. Studies on the governance and institutional arrangements for health purchasing in Nigeria's health financing schemes and how they affect strategic health purchasing are limited. This study investigates the influence of governance and institutional arrangements on implementing strategic health purchasing within the National Health Insurance Scheme's Formal Sector Social Health Insurance Programme (FSSHIP) and General Tax Funding (GTF) in Nigeria.

Methods

A qualitative, descriptive case study approach was used to collect information on FSSHIP and GTF schemes. Data was collected through review of relevant documents (20) and interviews with key informants (n=6) using a structured template, and data analyzed using a thematic framework approach.

Findings

The findings reveal some governance structures in health purchasing within FSSHIP that facilitate strategic health purchasing, including systems for designing benefit packages, accrediting and monitoring health maintenance organizations (HMOs) and providers, defining provider payment mechanisms, and vetting claims. However, purchasing is plagued by institutional challenges that impede strategic purchasing, including weak regulation, weak monitoring of providers and purchasers, delays in provider payment, and corrupt practices by HMOs. GTF schemes have a system for benefits specification, contracting with providers, and budgeting, which enhances strategic purchasing. But purchasing by GTF schemes is impeded by fragmented benefit packages, which leads to inefficiencies and duplication of services. The criteria for resource allocation are unclear and not evidence based.

Conclusion

Capacity to undertake strategic purchasing within the FSSHIP and GTF schemes is limited due to weak governance and institutional arrangements. The schemes have the potential to contribute to achieving UHC if these constraining factors are addressed.

Strategic Health Purchasing In Nigeria: Investigating Governance And Institutional Capacities Within The Formal Sector Social Health Insurance Programme And Tax-Funded Health Services.

Uchenna Ezenwaka, Agnes Gatome-Munyua, Chikezie Nwankwor, Nkechi Olalere, Nneka Orji, Uchenna Ewelike, Benjamin Uzochukwu, Obinna Onwujekwe

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Conclusion

Capacity to undertake strategic purchasing within the FSSHIP and GTF schemes is limited

due to weak governance and institutional arrangements. The schemes have the potential to contribute to achieving UHC if these constraining factors are addressed.

Assessment Of Strategic Healthcare Purchasing Arrangements In Three Public Insurance Schemes In Tanzania

Augustine Kuwawenaruwa, Suzan Makawia, Fatuma Manzi

Introduction

Strategic health purchasing in low and middle-income countries has received substantial attention as countries aim to achieve universal health coverage, by ensuring equitable access to quality health services without the risk of financial hardship. There is little evidence published from Tanzania on purchasing arrangements and what is required for strategic purchasing. This study analyses three purchasing arrangements in Tanzania and gives recommendations to strengthen strategic purchasing in Tanzania.

Methods

We used the multi-case qualitative study drawing on the National Health Insurance Fund (NHIF), Social Health Insurance Benefit (SHIB), and improved Community Health Fund (iCHF) to explore the three insurance schemes with a purchaser-provider split. Data were drawn from document reviews and results were validated with nine key informant interviews with a range of actors involved in strategic purchasing. A deductive and inductive approach was used to develop the themes and framework analysis to summarize the data.

Findings

The findings show that benefit specification for all three schemes was based on the standard treatment guidelines issued by the Ministry of Health. Public facilities are automatically included in these schemes while there is selective contracting with private facilities based on the location of the provider, the range of services available as stipulated in the scheme guideline, and the willingness of the provider to be contracted. NHIF uses fee-for-service to reimburse providers. While SHIB and iCHF use capitation. NHIF has an electronic system to monitor registration, verification, claims processing, and referrals. While SHIB monitoring is through routine supportive supervision and for the iCHF provider performance is monitored through utilization rates.

Conclusion

Purchasers in the three schemes have made progress in benefits specification, selective contracting of the private sector, claims monitoring. However, use of fee for service as the predominant provider payment modality in NHIF requires review to improve efficiency and contain costs; while use of output based payment such as capitation by iCHF and SHIB provides lessons for NHIF for cost containment. As Tanzania considers introducing a single national health insurance (SNHI), the role of these three schemes needs to be clarified, while considering the strengths and shortcomings to improve on with the redesign of the SNHI**.**

Parallel Session 4-1: Oral

UHC Policy Processes and Reforms

Examining the Efficiency of Health Systems in Sub-Saharan Africa: Monitoring Progress towards Universal Health Coverage

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Background:

The adoption of the Sustainable Development Goal (SDG) 3.8 in the year 2015 has marked a shift of focus in global and regional discourse on health from elimination or reduction of specific diseases/conditions to Universal Health Coverage (UHC) - that all people who need essential health services receive them without suffering from financial hardship. The outbreak of the COVID-19 pandemic has made the need for the attainment of the UHC goal more pressing.

Objective:

The central objective of this study is to evaluate the performance of health systems of SSA countries, accentuating the efficiency of progress being made to achieve the UHC goal.

Methods:

UHC indices were estimated for 30 SSA countries using ten health coverage indicators and two financial protection indicators. Technical efficiency scores were estimated using the output-oriented variable returns to scale (VRS) data envelopment analysis (DEA) model. This methodology allows for the evaluation of each country's ability to transform health inputs (health expenditure, medical doctors, nurses and beds) into health output (UHC index). The efficiency scores are regressed against seven explanatory variables: education, governance quality, out-of-pocket payment, domestic health spending, external health funding, compulsory health financing arrangement, and income levels using bootstrap DEA proposed by Simar and Wilson (2007).

Results:

The estimated UHC indices range from a minimum of 52% to a maximum of 81%, and medium coverage of 66%. On average, the health systems of the selected SSA countries have bias-corrected efficiency score 0.872 (95% confidence interval = 0.830 – 0.913). The bootstrap simarwilson regression also revealed that while education, governance quality, domestic health spending, external health funding, and compulsory health financing arrangement have positive significant effect on health system efficiency in making progress towards the attainment of the UHC goal, out-of-pocket payment significantly reduces the efficiency of health systems in achieving UHC.

Conclusions:

To improve technical efficiency of health systems, policy makers should focus on policies that empower individuals' education, good governance, and mode of financing healthcare rather than relying solely on providing healthcare services. Policies that enhance education, good governance, and reduce out-of-pocket payment for health services lead to improved health system performance which eventually speed up progress towards achieving UHC.

Keywords: Health Systems, Universal Health Coverage, Technical Efficiency, Data Envelopment Analysis, Sub-Saharan Africa.

Progress in the face of cuts: a qualitative Nigerian case study of maintaining progress towards universal health coverage after losing donor assistances

Uche Shalom Obi[1], *Osondu Ogbuoji*[2], *Wenhui Mao*[2], *Minahil Shahid*[2], *Obinna Onwujekwe*[3] *and Gavin Yamey*[2], *(1)Department of Community Medicine,University of Nigeria Teaching Hospital, Enugu, Nigeria, (2)The Center for Policy Impact in Global Health, Durham, NC, (3)University of Nigeria, Nsukka, Enugu Campus, Enugu, Nigeria*

In the coming years, about a dozen middle-income countries are excepted to transition out of development assistance for health (DAH) based on their economic growth. This anticipated loss of external funds at a time when there is a need for accelerated progress towards universal health coverage (UHC) is a source of concern.

Evaluating country readiness for transition towards country ownership of health programmes is a crucial step in making progress towards UHC.

We used in-depth interviews to explore: (1) the preparedness of the Nigerian health system to transition out of DAH, (2) transition policies and strategies that are in place in Nigeria, (3) the road map for the implementation of these policies and (4) challenges and recommendations for making progress on such policies. We applied Vogus and Graff's expanded transition readiness framework within the Nigerian context to synthesize preparedness plans, gaps, challenges and stakeholders' recommendations for sustaining the gains of donor-funded programmes and reaching UHC.

Some steps have been taken to integrate and institutionalize service delivery processes toward sustainable immunization and responsive primary healthcare in line with UHC. There are ongoing discussions on integrating human immunodeficiency virus (HIV) services with other services and the possibility of covering HIV services under the National Health Insurance Scheme (NHIS). We identified more transition preparedness plans within immunization programme compared with HIV programme. However, we identified gaps in all the nine components of the framework that must be filled to be able to sustain gains and make significant progress towards country ownership and UHC.

Nigeria needs to focus on building the overall health system by identifying systematic gaps

instead of continuing to invest in parallel programmes. Programmes need to be consolidated within the overall health system, health financing priorities and policies. A comprehensive and functional structure will provide continuity even in the event of decreasing external funds or donor exits.

Keywords: Development assistance for health; Nigeria; UHC; transition.

Situating donor transition in the context Universal Health Coverage (UHC) and Health System Resilience: Lessons from cross programmatic efficiency assessment in Kenya

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Background

Meaningful progress towards Universal Health Coverage (UHC) will depend on more resources being available to the health sector. However, Kenya's renewed focus on moving towards UHC comes at a time when donors are transitioning from directly supporting the health sector. Kenya's commitment to UHC provides an opportunity for Kenya to approach donor transition from a UHC lens so as to ensure sustainability and system resilience. With this background, this study set out to explore cross programmatic inefficiencies in the implementation of priority health programs that depend significantly on donors.

Methods

Using a cross-sectional design, data was collected through document review and key informant interviews and at national and in a sample of three counties. The analytical approach adopted a system-wide approach to analyzing efficiency across the selected health programs. The selected programs were HIV, TB, Immunization, RMNCAH, & Malaria. The approach included mapping implementation of the programs across the four core functions of the health system (service delivery, stewardship/ governance, generation of human and physical resources/inputs and health financing). Based on this, we map areas of duplication, overlap and misalignment across the programmes and within the broader health system aspects related to the programs.

Results

Donor funded programs have multiple funding flows with different incentive structures that result into misalignment with broader health system goals. On the input side, there is still program based human resource management leading to duplicative roles, sub optimal staff performance and over reliance on contracted staff while fragmentation in supply chains resulting into lack of coordination in supplies and complimentary inputs compromising access

to health services. There are also challenges observed in terms of multiple data systems and mechanisms for reporting and data use with the programs. The organization of the health system functions above including governance also affects effective service delivery including public health functions.

Conclusion/Recommendation

As countries plan to transition from donor resources while on the path to scaling up UHC, focus should not just be on aiming at just replacing donor dollars with domestic dollars as this is neither efficient nor sustainable. Cross programmatic efficiency identifies potential health system overlaps/misalignments that could be addressed as Kenya transitions from donor support so that access to priority services is sustained and the system becomes more resilient.

Socioeconomic inequity in the screening and treatment of hypertension in Kenya: evidence from a national survey

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Background:

Non-communicable diseases (NCDs) account for 50% of hospitalisations and 55% of inpatient deaths in Kenya. Hypertension is one of the major NCDs in Kenya. Equitable access and utilisation of screening and treatment interventions are critical for reducing the burden of hypertension. This study assessed horizontal equity (equal treatment for equal need) in the screening and treatment for hypertension. It also decomposed socioeconomic inequalities in care use in Kenya.

Methods:

Cross-sectional data from the 2015 NCDs risk factors STEPwise survey, covering 4,500 adults aged 18-69 years were analysed. Socioeconomic inequality was assessed using concentration curves and concentration indices (CI), and inequity by the horizontal inequity (HI) index. A positive (negative) CI or HI value suggests a pro-rich (pro-poor) inequality or inequity. Socioeconomic inequality in screening and treatment for hypertension was decomposed into contributions of need (age, sex, and body mass index (BMI)) and non-need (wealth status, education, exposure to media, employment, and area of residence) factors using a standard decomposition method.

Results:

The need for hypertension screening was higher among poorer than wealthier socioeconomic groups (CI = -0.077; $p < 0.05$). However, wealthier groups needed hypertension treatment more than poorer groups (CI = 0.293; $p<0.001$). Inequity in the use of hypertension screening (HI = 0.185; $p<0.001$) and treatment (HI = 0.095; $p<0.001$) were significantly pro-rich. Need factors such

as sex and BMI were the largest contributors to inequalities in the use of screening services. By contrast, non-need factors like the area of residence, wealth, and employment status mainly contributed to inequalities in the utilisation of treatment services.

Conclusion:

Among other things, the use of hypertension screening and treatment services in Kenya should be according to need to realise the Sustainable Development Goals for NCDs. Specifically, efforts to attain equity in healthcare use for hypertension services should be multi-sectoral and focused on crucial inequity drivers such as regional disparities in care use, poverty and educational attainment. Also, concerted awareness campaigns are needed to increase the uptake of screening services for hypertension.

Improving UHC processes in sub-Saharan Africa: what can the process documentation methodological approach bring in?

Luc Mahougbé Kouwanou[1], *Kéfilath Bello*[1], *Cheickna Touré*[2], *Allison Kelley*[3], *Conrad Tonoukouen*[3] *and Jean-Paul Dossou*[1], *(1)Centre de Recherche en Reproduction Humaine et en Démographie (CERRHUD), Cotonou, Benin, (2)Results for Development (R4D), Bamako, Mali, (3)Results for Development (R4D)*

The journey towards universal health coverage (UHC) in sub-Saharan African countries is a complex process, not just technical, but also highly political. Rigid protocols to address the identified problems have limited application or are counter-productive. Continuous learning is key for adapting strategies to the countries' context and enhancing the chances for success . Process documentation (PD) is an innovative approach, developed by the African Collaborative for Health Financing Solutions (ACS), to address this complexity and to support more effectively countries in their UHC policy processes. This paper aim at presenting the PD approach and the lessons learnt through its application.

PD is a prospective policy analysis approach which consist in documenting systematically all relevant events and stakeholders which could potentially influence or be influenced by a given UHC process; analysing them in real-time; and using the lessons learnt to improve the UHC process. PD follows a five-steps iterative process including: the identification of the process to be documented and the documentation team, the recording of events and stakeholders, the immediate analysis of individual records, the periodic desk analysis of a set of records, and the integration of the key lessons learnt into the policy process. The PD methodology has been used by the ACS project in Benin, Botswana, Burkina Faso, Uganda, Namibia, and Togo. Key achievements include a successful facilitation of the process of developing a UHC roadmap in Uganda, rapid learning cycles to support the pilot phase of the social health insurance scheme *"AM-ARCH"* in Benin, and a stakeholder analysis for supporting the development of a workplan to accelerate UHC progress in Togo. The experimentation of the PD approach rose some challenges including the difficulty of obtaining reliable and timely information, time investment from those who document, and managing the stakeholder's sensitivity, given the

political nature of some findings.

In conclusion, PD is a promising approach with the potential to continuously inform policy processes. There is a need to refine the methodology to make it easier to use routinely and to improve its effectiveness.

Parallel Session 4-2: Oral

Strategic purchasing

Tracking Progress Towards Strategic Purchasing for Healthcare in Nigeria: A Case Study of the Niger State Healthcare System

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Background

: Achievement of Universal Health Coverage (UHC) relies on effective implementation of strategic purchasing for healthcare (SHP) directly linked to enhanced system performance. Consequently, countries committed to UHC have made progress towards SHP to optimize attainment of health system goals. The study examined the purchasing practices in the Niger state healthcare system to assess and identify progress, challenges and opportunities for SHP.

Methods

: The study critically analyzed the Niger state's health financing schemes to assess their purchasing practices based on a descriptive qualitative case study approach. Reviews of relevant documents were undertaken including in-depth interviews with key informants/ stakeholders. Information on external factors and governance, purchasing practices, and other capacities of the state's financing schemes were collected. Data was analyzed guided by the SPARC recommended framework for examining purchasing practices for progress towards strategic healthcare purchasing.

Findings

: A governance and accountability structure is led by the Commissioner for Health through the MOH across the departments and agencies with clear lines of responsibilities. The SMOH is the dominant provider/purchaser of healthcare in the state, with other agencies possessing purchasing functions. Government commitment towards UHC led to development of policy and regulatory frameworks for SHP, revitalization of PHC facilities for improved service delivery, and establishment of the state's health contributory scheme NICARE, all of which support SHP objectives. However, budget allocation for healthcare remains very inadequate due to poor revenue sources, which constrain SHP objectives. As an integrated system, the SMOH lack purchaser-provider split as providers are not selected based on quality of service delivery and performance. Provider performance monitoring is weak with limited incentive to drive performance. Provider payments through salary and line-item budget do not promote quality and efficiency of service delivery. There are no clear channels between the SMOH and the citizens to provide timely feedback on service delivery. Capacity for strategic purchasing is very limited but willingness for technical support remains high.

Conclusion:

Healthcare purchasing in Niger state remains largely passive given the operation of public integrated system which portends impediments to SHP. However, significant progress has been made towards SHP in the state. Health infrastructure upgrade, establishment of contributory health scheme among significant policy and regulatory frameworks represent major progress towards SHP in the state. Strong government's commitment towards UHC, strengthening of the contributory health scheme and availability of technical support, among other recommended measures will boost implementation of SHP in the state for progress towards UHC.

The contribution of The Nigeria State Health Investment Project to building resilient health systems: Lessons from Ten years of Results Based Financing implementation in Nigeria

Hyeladzira Garnvwa, *Binta Ismail, Muhammed Muhammed, Muhammed Mashin, Ismail Salihu and Sarah Martin, National Primary Health Care Development Agency (NPHCDA), Abuja, Nigeria*

Background

Nigeria's health indices remain among the worst within Sub-Saharan Africa. Progress towards improving infant, under-5 and maternal mortality rates, and skilled birth attendance also fell behind international standards. In 2011, the Nigeria State Health Investment Project (NSHIP) was introduced to shift the focus to strengthening service delivery and improving health outcomes through innovative approaches to health financing using **Results**-Based Financing (RBF). NSHIP was then expanded to tackle the disruption to health services caused by the Boko Haram insurgency in the Northeast Region.

Objectives

In light of the official closure of NSHIP in 2021, this paper offers the opportunity to reflect upon how the project has evolved over 10 years of implementation, particularly the key challenges faced and how they were overcome. Available data regarding finance, personnel management, and local adaptations is worthwhile in informing future programming for RBF projects. Self-evaluation following NSHIPs closure provides a systematic reflection of the results, challenges and lessons learnt.

Methodology

The evaluation period was from 2011 to 2020 to collect principal information. Key informant interviews and NSHIP project documents were used for qualitative data, while primary data from the project portal and National Health Management Information System was collected for quantitative review. Simple descriptive statistical methods were used to analyze the data.

The paper also assesses the outcomes of the project against pre-defined Project Development Objectives, with a focus on providing evidence of project achievements.

Key findings

The result of RBF in Nigeria have been unprecedented in terms of the improvement to health outcomes achieved. With the implementation of RBF approach throughout NSHIP, 2,200 primary health facilities across 113 Local Government Areas in eight states have experienced total transformation and become functional with improved quality service delivery, which has directly translated to improvements in population health. This has ensured that 30 million beneficiaries including women and children have access to quality basic health care services and secondary care.

Conclusion

In the Nigerian context, RBF was a timely initiative given the poor health indices at national and sub-national levels. NSHIP has demonstrated how RBF can serve as an innovative strategy to increase the impact of investments in health and improve efficiency. However, the project also exposed some gaps in the RBF implementation process, as well as recurrent challenges deterring it from achieving its full potential. The application of NSHIP has offered valuable lessons to strengthen the design and application of RBF and influence national policy.

Strategic Health Purchasing for Universal Health Coverage in Benin: A Critical Assessment

Cossi Xavier Agbeto[1], *Crédo Ahissou*[2], *Jean Paul Dossou*[2], *Kéfilath Bello*[3] *and Christelle Boyi*[4], *(1)Centre de Recherche en Reproduction Humaine et en Démographie, Abomey-Calavi, Benin, (2)Centre de Recherche en Reproduction Humaine et en Démographie, Cotonou, Benin, (3) Centre de Recherche en Reproduction Humaine et en Démographie (CERRHUD), Cotonou, Benin, (4)centre de Recherche en Reproduction Humaine et en Démographie*

Abstract

In Benin, research addressing Strategic Health Purchasing are almost inexistent. Currently, several reforms are underway in the country intending to move towards a Strategic Health Purchasing, although much remains to be done. Consequently, this paper seeks to show the effort made towards SHP through an assessment of its progress and gaps in Benin.

Method

We combined a cross-sectional qualitative study design with collected data using document reviews, key informant interviews, and a stakeholder engagement workshop focusing on the five main health purchasers in Benin: ANPS: National Agency for Social Protection (for the health insurance component of the ARCH) project, the ANGC (for the National Free Caesarean section policy), by the Ministry of Economy and Finance (for the National Pension Fund of Benin), by the treasury (for the 4/5 scheme for state agents, the Benin National Retirement Fund), and by insurance companies themselves (for private health insurances and the

"*Mutuelles de Santé*").

Results

Our results as follow:

Benefits package:

The benefits specification varies across the health purchasing mechanisms. In the ARCH project like most of the public schemes for instance, purchasers mostly focus on public providers whereas the private purchasers tend to contract with private insurance companies.

Financial management:

There is limited autonomy in decision making and financial management in several schemes especially those that depend mainly on the government. On the contrary, private insurance companies and the *Mutuelles de santé* are autonomous in their decision-making.

Provider payment:

Fee-for-service is the most used payment model in most schemes including the ARCH project. In contrast, the free caesarean section policy and malaria control programs reimburse providers by paying a lump sum for each caesarean section performed.

Monitoring:

Monitoring and evaluation receive little attention in the implementation of most schemes, mainly due to the lack of information management systems and the fragmentation of existing information systems. However, in the ARCH project for instance, the monitoring and evaluation of activities and results are conducted by the same purchasers that do not always provide objective analyses.

Contracting:

Provider payment methods and contracting policies do not well align with strategic purchasing in health services comprehensiveness.

Governance and health information systems:

Governance is multi-stakeholder in most public regimes. However, there is a low or no real community participation in decision-making except in the "*Mutuelles de santé*". Furthermore, each SHP scheme has its health information system as a cause of the fragmentation of the health financing system.

Sustainable Health Financing in Africa: Expenditure and Revenue Projections and Fiscal Space Analysis

Chris Atim[1], **Eric Arthur**[2] *and Daniel Malik Achala*[1], *(1) AfHEA, Accra, Ghana, (2)Kwame Nkrumah University of Science & Technology (KNUST), Kumasi, Ghana*

Background & Methods

The paper examines sustainable health care financing in Africa. We provide an analysis of the mix of revenue sources for health including development assistance in Africa using smoothed-out five-year averages data from 2000 to 2018. We present a discussion to support the need to transition to domestic government health expenditure for sustainable financing. Then we make projections of economic growth, tax revenues and domestic government health expenditure taking into account the impacts of the Covid-19 pandemic and suggest alternative sources of financing in Africa. We assume domestic health expenditure grows at same rate as economic growth rates. Further, we assume countries could increase the tax to GDP ratios to 20%. We use a combination of quantitative and qualitative methods using data from international databases and repositories of economic and health financing. We also carried out a comprehensive desk and literature searches to inform our analysis.

Results & Findings & Conclusion

The results indicate a significant dependence on out-of-pocket and external health expenditure. Besides, there is low commitment from governments in terms of financing the health sector as evident in the inability of most countries to achieve the 15% Abuja target and the 5% of GDP as health expenditure. Besides, health expenditure per capita is low, falling below the USD91 recommended for basic health care, coupled with the low levels of both social and voluntary health insurance in the region. Also using the projected growth rate of GDP and population, we find that the pandemic has depressing effects on economic growth rates and tax revenues in African countries, affecting the ability of the countries to provide sustained financing to the health sector. This, therefore, requires effort from countries to mitigate the impacts of the pandemic in order to improve economic growth rates. Our analysis also shows that if countries spend at least 5% of GDP as domestic government health expenditure, countries in Africa can make good progress towards their UHC targets, although there will be shortfalls as a result of the pandemic hence the need to revise these targets. We also find that African countries could mobilize substantial revenues if they increased their tax to GDP ratios from their current levels to the recommended 20% of GDP as we find significant gaps in tax revenues. We conclude the paper by discussing other innovative sources of financing that could improve revenues and hence allocations to the health sector.A

Acknowledgement and Discliamer: *This paper is based on work funded by UNECA & ABCHealth as part of background analyses for the forthcoming report on Healthcare and Economic Growth in Africa, 2nd Edition. The authors alone are responsible for the contents and viewpoints in the paper. Opinions and conclusions in the paper should not be attributed to UNECA, ABCHealth, or any institution with which the authors are affiliated.*

A critical analysis of recent history of African countries' state of health financing, with special attention on strategic purchasing & priority setting

Chris Atim[1], Eric Arthur[2] and **Daniel Malik Achala**[1]*, (1) AfHEA, Accra, Ghana, (2)Kwame Nkrumah University of Science & Technology (KNUST), Kumasi, Ghana*

Background:

Many African countries have signed onto the sustainable development goals (SDGs). Progress towards achieving the health related goals has been slow as many countries have low service coverage. This paper examined the current status of health financing in Africa and countries' progress towards universal health coverage (UHC). We analyzed recent macro fiscal, health systems and financing data of African countries. We examined key health systems priorities including: priority setting and use of technology in health care, strategic purchasing and risk pooling as well as service coverage. The paper also looked at the impact on countries of the ongoing Covid-19 pandemic.

Methods:

A combination of quantitative and qualitative methods were used. Data included international databases and repositories of economic and health financing data from World Bank, World Health Organization (WHO), Primary Healthcare Performance Initiative (PHCPI). The qualitative aspect made use of comprehensive desk and literature searches of key themes to inform our analysis.

Results ad findings:

There is pervasive and very high out-of-pocket (OOP) health spending in Africa. This presents one of the most significant challenges to countries' pursuit of UHC. We found that, government health expenditure is low in many countries while external health expenditure even though dwindling, is still high in some countries. With dwindling and unsustainable external aid and the further impoverishing effects of OOPs, public funding remains the only viable way for countries to make meaningful progress towards UHC, especially to ensure that the poor and vulnerable populations obtain the health care they need without facing any financial hardship as a result. We further found that strategic purchasing and health technology assessment, which can boost both allocative and technical efficiency in health, are being underutilized in Africa. Purchasing of health care services in Africa is largely input based rather than strategic and does not incentivize quality service delivery.

Conclusion:

There is still high OOP in many African countries, which is impeding progress to UHC. Government health spending is key to African countries' progress towards achieving UHC given the dwindling and unsustainable external health funds and retrogressive nature of OOPs. Countries should take advantage of opportunities arising from, among other things, the response to the Covid-19 pandemic, to maximize the use of strategic purchasing, digital technology and similar tools to improved health services and outcomes.

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Parallel Session 4-3: Oral

Impact of COVID on Health Services_FR 2

Non-linear effects of health crises on economic activity in 27 African countries

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Background

When an epidemic occurs, the measures taken are generally preventive and may lose their effectiveness in the long term. Curative solutions are therefore desirable. But these curative solutions, before being put in place, require several steps that can take years. During this time, if nothing is done, the epidemic situation could turn into a health crisis, which by impacting the physical integrity of the population could have a negative effect on economic activity. So what is the optimum time that should be taken to find a sustainable solution to epidemics in order to avoid economic recession?

Aims and objectives of the study

The aim of this study is to contribute to the understanding of the influence of the duration of health crises on economic activity, especially in African countries, where epidemics are rampant and the Covid-19 crisis is reducing access to antiretrovirals.

The general objective of this paper is to analyse the effect of health crises on economic activity in Africa. Specifically, this study seeks to:

- Identify the nature of the link from health crisis to economic growth;
- Determine the optimal time at which a health crisis can negatively influence economic growth.

Method of analysis

A linear regression model is applied to a non-linear growth function in the health crisis variable.

The sample of this study concerns a panel of 27 states in Africa, observed over the period 1995-2017. The generalized method of moments (GMM) was used to estimate the parameters of the study model.

Key findings

The results of the study show that health crises in Africa generally have a non-linear effect on economic growth. When an epidemic starts, immediate response measures tend to develop certain sectors of activity to the benefit of others, leading to a reduction in the economic growth rate to +0.4%. On the other hand, when these short-term measures persist and are not transformed into sustainable solutions, a drop in economic growth of around -0.06% is observed. This decline usually takes place after 3 years 4 months.

Main conclusions

When an epidemic occurs, it is desirable that, in addition to barrier and prevention measures, the political authorities start to look for sustainable solutions, considering a countdown of 3 years on average.

Role of civil society and contribution of community actors to fight COVID-19 in Burkina Faso

Orokia Sory[1], *Joël Arthur Kiendrébéogo[2], Yamba Kafando[1], Charlemagne Tapsoba[3], Issa Kabore[1], Hamidou Ouédraog, Simon Kabor, Cheickna Tour, and Allison Gamble Kelley6, (1) Recherche pour la Santé et le Développement (RESADE), Ouagadougou, Burkina Faso, (2) Université Joseph KI-ZERBO, Department of Public Health, Ouagadougou, Burkina Faso, (3) Research for Health and Development, Burkina Faso, Burkina Faso, (4)Réseau accès aux médicaments essentiels (RAME), Ouagadougou, Burkina Faso, (5)Results for Development (R4D), Kenya, (6)Results for Development (R4D), France*

Introduction

Communities should play a crucial role in the fight against public health emergencies, but ensuring their effective engagement remains a challenge in many countries. We present the experience of Burkina Faso in involving community actors in the fight against COVID-19.

Objectives

To describe the process of mobilising community actors and their contribution to the fight against COVID-19 in Burkina Faso.

Methods

This was a descriptive qualitative study that took place in the city of Ouagadougou, covering the period from March to October 2020. Data were collected through document review, individual online interviews and participant observation, and then analysed thematically.

Results

The initiative to involve community actors in the fight against COVID-19 was taken by 23 civil society organisations grouped around a platform called “Démocratie Sanitaire et Implication Citoyenne (DES-ICI)”. In April 2020, this platform launched the movement “Communities are committed to Emptying COVID-19 (COMVID COVID-19)” by mobilising more than 300 community-based associations through social networks. These associations, under the leadership of the DES-ICI platform, were organised and divided into 54 Citizen Health Watch Units (CCVS) throughout the city of Ouagadougou. These CCVS worked on a voluntary basis, carrying out awareness raising activities, identification and follow-up of contact cases. The CCVS also manufactured and distributed protective materials, including soap, masks and

hydro-alcohol gel to vulnerable households. In addition, the COMVID-COVID-19 movement has helped to initiate dialogue and increased collaboration between civil society and the Ministry of Health in the response to COVID-19.

Conclusion

The COMVID COVID-19 movement has been essential in the fight against COVID-19 in Burkina Faso and has been a unique experience in mobilising community actors through civil society. This movement could inspire other countries, not only in the framework of the response to COVID-19, but also beyond, for the implementation of community health actions in the dynamics of the Universal Health Coverage.

Impact of the COVID-19 pandemic and response on the utilization of health services in public facilities during the first wave in Kinshasa, the Democratic Republic of the Congo

Prof. Serge Mayaka, MD PhD, *SCHOLL OF PUBLIC HEALTH OF KINSHASA, KINSHASA, Congo-Kinshasa*

Background

User use of health services can decline during epidemics, which was predicted in low- and middle-income countries during the COVID-19 pandemic. In March 2020, the government of the Democratic Republic of Congo (DRC) began implementing public health measures across Kinshasa, including strict containment measures in the Gombe health zone in the capital.

Goals

To date, only a small number of studies have assessed the impact of the COVID-19 pandemic on health service utilisation in LMICs, and none have also assessed both the implementation and lifting of containment measures. This study therefore falls within this framework.

Research objectives

- To assess the impact of COVID-19 and its associated response measures on health service utilisation in Kinshasa during the first wave of the pandemic
- To provide information to guide the response and future infectious disease outbreaks.

Methods used

Using monthly time series data from the health information system and interrupted time series data, with segmented Poisson mixed-effects regression models, we assessed the impact of the pandemic on the use of essential health services during the first wave of the pandemic in Kinshasa.

Key findings

Health service utilisation fell rapidly after the onset of the pandemic and ranged from 16% for visits for hypertension to 39% for visits for diabetes. However, the reductions were heavily concentrated in Gombe (81% decrease in outpatient visits) compared to the other health zones. When the lockdown was lifted, the total number of visits and visits for infectious and non-communicable diseases increased about twofold. Hospitals were more affected than health centres. Overall, the use of maternal health services and vaccinations was not significantly affected.

Key highlights

The COVID-19 pandemic resulted in significant reductions in the use of health services in Kinshasa, particularly in Gombe. The lifting of containment led to a rebound in the level of health service utilisation, but it remained below pre-pandemic levels.

Organized Session 5-1

Investment Cases For Transformative Results In The Decade Of Action: Case Studies In Sub-Saharan Africa

Authors: *Chinwe Ogbonna UNFPA, Ama Pokuaa Fenny Institute of Statistical, Social and Economic Research Howard Friedman,UNFPA, Jocelyn Fenard UNFPA,Nadia Carvalho Avenir Health Naomi Setshegetso, University of Botswana, Gaborone, Botswana, Jacob Novignon, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana, Alfred Mukong, University of Namibia.*

Description

In 2019, UNFPA, the United Nations Population Fund estimated the costs and resource gaps for achieving three transformative results by 2030, namely ending unmet need for family planning, ending preventable maternal deaths, and ending gender-based violence and harmful practices. With its collaborating partners, UNFPA launched the Global price tags at the ICPD25 Nairobi Summit. The global price tags used aggregate country-level estimates for high burden countries, as guided by tailored tools, a clear methodology and several data sources. To achieve the three transformative results by 2030 in priority countries, a total cost of $264 billion was estimated, of which $42 billion was projected as available resources and commitments in 2019 from donors in the form of development assistance. New investments of $222 billion were estimated as the financing gap to meet the three transformative results by 2030. These resources are expected to be raised from primarily domestic resources, including government revenue, and innovative financing sources. It is important to highlight that the global price tags were estimated in 2019 before the COVID19 pandemic in 2020. There is recognition that the scale of resources required to close financing gaps in achieving the Transformative results could be significantly greater.

In further recognition of the need for validated country estimates of resource requirements to achieve the Transformative results and met commitments made by member states at the Nairobi Summit, Investment cases have gained momentum in Africa. These country-level investment cases present an opportunity to focus on the unfinished business of the ICPD Agenda at the country level, by defining the scale and scope of investments needed to prioritize proven, high-impact and cost-effective interventions that are required to accelerate progress towards achievement of the transformative results committed to by UNFPA and partners.

Botswana: Investment Case of the Transformative Results by 2030

Naomi Setshegetso, University of Botswana, Gaborone, Botswana

Background:

The family planning programme in Botswana has contributed to improved health outcomes

and development over the years. This, however, is not without some challenges. One of the main limitations to scaling up effective coverage of family planning services is limited availability of disaggregated data on key SRHR indicators to guide targeted interventions. Botswana relies mainly on programmatic data for tracking progress for the family planning programme.

Methods:

Different effective coverage scenarios of the priority interventions were developed in consultation with the government and partners. The baseline was set as 2020 with projections to the SDG target year of 2030 for all the coverage projections with the first year of impact recorded in 2021. The baseline case (or status quo) scenario assumed that contraceptive prevalence rate (CPR) of 67.4 percent prevails over time and does not change. Relative to other scenarios, the baseline case scenario shows how the contraceptive prevalence rate (and modern CPR) evolves over time relative to the set target in terms of its impact on unmet need for FP, unintended pregnancies, maternal deaths and unsafe abortions averted. In the second scenario, it was assumed that the current contraceptive prevalence rate of 67.4 percent only prevails in the base year and thereafter, evolves over time to reach a target of 75 percent in 2030 – a target set by the UN as an SDG for all countries to ensure universal access to reproductive health care. In the third scenario, it was assumed that current contraceptive prevalence rate of 67.4 percent increases over time 80 percent by 2030.

Outcome:

The findings from the estimations show the significant impact of increasing modern contraceptive prevalence and addressing unmet need for family planning in terms of reductions in unintended pregnancies, maternal deaths and unsafe abortions. Specifically,

An increase in modern contraceptive prevalence rate from 64.52 percent to 86 percent with a view to ending unmet need for family planning will increase the scale of impact to avert unintended pregnancies by 2030.

In total 665,775 unintended pregnancies would be averted between 2020 and 2030 if modern CPR is 64.52 percent (baseline/status quo with CPR of 67.4 percent).

The public health emergencies and disruptions presented by the COVID-19 pandemic and its far-reaching impact on lives, livelihoods, and the economy, underscore the need for resilient health systems, that can ensure continuity of essential services.

South Sudan: Investment Case of the Transformative Results by 2030

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

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Background:

South Sudan's maternal mortality rate is relatively high, estimated at 789 maternal deaths per 100,000 live births (UN estimates, 2015). Further, skilled attendance during delivery is at 19% with 80% of women delivering at home assisted by untrained attendants. The unmet need

for contraception in South Sudan was at 29.7% in 2020. Contraceptive prevalence rate for all methods was estimates at 4% in 2010 and modern methods at 5% as at 2015.

Methods:

Different effective coverage scenarios of the priority interventions were developed in consultation with the National Reference Group (NRG). The baseline and end line for all the coverage projections are 2020 and 2030 respectively and the first year of impact of the intervention is 2021. With regards to ending maternal deaths and ending unmet need for family planning, four different effective coverage scenarios were considered.

Outcome:

Ending preventable maternal deaths:

An achievable (50%) scale up of coverage of twenty-seven (27) high impact maternal health interventions, including contraceptive use, could save over 5,500 maternal lives over the next ten years at a total incremental (additional) cost of US$ 318 million in South Sudan or a total cost of US$ 408 million.

Ending unmet need for family planning:

An increase in the modern contraceptive prevalence rate to 30 to 50%, with a view to ending unmet need for family planning, will lead to the number of unintended pregnancies averted increasing from 292,075 in 2020 to between 1,084,243 and 1,717,979 in 2030 under the three scenarios [Modest (30%), Achievable (40%) and Ambitious (50%)].

Ending Child Marriage:

Over 2 million children (baseline) are likely to be married in the next 10 years if there is no intervention undertaken. However, with targeted interventions, 62% of child marriages (about 1.4 million) would be averted.

Ending Gender-based violence and all harmful practices:

With a 5% annual increase in the effective coverage of targeted interventions, the number of women exposed to IPV in South Sudan would start to decline. Between 2021 and 2025, 171,708 cases of IPV would be averted; this approaches half a million by 2030. With a 50% intervention coverage for all indicators achieved by 2030, 392,376 IPV cumulative incidents would be averted during the first 5 years (2021-2025) and nearly 2.3 million incidents averted during the second half of the decade.

Namibia: Investment Case of the Transformative Results by 2030

Alfred Mukong, University of Namibia

Background:

South Sudan's maternal mortality rate is relatively high, estimated at 789 maternal deaths per 100,000 live births (UN estimates, 2015). Further, skilled attendance during delivery is at 19%

with 80% of women delivering at home assisted by untrained attendants. Family planning service uptake is extremely low in the country, with an estimated 96% of women aged 15-49 years currently married or in union, unable to use/access any family planning methods; with only 1% of a total of 4% practicing families having used modern family planning methods. The unmet need for contraception in South Sudan was at 29.7% in 2020.

Methods:

Different effective coverage scenarios of the priority interventions were developed in consultation with the National Reference Group (NRG). The baseline and end line for all the coverage projections are 2020 and 2030 respectively and the first year of impact of the intervention is 2021.

Outcome:

Ending preventable maternal deaths:

An achievable (50%) scale up of coverage of twenty-seven (27) high impact maternal health interventions, including contraceptive use, could save over 5,500 maternal lives over the next ten years at a total incremental (additional) cost of US$ 318 million in South Sudan or a total cost of US$ 408 million.

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Ending Child Marriage:

Over 2 million children (baseline) are likely to be married in the next 10 years if there is no intervention undertaken. However, with targeted interventions, 62% of child marriages (about 1.4 million) would be averted.

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With a 5% annual increase in the effective coverage of targeted interventions, the number of women exposed to IPV in South Sudan would start to decline. Between 2021 and 2025, 171,708 cases of IPV would be averted; this approaches half a million by 2030. With a 50% intervention coverage for all indicators achieved by 2030, 392,376 IPV cumulative incidents would be averted during the first 5 years (2021-2025) and nearly 2.3 million incidents averted during the second half of the decade.

Organized Session 5-2

Scaling up Surgery in sub-Saharan Africa: Exploring the Fundamental Economics and Dynamic Complexities

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Description

Nine in ten persons in sub-Saharan Africa (SSA) lack access to safe, timely and affordable surgery. Since the 2015 publication of the Lancet Commission on Global Surgery (LCGS) report, detailing among others global disparities in access to surgery, there have been national and regional initiatives to scale up surgery in SSA, including the development and launch of National, Surgical, Obstetric and Anaesthesia Plans (NSOAPs) in Zambia, Tanzania, Nigeria, Rwanda and Madagascar. SURG-Africa (Scaling up Safe Surgery for Rural Populations in Africa) project also trialled a mentorship programme to empower district hospital surgical teams in Tanzania, Malawi and Zambia to undertake a wider range and a larger number of surgical procedures at district hospitals. Such efforts are however hampered by limited evidence on the surgical systems. Exploring different dimensions of the surgical system, this session will demonstrate the role of economic and systems research in shaping policies for building resilient surgical systems in SSA.

This session will consist of introductory remarks by the principal organizer/moderator, four distinct paper presentations, questions and answer sub-session, and concluding remarks. The first presentation is a systematic review of literature, assessing and describing the current situation of financing of surgery in SSA, and providing policy options for improvements. The second speaker will present a study into the costs and opportunities for efficiency improvements in delivery of surgeries at regional and district hospitals in Tanzania. The third presentation will dive deeper into the efficiency question by investigating the determinants of efficiency at the district hospitals in Tanzania, Malawi and Zambia, using a mix of Data Envelopment and regression analyses. The last presentation will employ a systems dynamics tool – Group Model Building (GMB) workshops – to explore the policy options for implementing and sustaining district level surgical mentorship model for surgical scale up in Zambia. This will provide a case study of why and how systems thinking could help in policy formulation and implementation to minimize policy failures and unintended consequences associated with complex adaptive systems.

This session will demonstrate that surgery scale-up is possible in SSA but requires comprehensive, long-term and systems-based policies, starting with the prioritization of surgery in national resource allocation priorities, and establishment of a dedicated global surgery fund.

Financing of Surgery and Anaesthesia in Sub-Saharan Africa: A Scoping Review

Leon Bijlmakers, Department for Health Evidence, Radboud University Medical Centre, Nijmegen, Netherlands

Objective:

This study aimed to provide an overview of current knowledge and situational analysis of financing of surgery and anaesthesia across sub-Saharan Africa (SSA).

Design:

We performed a scoping review of scientific databases (PubMed, EMBASE, Global Health and African Index Medicus), grey literature, and websites of development organisations. Screening and data extraction were conducted by two independent reviewers and abstracted data were summarized using thematic narrative synthesis per the financing domains: mobilization, pooling and purchasing.

Results:

The search resulted in 5533 unique articles among which 149 met the inclusion criteria: 132 were related to mobilization, 17 to pooling, and 5 to purchasing. Neglect of surgery in national health priorities is widespread in SSA and no report was found on national level surgical expenditures or budgetary allocations. Financial protection mechanisms are weak or non-existent; poor patients often forego care or face financial catastrophes in seeking care, even in the context of universal public financing (free care) initiatives.

Conclusion:

Financing of surgical and anaesthesia care in SSA is as poor as it is under-investigated, calling for increased national prioritisation and tracking of surgical funding. Improving availability, accessibility, and affordability of surgical and anaesthesia care require comprehensive and inclusive policy formulations.

Economic Costs of Providing District- and Regional- Level Surgeries in Tanzania

Juma Adinan, East Central and Southern Africa Health Community, Arusha, Tanzania, United Republic of

Objective:

This study aimed to calculate and compare the costs of providing surgical care at the district and regional hospitals; and identify points of possible efficiency gains.

Methods:

Two district hospitals (DHs) and the regional referral hospital (RH) in Arusha region were selected. All the staff, buildings, equipment, and medical and non-medical supplies deployed

in running the hospitals over a 12 month period were identified and quantified from interviews and hospital records. Using a combination of step-down costing and activity-based costing, all costs attributed to surgeries were established and then distributed over the individual types of surgeries. These costs were delineated into pre-operative, intra-operative, and post-operative components.

Results:

The total annual costs of running the clinical cost centres ranged from $567k at Oltrumet District Hospital to $3,453k at Mt Meru Regional Referral Hospital. The total costs of surgeries ranged from $79k to $813k; amounting to 12-22 % of the total costs of running the hospitals. At least 70% of the costs were salaries. Unit costs and relative shares of capital costs were generally higher at the district hospitals. Two-thirds of all the procedures incurred at least 60% of their costs in the theatre. Open reduction and internal fixation (ORIF) performed at the regional hospital was cheaper ($618) than surgical debridement (plus conservative treatment) due to prolonged post-operative inpatient care associated with the latter ($1,177), but was performed infrequently mostly due to unavailability of implants.

Conclusion:

Lower unit costs and shares of capital costs at the RH reflect an advantage of economies of scale and scope at the RH, and a possible underutilization of capacity at the DHs. Greater efficiencies make a case for concentration and scale-up of surgical services at the RHs, but there is a stronger case for scaling up district-level surgeries, not only for equitable access to services, but also to drive down unit costs there, and free up RH resources for more complex cases such as ORIF.

Surgical Capacity, Productivity and Efficiency at the District Level in Sub-Saharan Africa: A Three-country Study

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Objective:

This paper investigates the determinants of hospital efficiency in district hospitals in three African countries.

Method:

Three-months cross-sectional data, comprising surgical capacity indicators and volumes of major surgical procedures collected from 61 district hospitals in Malawi, Tanzania, and Zambia, were analysed. Data envelopment analysis was used to calculate average hospital efficiency scores (max.=1) for each country. Quantile regression analysis was selected to estimate the relationship between surgical volume and input indicators. Two-stage bootstrap regression analysis was used to estimate the determinants of hospital efficiency.

Results:

Average hospital efficiency scores were 0·77 in Tanzania, 0·70 in Malawi and 0·41 in Zambia. Infrastructure had the highest weight in calculating these scores. Hospitals that scored high on the most commonly utilised surgical capacity index were not the ones with high surgical volumes or high efficiency. The number of surgical team members, which was lowest in Zambia, was strongly, positively correlated with surgical productivity and efficiency

Conclusions: Hospital efficiency, combining capacity measures and surgical outputs, is a better indicator of surgical performance than capacity measures, which if used alone for surgical planning could be misleading. Investment in the surgical workforce is critical to improving district hospital surgical productivity and efficiency.

Options for Surgical Mentoring: Lessons from Zambia Based on Stakeholder Consultation and Systems Science

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Objective:

The aim of this study was to explore policy options for embedding a pilot surgical mentoring programme in existing policy structures in Zambia through a participatory modeling approach.

Methods:

Four group model building workshops were held, two each at district and central hospitals. Participants worked in a variety of institutions and had clinical and/or administrative backgrounds. Two independent reviewers compared the causal loop diagrams (CLDs) that resulted from these workshops in a pairwise fashion to construct an integrated CLD. Graph theory was used to analyze the integrated CLD, and dynamic system behavior was explored using the Method to Analyse Relations between Variables using Enriched Loops (MARVEL) method.

Results:

The establishment of a provincial mentoring faculty, in collaboration with key stakeholders, would be a necessary step to coordinate and sustain surgical mentoring and to monitor district-level surgical performance. Quarterly surgical mentoring reviews at the provincial level are recommended to evaluate and, if needed, adapt mentoring. District hospital administrators need to closely monitor mentee motivation.

Conclusions:

Surgical mentoring can play a key role in scaling up district-level surgery but its implementation is complex and requires designated provincial level coordination and regular contact with relevant stakeholders.

Parallel Session 5-1: Oral

Cost and Cost-effecteness of health interventions 1

Evaluating the direct medical costs associated with prematurity during the initial hospitalization in Rwanda: a prevalence based cost of illness study

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Background:

Prematurity is still the leading cause of neonatal mortality globally, Rwanda included, though advanced medical technology improved survival for this condition. The initial hospitalization of premature babies is associated with high costs impacting on the country health budget. In Rwanda, these costs are not known to allow better related planning, hence the purpose and motivation for this research.

Methods:

This is a prospective Cost of Illness study using prevalence approach conducted in 5 hospitals (Muhima, Masaka, Gisenyi, Ruhengeri and Butare University Teaching Hospital). It includes premature babies admitted from June to July 2021 followed up till exit prospectively to determine medical direct costs (MDC) using bottom-up approach. Data was tabulated with Microsoft Excel and exported into SPSS for additional analysis. The overall and other different mean MDC were determined. The country MDC was estimated based on recent incidence. Linear relationship between explanatory and outcome variable was assessed and cost prediction done using Linear Regression model. The significance level was set at $p < 0.05$.

Results:

A total of 123 preterm babies were recruited. Very preterm and moderate preterm babies were 36.6% and 23.6% respectively. The overall mean MDC was 237.72 $ (SD 294.97 $) and the cost per infant varied with prematurity degree, weight category, hospital level and length of stay. MDC were dominated by drugs and supplies (65%) and oxygen was the cost driver of MDC

accounting itself 38.40% of total costs. Birth weight (BW) was the most powerful predictive factor for both hospital stay and MDC and served for predictions.

Conclusion:

Analysis and prediction of MDC in this study provide in-depth understanding of BW as cost predictive factor to be tackled through measures to prevent or delay preterm birth. The oxygen related cost accounts for high proportion of MDC and this cost may be reduced by placing oxygen plants across hospitals.

Cost-Effectiveness Analysis of Seasonal Malaria Chemoprevention in Benin

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Seasonal malaria chemoprevention (SMC) – the intermittent administration of sulfadoxine-pyrimethamine plus amodiaquine during peak malaria transmission months – is recommended for children aged 3–59 months living in eligible geographic areas to prevent Plasmodium falciparum. Although SMC is considered a low-cost and highly cost-effective intervention, there is a need to understand the cost-effectiveness of different administration strategies to inform future planning and resource allocation. The objective of this study is to assess the cost-effectiveness of two methods of monthly SMC administration in northern Benin, comparing three-days of directly observed treatment (3-day DOT) by a trained provider versus one-day of directly observed treatment (1-day DOT) by a trained provider with the subsequent two doses provided by the child's caregiver.

We conducted a cost-effectiveness analysis of the 2020 SMC campaign which targeted four health zones – Tanguiéta Matéri Cobly (TMC), Malanville Karimama (MK), Banikoara (BNK), and Kandi Gogounou Ségbana (KGS) – targeting 304,772 children aged 3-59 months. Zones BNK and KGS utilized the 3-day DOT strategy and zones TMC and MK utilized the one-day DOT strategy. The financial and economic costs were captured from expenditure reports, microplans, and in-person interviews and were analyzed from both the program and household perspectives. The main effects measures were malaria cases, deaths, and disability-adjusted life-years (DALYs) averted which were estimated from reported numbers of SMC treatments administered and modelled effects using a decision analytic model which incorporated data on SMC effectiveness and malaria transmission which were obtained from the literature. One-way sensitivity analyses were conducted to test the robustness of the incremental cost-effectiveness ratio (ICER).

The total cost of the 2020 SMC campaign was $1.6 million (FCFA 879 million) in the 1-day DOT zones and $2 million (FCFA 1 billion) in the 3-day DOT zones. The cost per monthly SMC cycle

delivered to a child was $3.71 (FCFA 1,983) in the 1-day DOT zones compared with $3.13 (FCFA 1,673) in the 3-day DOT zones. The 3-day DOT strategy was the most cost-effective across all effects outcomes with an incremental cost-effectiveness ratio (ICER) of $446 (FCFA 238,409) per discounted DALY averted. One-way deterministic sensitivity analyses demonstrated that even under the most conservative estimates, the ICER remained cost-effective.

Both 1-DOT and 3-DOT are low cost and cost-effective strategies for SMC administration, with the 3-day DOT administration considered more cost-effective. This evidence should help in guiding future program planning and resource allocation for SMC in Benin and other SMC-eligible countries.

Modelling The Cost-Effectiveness Of Essential And Advanced Critical Care For Covid-19 Patients In Kenya

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Background:

Case management of symptomatic COVID-19 patients is a key health system intervention. The Kenyan government embarked to fill capacity gaps in essential and advanced critical care needed for the management of severe and critical COVID-19. However, given scarce resources, gaps in both essential and advanced critical care persist. This study assessed the cost-effectiveness of investments in essential and advanced critical care to inform the prioritization of investment decisions.

Methods:

We employed a decision tree model to assess the incremental cost-effectiveness of investment in essential care (EC) and investment in both essential and advanced critical care (EC+ACC) compared to current health care provision capacity (status quo) for COVID-19 patients in Kenya. We used a health system perspective, and an inpatient care episode time horizon. Cost data was obtained from primary empirical analysis while outcomes data was obtained from epidemiological model estimates. We used univariate and probabilistic sensitivity analysis (PSA) to assess the robustness of the results.

Results:

The status quo option is more costly and less effective compared to investment in essential care and is thus dominated by the later. The incremental cost effectiveness ratio (ICER) of Investment in essential and advanced critical care (EC+ACC) was US $1,378.21 per DALY averted and hence not a cost-effective strategy when compared to Kenya's cost-effectiveness threshold (USD 908).

Conclusion:

When the criterion of cost-effectiveness is considered, and within the context of resource scarcity, Kenya will achieve better value for money if it prioritizes investments in essential care before investments in advanced critical care. This information on cost-effectiveness will however need to be considered as part of a multi-criteria decision-making framework that uses a range of criteria that reflect societal values of the Kenyan society.

Keywords: COVID-19, cost-effectiveness, essential care, advanced critical care, Kenya

Cost and Cost-effectiveness of Pediatric Oncology Unit in Ethiopia

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Background

Despite the recently increasing global initiatives for childhood cancer, most recommended interventions to improve survival and quality of life of children with cancers in Low Income Countries (LICs) are classified as either low or medium priority in the recently revised Ethiopia Essential Health Service Package (EEHSP), due to the limitation of local evidence on cost and cost-effectiveness.

Methods

We collected historical cost data and quantity of service provided for the pediatric oncology unit, and all other (eighty-six) departments in Tikur Anbessa Specialized Hospital (TASH) from 8 July 2018 to June 2019, using mixed (dominantly top down) costing approach and provider perspective. The direct cost (Human Resource, Drug and Supplies, Medical Equipment) of the oncology unit, cost share from other clinical departments, and overhead cost share are summed up to estimate the total annual cost of running the unit. We used data on health outcome from other studies to estimate the net utility gain (DALY averted) of running a pediatric oncology unit compared to doing-nothing scenario. We applied the WHO-CHOICE threshold to determine willingness-to-pay for Ethiopia.

Results

The annual total cost of running the pediatric oncology unit in TASH during 2018-2019 was USD

797,458 (USD 482 per patient). Drugs and supplies (33%), and personnel (32%) constitute a large share of the cost. Sixty two percent of the cost is attributable to Inpatient Department (IPD) services, with the remaining 38% of costs related to Outpatient Department (OPD) services. The cost per DALY averted is USD 726 (range USD 555 to USD 905 on the one-way sensitivity analysis) which lies below the threshold for "very cost effective" interventions, which is set as the 2019 Ethiopian GDP per capita (USD 954/capita).

Conclusions

The provision of pediatric cancer services using a specialized oncology unit is very cost effective in Ethiopia and will most likely be the case in other LICs. We recommend for reassessing the Childhood cancer treatment priority level decision in the current EHSPE.

Projecting the cost of introducing typhoid conjugate vaccine (TCV) in the national immunization program in Malawi using a standardized costing framework

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Background:

In 2018 the World Health Organization formally recommended the introduction of typhoid conjugate vaccine (TCV) in typhoid-endemic settings. Despite a substantial typhoid burden in sub-Saharan Africa, TCV has only been introduced in two African countries. Decision-makers in Malawi decided to introduce TCV and applied to Gavi, the Vaccine Alliance, in September 2020. The current plan is to introduce TCV as part of the national immunization program in October 2022. The introduction will include a nationwide campaign targeting all children aged 9-month to 15 years old. Following the campaign, TCV will be provided through routine immunization at 9 months. This study aims to estimate the cost of TCV introduction and delivery, based on the delivery strategies defined in Malawi's National Plan of Action.

Methods:

This costing analysis is conducted from the perspective of the government and focuses on projecting the incremental cost of TCV introduction. The study will take an activity-based, ingredients costing approach, where all activities associated with the introduction and delivery of the vaccine are identified, measured, and valued individually, reporting separate quantities and unit prices. Both financial and economic costs are included in the analysis. The study uses a costing tool developed by Levin and Morgan through a partnership between the International Vaccine Institute and the World Health Organization. Primary and secondary data have been collected through key informant interviews with representatives of the Malawi

Expanded Program on Immunization team at central level as well as in 4 districts and a total of 24 local health facilities. Primary data in health facilities were collected through interviews with health workers involved in immunization activities using costing questionnaires.

Results:

Results will include total financial and economic costs of TCV introduction in Malawi, plus service delivery cost per dose via the campaign and in routine immunization. Costs will be reported by main activities (training, microplanning, supervision, etc.), and cost categories (introduction costs and recurrent costs), highlighting major cost drivers.

Discussion:

Findings from this analysis (expected by Novermber 2021) will be critical in assessing the economic implications of delivering TCV, and in informing decision-making and budget planning in anticipation of TCV introduction in Malawi. Major cost drivers highlighted by the analysis may also inform decision-makers from other countries in the region as they assess value and feasibility to introduce TCV in their national immunization program.

Parallel Session 5-2: Oral

Cost and Cost-effectiness of health interventions 2

Direct and Indirect Costs of Non-surgical Treatment for Acute Tonsillitis in Children in Southeast Nigeria

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Background

Acute tonsillitis has become one of the main reasons why children visit healthcare facilities in Nigeria. Presently, there is no information on the costs of its treatment, and this study aimed at determining these costs.

Methods

The study was conducted in two hospitals located in the southeast of Nigeria. The information was obtained in two ways: (1) retrospectively from the medical records of children treated for acute tonsillitis over a period of 5 years and (2) cross-sectionally from children who presented with complaints of acute tonsillitis over a period of 7 months. The information obtained was the costs of self-medication, hospital treatment, and the payment mechanisms used to settle these costs. The human capital method approach was used to estimate the indirect cost (loss in productivity) from the caregivers' absenteeism from work.

Results

The mean costs of self-medication and hospital treatment for acute tonsillitis in children were €3.85 and €13.48, respectively. The indirect cost was €11.31. The mean total cost of treatment of acute tonsillitis was €23.80. The proportion of households that suffered catastrophic health expenditure (CHE) from the treatment of acute tonsillitis was 55 (55%). CHE was highest [22 (91.7%)] in the lowest socio-economic quartile compared to households in the highest quartile [4 (16.7%)], and the difference was statistically significant (p = 0.02). Of the 72 participants whose

payment mechanisms were documented, the proportion who paid out of pocket was 53 (73.6%), and 19 (26.4%) used the National Health Insurance Scheme.

Conclusion

The costs of treatment for children with acute tonsillitis were high, and most of these costs

were settled out-of-pocket. The costs for laboratory investigations, drugs, and productivity loss contributed to these high costs. There is a need to cover the costs of non-surgical treatment of acute tonsillitis in social health insurance and improve efforts to increase the coverage of the health insurance scheme.

Cost for Diabetes and Hypertension Management in Health Facilities in Nigeria

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Introduction

Nigeria is experiencing demographic and disease transitions, which have results in a rise in non- communicable diseases (NCDs) such as diabetes mellitus (DM), hypertension (HTN), cancer and injuries. There are no recent granular costs of providing these services at the primary healthcare level, which are needed to inform policy makers and financial planning. To help address these complex set of challenges, we conducted a costing study to explore the preparedness of Nigeria to finance the changing health and resource needs associated with these health transitions.

Methods

Primary data were collected from 24 health facilities in four states in Nigeria (Kaduna, Lagos, FCT and Imo). A combined costing approach which involved both top-down (allocation) and bottom-up (ingredients-based) methods was used to determine the unit costs associated with the service delivery of HTN, DM and injury interventions.

Key Findings

Overall, the estimated total unit cost for facilities to provide hypertension and diabetes mellitus treatment services to a single patient is 51,805 NGN (US $144) and 154,636 NGN (US $430) respectively. Further, the estimated total unit cost for facilities to provide injury services is 280,654 NGN (US $780). Drug costs are the major variable cost drivers for hypertension, diabetes mellitus, and injuries at 11,655 NGN (US $32), 36,784 NGN (US $102) and 122,976 NGN (US $342) respectively.

Conclusion

NCDs, injuries and accidents services incur high service costs which can lead to high out-of-pocket expenses. The study estimates can be used for necessary planning and policy solutions to effectively and sustainably offer a wider scope of essential benefit package of services to the Nigerian population.

Examining the Unit Costs of COVID-19 Vaccine Delivery in Kenya

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Background:

COVID-19 vaccines are considered the path out of the pandemic. As a result, the government of Kenya deployed the COVID-19 vaccine in March 2021 in a phased approach. This study aimed to estimate the financial and economic incremental costs of procuring and delivering the COVID-19 vaccine in Kenya across various vaccination strategies.

Methods:

We used an activity-based costing approach to estimate the incremental costs of COVID-19 vaccine delivery, from the provider's perspective. Document reviews and key informant interviews with stakeholders involved in the vaccine delivery and administration at a national level and in two counties were done to inform the activities and assumptions used in the analysis, as well as the resources required. Unit prices were derived from the same document reviews or from market prices. Both financial and economic vaccine procurement costs per person vaccinated with two doses, and the vaccine delivery costs per person vaccinated with two doses were estimated and reported in 2021 USD.

Results:

The economic costs of vaccine procurement per person vaccinated with two doses was $17.34. The financial costs of vaccine delivery per person vaccinated with two doses ranged from $4.23 to $3.25 in the 30% and 100% coverage strategies. Estimates of the economic delivery costs per person vaccinated with two doses were between two and three times higher than the financial costs. With the exception of procurement costs, the main cost driver of financial and economic delivery costs were supply chain activities (47-59% of total financial costs) and advocacy, communication and social mobilization activities (29-35% of total economic costs) respectively.

Conclusion:

This analysis presents cost estimates that can be used to inform local policy and may further inform parameters used in cost-effectiveness models. The results although less generalizable to other similar low-and middle-income settings in the current format, could potentially be adapted and adjusted to country-specific assumptions. Therefore, adding to the evidence available on COVID-19 vaccine delivery costs.

Cost-effectiveness analysis of the extension of seasonal malaria chemoprevention (SMC) to children aged 5-9 years in a health district, Mali: Methods and preliminary findings

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Background:

Malaria prevention in children under 5 years of age relies mainly on two strategies: the use of long-lasting insecticide-treated nets and indoor residual spraying. These strategies are usually combined with intermittent preventive treatment called seasonal malaria chemoprevention (SMC) with sulfadoxine-pyrimethamine and amodiaquine (SPAQ). Increasing resistance to SPAQ has led some countries, including Mali, to experiment with other treatments, including dihydroartemisinin-piperaquine (DHAPQ). The objective of this study was to evaluate the cost-effectiveness of the two treatments for SMC and their extension to children aged 5 to 10 years.

Methods:

This is a four-round quasi-experimental trial with three treatment arms, each composed of three health areas (villages) in the Koulikoro health district: control arm using standard SMC treatment for children aged 0-4 years; treatment arm using standard treatment for children aged 0-9 years; and another treatment arm using DHAPQ for children aged 0-9 years. Data were collected monthly between July and October in 2020 on 6,326 children. Costs were estimated from the provider's perspective; we calculated the total cost and the cost per child who received treatment. Using the decision tree model, we attempted to estimate the cost-effectiveness ratio and the incremental cost-effectiveness ratio to determine the most cost-effective strategy. A sensitivity analysis is also performed to examine the sensitivity of the results to our assumptions about data quality and price differences.

Emerging findings:

Our initial results show a low prevalence of malaria among children in both SMC extension arms compared to the control arm. Extension appears to be beneficial in reducing malaria prevalence in children aged 0-4 years.

Conclusion:

Our initial results show a benefit of extending SMC to older children regardless of treatment type. Ongoing unit cost and cost-effectiveness analyses will help determine the value of committing additional resources to SMC for expansion to children aged 5-9 years.

Keywords: Cost, cost-effectiveness, Decision Tree Model, Seasonal Malaria Chemoprevention, SMC, Child, Mali

Examining the cost-effectiveness of personal protective equipment for formal healthcare workers in Kenya during the COVID-19 pandemic

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Background

Healthcare workers are at a higher risk of COVID-19 infection during care encounters compared to the general population. Personal Protective Equipment (PPE) have been shown to protect COVID-19 among healthcare workers, however, Kenya has faced PPE shortages that can adequately protect all healthcare workers. We, therefore, examined the health and economic consequences of investing in PPE for healthcare workers in Kenya.

Methods

We conducted a cost-effectiveness and return on investment (ROI) analysis using a decision-analytic model following the Consolidated Health Economic Evaluation Reporting Standards (CHEERS) guidelines. We examined two outcomes: 1) the incremental cost per healthcare worker death averted, and 2) the incremental cost per healthcare worker COVID-19 case averted. We performed a multivariate sensitivity analysis using 10,000 Monte Carlo simulations.

Results

Kenya would need to invest $3.12 million (95% CI: 2.65–3.59) to adequately protect healthcare workers against COVID-19. This investment would avert 416 (IQR: 330–517) and 30,041 (IQR: 7243 – 102,480) healthcare worker deaths and COVID-19 cases respectively. Additionally, such an investment would result in a healthcare system ROI of $170.64 million (IQR: 138–209) – equivalent to an 11.04 times return.

Conclusion

Despite other nationwide COVID-19 prevention measures such as social distancing, over 70% of healthcare workers will still be infected if the availability of PPE remains scarce. As part of the COVID-19 response strategy, the government should consider adequate investment in PPE for all healthcare workers in the country as it provides a large return on investment and it is value for money.

Poster Session 3-1

Investment in Training Health workforce Poster Session 5

Training strategic leaders for the Nigerian Health Sector: A needs assessment study

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Background:

Developing leadership competencies in the Nigerian Health sector has become a dire need. Thus it is imperative to ensure that strategic leaders being trained, receive the most suitable training that will enable them to effectively turn knowledge into practice and take decisions that can make health more resilient to pandemics.

Methods:

The study adopted a descriptive, cross-sectional design. A qualitative method of data collection was used. There were three categories of respondents and three unique in-depth interview guides (one for each category of respondents). A total of 21 respondents were interviewed. These respondents comprised of 12 policymakers, 6 tutors (lecturers) and 3 prospective students of DrPH. They were all purposively selected to fit the desired categories for the study. In addition, 21 published literatures in relation to the study objectives were reviewed by the researchers and relevant information extracted.

Results:

The findings report that the wider environment where strategic leaders work is not conducive and has led to lack of satisfaction, motivation, shortage of manpower and the needed political will to drive health decisions, especially in the face of pandemics. Also, among the core competencies needed in order to be a strategic leader are critical thinking and analysis, team work, advocacy, analysis and communication etc. The training curriculum for strategic leaders should be designed to impact competency to solve identified problems at the end of the training and also to identify strategies that can make the health sector more resilient to future pandemics.

Conclusion:

In order to ensure that those who are being trained to be the next generation of leaders for any health institution are equipped to move the said institution forward, a sort of agreement has to exist between trainers and trainees, ensuring that the trainee will provide services for a stipulated period. They must be given resources to work with and an enabling environment has to be created, amongst other things, to enable them deliver their mission. While the trainees have to be focused on ways that can strengthen the building blocks and in turn, strengthen the health systems of their institutions, to impact the sub-national and national levels respectively.

Keywords: Strategic leadership, Leadership training, Training needs, Health leadership, Nigeria

Enhancing the Capacity of Surveillance actors in Transforming SORMAS Data into Evidence informed decision making on COVID-19 Response in Nigeria

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Background

Disease surveillance and response improves the flow of surveillance information to monitor the spread of disease, evaluates the effectiveness of control and preventive measures. Integrated Disease Surveillance and Response (IDSR) tool and Surveillance Outbreak Response Management and Analysis System (SORMAS) captures all the surveillance data on COVID-19 and other Vaccine prevented Diseases (VPD) in Nigeria. Having a robust database is not enough but data must be analyzed and transform into evidence informed decision making.

Aims/Objectives

The aim of this study is to improve the knowledge and capacity of surveillance actors to access and utilize relevant evidence via ICT training. It also measures the usefulness of training to enhance the capacity of the participants to develop evidence inform decision making on COVID-19 response.

Methods

A modified "before and after" intervention study design was used in which outcomes were measured on the target participants. A 5-point liker scale according to the degree of adequacy; 1 = grossly inadequate, 5 = very adequate was employed. The difference between the before and after measurements was taken to be the impact of the intervention. This study was conducted in Anambra State, south-eastern Nigeria and the participants were Surveillance Actors. A one-day intensive training workshop was organized for Surveillance Actors who had 32 participants in attendance. Topics covered included: (i). Active Case Search; (ii). Event-Based Surveillance; (iii) Use of ICT for evidence synthesis; (iv) Measures of Central Tendency.

Results

The pre-training mean of knowledge and capacity for use of ICT ranged from 2.44-3.25, while the post-training mean ranged from 3.75-4.00 on 5-point scale. The percentage increase in mean of knowledge and capacity at the end is 20%.

Conclusion

Findings of this study suggests that ICT competence relevant to translating data to evidence informed decision making can be enhanced through training workshop.

Keywords: *Evidence-Informed, Decision making, surveillance actors SORMAS, Data*

Building back better health systems includes access to quality healthcare for older persons in cash grant-selected communities – Implications for Ghana's healthcare system in achieving UHC.

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Background

Despite the present global and national drive to give priority to population ageing, achieving universal health coverage would continue to remain an unfulfilled agenda without focusing on quality healthcare services for all, particularly, older persons. The characterization of population ageing is associated with increasing disease prevalence and disability. It is against this backdrop that several social intervention programmes like national health insurance and cash transfers have been introduced to promote access and utilization of healthcare in Ghana. This, in turn, may not only strengthen Ghana's healthcare systems in achieving UHC unless it is linked to quality essential services to its progressively ageing population.

Aims and objectives

Guided by the Donabedian' quality of care model, this paper provides insights into the expectations of older persons in accessing quality healthcare, and the associated factors in eight cash grant-selected communities in Ghana.

Methods

Data were extracted from the Ageing, Social Protection and Health Systems (ASPHS) survey carried out between September 2017 and October 2017 among older persons (60+ years) residing in cash transfer-targeted communities. The study sought to explore information on the quality of care expectations using the modified version of the "QUOTE-Elderly instrument" with 32 items. Statistical techniques used for data analysis were descriptive, multivariate analysis (exploratory factor analysis), and the multiple logistic regression models using Stata 14.1 software.

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. 77.2% reported having NCDs. Sixty percent were NHIS enrollees. Fifty-nine percent achieved insurance membership as Exempt by age, indigent or as a beneficiary of the Cash grant program. With an overall Cronbach's coefficient of 0.96, communication and respect, adequate service delivery, provider attitude, cost and geographic accessibility were the five main sub-scales found to be extremely important in accessing quality healthcare among older persons. Though health insurance status was found to have some significant level associated with provider attitude and geographic access, household food security, having a primary caregiver, wealth index, rurality and health status were predictors associated with the

different dimensions of quality of care.

Main conclusion

Understanding the diverse expectations of the dimensions of quality of care, and their related factors among older persons is key in ensuring universal health coverage as a guarantee in building strong health systems for older persons, particularly in this pandemic era.

How can health planners decide what to invest in health systems strengthening? Review of existing literature and priorities for future research.

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Background

A well-functioning healthcare system is essential to enable the delivery of clinical and public health interventions that can improve population health. However, it has proved challenging to determine the value of investments in health systems strengthening (HSS) compared to more direct funding of interventions that have a proximate impact on individual health. Economic evaluation to guide resource allocation has overwhelmingly focused on clinical interventions and has neglected issues of guiding resources towards HSS.

Methods

We conducted a short review of the state of the literature to examine how assessments of the value of HSS have been considered to date, drawing distinction between theoretical and empirical contributions. We then assess the existing literature on how the value of HSS can be assessed and summarise and present empirical estimates on the impact of specific health system investments. The most promising directions for future health economic research to guide resource allocation towards HSS are presented.

Findings

Providing evidence on the value of HSS is very challenging because its benefits cut across several health-related activities and are mediated through many different types of interventions. In recent years, theoretical literature has provided greater insight into how the value of HSS can be determined, but this has not yet translated to a stronger empirical evidence base. *Results from two new studi*es could offer a model for further research and to guide future investments in HSS. In Uganda, it is found that investing budgets to expand availability of certain cadres of healthcare workers could result in more than 15 times the health impact of an equivalent additional spend on priority drugs and commodities In Malawi,

a 25% increase in feasible coverage levels through HSS would have a similar health impact to eliminating some of the leading infectious diseases. We outline how this literature could be further developed and highlight 4 approaches that hold most promise.

Conclusion

HSS is likely to have a sizeable beneficial impact on population health, potential much more than expanding budgets for drugs and commodities. In future, a richer empirical literature is possible that would build upon the most promising recent theoretical contributions.

Evaluation results from a Training of Trainers in economic evaluation for public health decision-making

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Background:

Economic principles can guide efficient and equitable allocation of healthcare resources. In low and middle-income countries, where resources are particularly scarce, expertise in applied health economics is limited. To address this critical gap in capacity, Teaching Vaccine Economics Everywhere (TVEE), in partnership with faculty from Johns Hopkins University and Institut Supérieur des Sciences de la Population (ISSP) of Joseph Ki-Zerbo University of Ouagadougou, conducted a virtual Training of Trainers (TOT) in Health Economic Evaluation during July 19-23, 2021.

Objectives:

To assess self-reported knowledge gain and readiness to teach health economic evaluation for public health decision-making among participants of the TVEE TOT.

Methods:

We analyzed responses to a post-training survey administered to n=16 respondents who attended the virtual TOT. The TOT, conducted in French, was designed to equip teaching faculty at universities and training institutes in West Africa to deliver university-level training in economic evaluation for public health decision-making. Topics covered included an overview of the concept of value in public health and methods and practical considerations of economic evaluation. The survey included 18 questions, which asked respondents to rate their knowledge of health economic evaluation concepts before and after the TOT and to evaluate the training they received.

Results:

TOT participants represented five countries including Burkina Faso (9), Senegal (2), Mali

(2), Cote d'Ivoire (2), and Cameroon (1). Twelve (75%) participants rated their knowledge of economic evaluation for public health decision-making as beginner (n=7) or intermediate (n=5) prior to the TOT; this share declined to 31% (n=5) after the TOT. The share of participants reporting a mastery knowledge level increased from 6% (n=1) before to 19% (n=3) after the TOT. Participants also expressed appreciation for the training, reporting a mean rating of 4.3 out of 5 of the training overall (range, 4-5) and an average rating of 3.8 out of 5 (range, 3-5) of their readiness to integrate, adapt and deliver courses in economic evaluation for public health decision making. All 16 participants reported plans to integrate the curriculum into a course they teach.

Conclusion(s):

These results suggest that low-cost, virtually-delivered, high-quality capacity-building programs, such as the one offered by TVEE, have the potential to increase trainers' knowledge and readiness to teach topics in health economic evaluation for public health decision-making in low-resource settings. Our group plans to conduct follow up surveys to monitor whether and how TOT participants integrate the TVEE curriculum into their courses.

Poster Session 3-2

Determinants of Health Poster Session 6

COVID-19: Impact on Dental Care Utilization among Students of University of Nigeria

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Background:

The COVID-19 outbreak has impacted on health care system globally and has resulted in many emergency measures taken by governing countries. The lockdown, lack of adequate Personal Protective Equipment (PPE) and safety measures at health care facilities, have resulted in closure of regular outpatient services leading to substantial decrease in patient turnover at dental departments. This study was carried out to determine the impact of COVID-19 on the utilization of dental services amongst University of Nigeria Enugu Campus students.

Methods:

A descriptive quantitative survey, which was conducted among 422 students of University of Nigeria, Enugu Campus in November 2020. A multistage sampling technique was used to select sample and the sample size was calculated using Fisher's formula for minimum sample size estimation for a definite population ($n = Z^2 p (1-p)/ d2$). Data was collected using a structured interviewer administered questionnaire. The data generated were analyzed using SPSS 25.0

Results:

Majority of the respondents (71.3%) had good knowledge of COVID-19. The respondents (83.3%) stated that the pandemic was found to significantly affect dental service utilization as there was a drastic decrease in the number of students who visited the dentist during the pandemic (from 40.4% to 9.6%) (0.05). The major reason for the poor utilization of dental services among the students was the fear of contracting the virus (80%) (0.05). To improve dental service utilization, observation of safety precautions, health education and awareness creation is integral.

Conclusion:

The COVID-19 pandemic has had a profound impact on the health care system, including the dental industry. To improve dental service utilization in the post pandemic period, dentists should be prepared to improve on infection prevention protocols and also assist patients in understanding and prioritizing their dental health needs, which may change in the post pandemic era. Thus awareness building and increased oral health prevention and control measures are required.

Socio-Economic Burden Of Covid-19 On Households In Blantyre, Malawi: Evidence From A Cross-Sectional Survey

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Introduction:

To reduce local transmission of COVID-19 infections, many countries have adopted the World Health Organization measures such as self-isolation of confirmed COVID-19 cases and quarantine of suspected cases. However, little information exists on the economic impact of such COVID-19 measures in low-income countries where most people work in the informal sector and can hardly work from home. The objective of this study was to assess the socio-economic burden of COVID-19 at household level.

Methods:

From December 2020 to September 2021, we conducted a cross-sectional descriptive study in urban and peri-urban areas of Blantyre. A structured questionnaire was administered to individuals with confirmed COVID-19 and/or their guardians within 14 days after COVID-19 diagnosis. Data on socio-demographics, care seeking behaviours, costs associated with care and labour force participation including consequences related to COVID-19 illness were collected.

Results:

A total of 574 individuals took part in the study, including 169 (29.4%) COVID-19 cases of whom 16% had pre-existing illnesses. Cases had a mean age of 40.7 years, 73.3% were married, 61.3% attained tertiary education and 55.9% were formally employed. Only 2% of un-employed cases reported to have lost a job in the 6 months preceding the study. About 65.7% of COVID-19 cases sought formal treatment, 8.3% received in-patient care, spending an average of 3.1 days in hospitals. Average household expenditures on healthcare were MK6,125, MK62,500 and MK501,000 for transport, diagnosis and treatment, respectively. (1 USD=MK980). Of the 16% cases with pre-existing chronic illnesses, 15% reported interruption of access to care for their illnesses. Of these, 25, 50 and 25 % reported severe, moderate and minor disruptions to routine healthcare, respectively.

Approximately 15% of households reported a change in consumption, of these 18% borrowed money, 11% sold asserts and 7% delayed bill-payments as coping mechanism. Majority of the households (81.4%) expressed the need for direct financial support whereas 11.5% reported need for food and medical support.

Conclusion:

COVID-19 infection was associated with moderate short-term negative consequences among households characterized by reduced consumption and disruptions in health care utilization

among those with pre-existing chronic illnesses. Fiscal mitigation efforts targeting at risk households and optimal care delivery options should be considered to enhance household resilience to COVID-19 related shocks.

An empirical analysis of the determinants of Human Development in Africa: A gender approach

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Economic development extends beyond growth in per capita income to overall social wellbeing of a country's populace. An encompassing measure of development in the literature is the Human Development Index (HDI). The HDI provides clarity to why countries with high income levels are sometimes associated with poor development outcomes. HDI values are lower in Africa relative to other regions of the world and this hampers efforts to attain economic advancement in terms of wealth creation. While studies have examined the key drivers of human development with varying conclusions, not much is known for countries in the African region. This paper examines the determinants of human development in Africa using the Human Development Index. Findings are also presented across gender using the Gender-related Development Index (GDI).

The GDI is a distribution-sensitive measure that accounts for the human development impact of existing gender gaps in the three components of the HDI. Focus on gender is important because of high gender inequality in the region compared to other parts of the world. This disparity jeopardizes the continent's efforts for inclusive human development and economic growth. The results are presented for the 54 countries in the region using conventional panel data methods of the fixed and random effects model. Data for the study are generated from the Human Development Report 2019, and World Bank database 2020. The study covers the period 1995 to 2018 based on the availability of data for GDI. The analysis is conducted for all African countries and across country income groupings following the World Bank assignment into Low, Lower-middle and Upper-middle-income economies.

The model specification in this study is similar to Sen's human capital development framework. Predictors of the HDI and GDI, includes economic growth, public spending on education and health, Institutional quality, labor force participation, fertility rate, infrastructure captured using ICT and environmental quality measured using Carbon emission. Positive effects of a rise in the predictor variables are expected on the HDI and GDI with the exception of fertility rate and carbon emission where a rise should induce negative effects on the outcome variables, The differential impact across gender cannot be out rightly stated. The differential effect across country income groups cannot also be out rightly stated.

Impact of road traffic injuries on household economic welfare in Sub-saharan Africa

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Road traffic injuries (RTIs) are a major cause of health loss in many countries. The World Health Organisation estimates a global 1.35 million fatal injuries and a further 20 to 50 million non-fatal injuries annually. The abrupt nature of RTIs, treatment costs and possible disability, has potential to impose significant financial pressures on households. This paper examines the effect of RTIs on five indicators of households' economic wellbeing: household health expenditure, non-health consumption expenditure, asset ownership, household indebtedness and labour force participation. Using a multi-country household survey dataset, we employ a mix of genetic matching and multilevel modeling techniques to isolate effects of RTIs. We also explore use of an instrumental variable (IV) approach in a sensitivity analysis.

Estimates indicate households were worse off in several ways following a RTI; incurred significantly higher health expenditure, reduced expenditure on competing basic needs and faced a higher likelihood to borrow at positive interest rates to purchase health services. The direction of RTI effects using IV approach are consistent with those from matching and multilevel regression. The study provides estimates of wider effects of RTIs and re-enforces the need to consider impacts beyond the road accident victim in costing road traffic accidents.

Organized Session 6-1

Integrating Care For Maternal Health And Non-Communicable Disease: Design, Costs, And Sustainability

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Description

In recent times, several non-communicable diseases are becoming more implicated as indirect risk factors for worsening maternal health outcomes in low- and middle-income countries. Scaling up the access to the prevention, early detection, diagnoses, and management of these NCD-related risk factors in women of reproductive age has, therefore, become imperative in the reduction of maternal mortality and morbidity in many low- and middle-income countries including Nigeria. However, in many countries in Africa, maternal health and NCD services delivered in health facilities across the country are commonly fragmented and of poor quality, which reflects the traditional model of care.

A commonly recommended and contemporary strategy to address this challenge is the innovative integration of NCD care services into routine maternal health care services. Whilst this approach potentially has merits, there have been concerns around impact, costs (including potential savings), scalability, and sustainability of such approaches especially in contexts with limited/scarce resources.

Recently, a consortium of partners (funded by MSD for mothers) designed and implemented an innovative integrated quality of care (QoC) at the subnational level in Nigeria. The QoC model was designed as a woman-centered care model that incorporates elements of quality improvement (strengthening of the health facility's capacity) and self-care (leveraging digital technology) to expand access to screening and management of hypertension, diabetes mellitus, anemia and obesity at maternal health care touch points to reduce their contributions to indirect causes of maternal mortality and morbidity.

The proposed organized session will present design experiences, early results, costs implications, and lessons around sustainability within the context of scarce resources. The first presentation will focus on the design of the integrated model, approach to scale up, and early results. The second presentation will describe the self-care (digital health) intervention, including design, early results, costs implications, and critical considerations for implementation. The third presentation will highlight cost implications and potential cost savings from implementing an integrated model as well as experiences with the sustainability of the approach.

Reducing Indirect Causes Of Maternal Mortality And Morbidity In Nigeria: Experiences From Implementing An Integrated Model Of Care

Ugo Okoli, Jhpiego

Background

Nigeria is undergoing an obstetric transition in which the proportion of maternal deaths due to indirect causes is increasing. The attention paid to these unique vulnerabilities of women of reproductive age (WRA) with NCDs and their risk factors has been limited to date. This abstract describes our experience in designing and implementing a woman-centered integrated quality of care (QoC) model focused on education, screening, detection, and management of some of these risk factors.

Methods

Mixed methods were used to assess the prevalence of risk factors (Hypertension, Diabetes, Anemia, and Obesity) for indirect causes of maternal mortality and morbidity in 400 women of reproductive age. In addition, the knowledge, experience, and confidence of 79 health care workers (HCWs) in providing services for prevention and management of these risk factors in 20 health facilities were also assessed.

Stakeholders used the findings from the assessments to design an integrated QoC model which involved implementing screening women attending their first ANC for high blood pressure (HBP), anemia, and diabetes mellitus (DM) and weight status at every visit and management of those with complications.

Findings

Assessment findings showed a high prevalence of hypertension, anemia, obesity and to a lesser extent diabetes mellitus in WRA screened. Less than 5% of these women were aware of their status. In addition, many quality gaps were identified in screening and management of NCDs, linked risk factors at the health facilities.

Our experience from implementing the integrated model of care from October 2019 to September 2020 documented 26,712 women attending ANC at the participating facilities. The proportion screened for hypertension, DM, and anemia during ANC increased from 35% to 71%, 11% to 65%, and 20% to 60% respectively within this one-year period.

Conclusion

Assessment findings informed the design and implementation of an integrated woman-centered QoC model of care in selected health facilities in Nigeria. The early results from implementation are also encouraging, demonstrating improved screening for risk factors in ANC leading to early detection and management of these complications.

Leveraging Digital Health Technology For Integration Of Care: Design, Early Results, Costs, And Critical Considerations

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Background

As the Nigerian health system struggles with quality of care issues, exacerbated by the COVID-19 pandemic, preventative self-care is critical in enabling WRA to live healthier, happier, and more productive lives, positively impacting the lives of their families and their communities at large. In addition, with the deep penetration of smartphone ownership, digital health technology is increasingly being leveraged to improve health processes and outcomes.

mDoc, RICOM3 consortium partner, is a digital health social enterprise that provides support to individuals living with regular and chronic health needs with guidance on self-care and lifestyle modifications for healthier living.

Aims/Objectives

This presentation will demonstrate the impact and financial sustainability of digital health solutions in improving self-efficacy, digital literacy, health literacy, and health outcomes among WRA in a low-middle income setting.

Methodology

Through the MSD-funded RICOM3 project, 42,126 WRA registered on mDoc's CompleteHealth™ platform to access coach-led multidisciplinary teams who provide self-care support through the mDoc's virtual omni-channel approach. Members track their health metrics on personalized dashboards and support includes digital nudges, health education, personalized action plans following engagement with coaches, nutritional advice, and virtual exercise classes.

To drive financial sustainability, mDoc conducted a conjoint pricing analysis with existing and potential members of the CompleteHealth™ platform. A stratified random sampling method identified 222 (141 WRA) respondents with different socio-demographics. **Results** of this study led to the testing and deployment of tiered pricing plans enabling out-of-pocket (OOP) payments and partnerships with HMOs to include digital self-care packages among their health packages.

Key findings

Following self-care support, WRA reported a 40% increase in self-efficacy and 14.78mmHg average reduction in systolic blood pressure for those living with hypertension.

The conjoint pricing analysis showed access to a health specialist and specialized health coach were the most valued features of the CompleteHealth™ platform. Five-tiered pricing plans with different bouquet of benefits were created and well received, including a freemium tier to

ensure access is not curbed.

Conclusion

To sustain these gains, reliance cannot be on external funding but on a business model that drives financial sustainability through partnerships with health insurance providers and out-of-pocket payments from beneficiaries of these services.

Costs, Potential Long-Term Savings, And Sustainability Of An Integrated Model Of Maternal Health And Non-Communicable Disease Package Of Care Services

Chigbo Chikwendu, HSDF and Yahaya Mohammed, HSDF, Nigeria, Nigeria

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Background:

To improve access of women of reproductive age to NCD services, an innovative integrated model of care was recently piloted (donor-supported) at the subnational level in Nigeria with early promising results, which has piqued the interest of potential funders for potential scale up of the model. However, there is limited evidence on the costs of providing this integrated package of MH/NCD care and potential approaches to sustainability, which is required to aid policymakers, program planners, and implementers to make rational investment decisions regarding such innovative approaches. The aim of this study was to estimate the costs of this integrated model of care in Nigeria and to develop a viable sustainability plan.

Methods:

This was a mixed methods study. First, a bottom-up micro-costing technique was used to model costs on an excel-based cost-accounting engine developed to suit the objectives of the costing. Potential cost savings was estimated using a cost-consequence analytic framework to model the natural history of pregnancy progression, clinical efficacy of screening and BP control interventions, linked pregnancy-related outcomes, and resource use, comparing the integrated care model and the traditional model of care. Finally, a stakeholder workshop was organized to develop a pragmatic sustainability plan to expand NCD access to women of reproductive age.

Results:

The mean unit costs of providing the package of MH and NCD care services using the traditional, and the integrated model of care at the PHC level were estimated to be and ₦45,419 ($148.4) and ₦46,065 ($150.5), respectively, in the FCT, and N44,137 ($144.2) and N45,441 ($148.5), respectively. At the hospital level, the costs were N78,486 ($218) and N78,750 ($257) for the traditional and integrated models, respectively in FCT, and N62,451 ($204) and ₦62,611($204.6) in Lagos State. Further analysis reflects a cost savings of about ~2USD per woman. A sustainability plan was developed across 4 domains: financial, operational, political, and institutional. Health maintenance organizations (HMOs) were identified as key players in ensuring scaling and sustainability of the integrated model of care.

Conclusion:

Estimated costs of the integrated package of care were similar to the costs of the traditional model of care, potential cost savings with the integrated model. With at least two HMOs indicating interest in adopting the integrated model of care, HMOs appear to have a prominent role in ensuring sustained access of WRA to NCD services, especially in resource-constrained settings.

Organized Session 6-2

Economics of Neglected Tropical Skin Diseases: Findings from Liberia, Ghana, and Ethiopia

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Description

Neglected tropical skin diseases ("skin NTDs") – including leprosy, yaws, cutaneous leishmaniasis, onchocerciasis, Buruli ulcer, and lymphatic filariasis - pose a substantial health and economic burden in many African countries. While these diseases differ from one another in important ways, they also share many common features; they are associated with substantial physical disability, psychological distress, social exclusion, and financial hardship, and often affect people in poorer communities. The World Health Organization advocates integrated intervention approaches, which seek to improve diagnosis, treatment, and care for multiple skin NTDs simultaneously. Developing integrated approaches that are suitable for each of the many contexts in which skin NTDs occur requires a nuanced understanding of the economic impact of skin NTDs on individuals, households, and communities, as well as the challenges and opportunities to finance integrated approaches to improve health services for skin NTDs. Further, the efficiency of integrated approaches requires assessment to inform priority-setting decisions about if, when, where, and how they should be implemented.

This session will present new findings from two skin NTD research programmes – SHARP, which works in Ghana and Ethiopia, and REDRESS Liberia – both of which are funded by the National Institute for Health Research (United Kingdom). The chair will begin the session by briefly highlighting the importance of investigating the economics of skin NTDs and providing an overview of the structure of the session and some questions for the audience to reflect on during the presentations. Four presentations will follow. The first two will present findings of qualitative studies conducted in Ghana and Ethiopia to understand how key skin NTDs in these two countries affect patients and their families economically and the coping strategies adopted by those affected. The third presentation will complement the first two by focusing on financing challenges for skin NTDs from a health services perspective in Liberia. Drawing on SHARP's multidisciplinary formative work in Ghana and Ethiopia, the fourth presentation will develop a conceptual model to guide cost-effectiveness analyses of integrated approaches vs standard care for skin NTDs and identify some of the key issues to consider when assessing the cost-effectiveness of integrated approaches for skin NTDs. To conclude, invited discussants will provide initial reflections on the presentations and the session chair will encourage participation from the wider audience.

Economic Impact Of Neglected Tropical Diseases Of The Skin On Households In Ghana: A Qualitative Analysis

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Background:

Neglected tropical diseases (NTDs) of the skin - including leprosy, yaws, and Buruli ulcer - impose a substantial health and economic burden on patients, their families, and the health system as a whole. These NTDs result in psychological distress, stigma, and disability, as well as a substantial financial and economic burden. We aimed to understand the economic burden of skin NTDs on patients and their households in Ghana, as well as the strategies adopted by patients and caregivers to cope with these costs.

Methods:

The study was conducted in the Atwima Mpunua district in the Ashanti region of Ghana as part of wider, multidisciplinary formative research activities to inform the development of an integrated intervention strategy. A qualitative research design was adopted, involving the use of in-depth interviews (n=46), focus group discussions (n=7), and observations. Both the economic questions presented here, and other topics, including stigma and disease discourses, were explored. The sample included health workers, patients, traditional healers, community members, and caregivers. Data were transcribed, coded, and analysed thematically with the aid of MAXQDA software.

Findings:

The results suggest substantial direct and indirect costs of experiencing and managing SSSDs. The key direct cost drivers were wound dressing supplies, medication, and transportation. In terms of indirect cost, both patients and caregivers reported a reduction in economic and school-related activities. Specifically, there was evidence on opportunity cost including days lost to work, reduced working hours, lateness to school, and absenteeism. Opportunity costs were more prevalent among female patients compared to their male counterparts. We also found that these costs influenced treatment choices with some patients preferring traditional healers. In addition to their affordability, the choice of traditional healers was also attributed to accessibility of care and flexibility of payment. The main coping strategies mentioned include dissaving, family support, community support, and the National Health Insurance Scheme (NHIS). However, these were not widespread as not all households had consistent access to these coping strategies.

Conclusion:

The findings suggest that SSSDs have economic implications for patients and their households and this can translate into long-term consequences on living conditions. Improving medical stock, education on appropriate health-seeking pathways, and leveraging on existing social interventions schemes to offer soft and vocational skills for affected persons will be important steps to reducing the economic impacts of SSSDs.

Keywords: neglected tropical diseases, household costs, Buruli ulcer, yaws, leprosy

"Even if he gets hungry or thirsty, he'll endure all just for the sake of treatment cost": A qualitative analysis of the economic and financial impact of cutaneous leishmaniasis and leprosy on households in rural Ethiopia

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Background:

Cutaneous leishmaniasis and leprosy are stigmatizing skin diseases often resulting in substantial morbidity and disability. The economic burden of these skin diseases has not been well documented. The aim of this qualitative study was to explore the household economic impact of cutaneous leishmaniasis and leprosy in rural Ethiopia and the strategies used by affected households to cope with this economic burden.

Methods:

The study was conducted in Kalu district, South Wollo Zone, Amhara Region of Ethiopia from March to June 2021. It forms one part of multidisciplinary formative research conducted to support development of an integrated intervention strategy appropriate to the local context. Qualitative data collection explored both the economic questions presented here, and also other topics, including stigma and disease discourses. In-depth interviews (n=98) with patients, caregivers, and health workers; focus group discussions (n=40) with community members; and key informant interviews (n=50) with opinion leaders, traditional healers and policy actors were conducted. Data were coded using MAXQDA 2020 software and thematic framework was used for analysis.

Results:

Individuals with cutaneous leishmaniasis (CL) and leprosy and their family members experienced high cost for seeking care in the form of out-of-pocket payments, especially for transport and accommodation. Experiencing these illnesses resulted in loss of income to the household, through wage loss to both patients and other household members, notably accompanying persons in care-seeking. The findings show that children with CL and leprosy were sometimes absent from school or withdrew from school entirely because of their conditions. Several coping strategies including asset selling, consumption reduction, contracting out land to be farmed, borrowing, family and community support and community-based health insurance were used by the patient and family members to mitigate the financial costs of illness and production losses. Nonetheless, strategies like consumption reduction and selling assets are more common among leprosy patients and their families.

Conclusions:

Households in which an individual experiences CL or leprosy face substantial economic impact in terms of lost income and time for care-seeking. Strengthening treatment and diagnostic facilities closer to communities may increase access and reduce transport and travel costs. Including transportation costs within financial risk protection mechanisms may alleviate the financial impact.

Key words: Cutaneous leishmaniasis, leprosy, economic impact, Qualitative study, household

costs

A Conceptual Model For Assessing The Cost-Effectiveness Of Integrated Case Finding And Management Strategies For Neglected Tropical Skin Diseases

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Background:

Neglected tropical diseases of the skin (or "skin NTDs") are diverse in their aetiology, epidemiology, treatment, and health impacts; however, they also share many common factors. They are associated with substantial physical disability, psychological distress, social exclusion, and financial hardship, and often affect people in the same, relatively poor communities. The World Health Organization has advocated integrated approaches, which seek to improve diagnosis, treatment, and care for multiple skin NTDs simultaneously; however, the efficiency of such approaches has not been widely assessed. We aimed to develop a conceptual model to assess the cost-effectiveness of integrated case finding and management (ICF-M) strategies compared to standard care.

Methods:

To conceptualise the model, we drew on mixed methods formative research conducted in study areas in Ghana (Ashanti region) and Ethiopia (Amhara region). We reviewed clinical and economic evidence and engaged extensively with experts from wide-ranging disciplinary backgrounds to understand the mechanisms by which ICF-M strategies may change care seeking, service utilisation, downstream costs, and health outcomes. We identified key model components and data sources for critical input parameters.

Results:

To address the decision problem, our conceptual model combines a main model, represented with a decision tree, and sub-models for individual diseases. Although ICF-M activities target key skin NTDs in each context – notably Buruli ulcer, yaws, and leprosy in Ghana and cutaneous leishmaniasis and leprosy in Ethiopia – they may also increase healthcare utilisation and affect costs and health outcomes for other skin diseases. We identified data sources to populate the model and parameters likely to have a high level of uncertainty, which will have been identified for sensitivity analysis. The model will project both costs and outcomes over medium to long-term time horizons and will seek to model effectiveness in terms of both disability-adjusted life-years and quality-adjusted life-years.

Discussion:

Our conceptual model will inform data collection and analysis to evaluate ICF-M strategies implemented within the context of the Skin Health Africa Research Programme in Ghana and Ethiopia. The conceptual model is also intended to inform cost-effectiveness analyses of ICF-M strategies in other contexts. Identifying a model structure appropriate to reflect the natural clinical pathway of these conditions is likely to enhance model precision and transparency,

leading to more reliable and credible evidence to inform decision-making.

Key words: Skin diseases, Neglected Tropical Diseases, costs, cost-effectiveness, decision modelling

Financing Care For Severe Stigmatizing Skin Diseases In Liberia: Challenges And Opportunities

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Introduction:

Neglected tropical diseases (NTDs) are an important global health challenge, however little is known about how to effectively finance NTD related services. Integrated management in particular is put forward as an efficient and effective treatment modality for severe stigmatising skin diseases (SSSD) such as leprosy, yaws, onchocerciasis, Buruli ulcer and hydrocele. In the current study, we document barriers and facilitators to care from a health financing perspective.

Methods:

We carried out key informant interviews with 86 health professionals and 16 national health system representatives overall. 46 participants were active in counties implementing integrated case management, 40 participants were active in counties implementing standard care. We also interviewed 16 patients and community members. All interviews were transcribed and underwent thematic content analysis.

Findings:

From a health system perspective, we identify diverse challenges at national, county and district levels. These include limited decentralization of financial resources for NTD care and high levels of dependence on donors. The latter are responsible for ensuring medication availability and procurement of supplies. Government involvement in NTD financing is minimal, covering staffing costs only. At county and district levels, we find limited capacity among professionals to engage in NTD budget planning and quantification of medicines and supplies. As donor priorities include a focus on integrated case management, extensive piloting of the approach has taken place in 5 counties in Liberia. From the perspective of participants, integrated case management incurs further costs compared to standard care (including for incentivization of health professionals to engage in NTD activities); however, service outputs in pilot counties are also higher. Motivation of staff across pilot counties to engage in NTD work is also high, however late salary payments compromise staff motivation across all counties and lead to high levels of non-attendance or attrition. To date, despite the fact that services are meant to be free at point of care, neither pilot nor non-pilot counties cover all necessary patient incurred costs. From a patient and community perspective, we identify patients frequently paying for medication and supplies due to stockouts. Patients also pay for transportation to health facilities; as motorbike rides also frequently refuse to transport SSSD patients, out of pocket expenses are high.

Conclusion:

Our findings accord with broader work on financing of SSSD services in West African settings and suggest that health economic evaluations of integrated care approaches vs. standard care are warranted.

Organized Session 6-3

Implementation and economics of diagnosis for communicable and non-communicable diseases

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Description

Accurate diagnostic tests are central for the management of communicable and non-communicable diseases at both the patient level (eg, for the diagnosis, guided therapy, and management of disease) and the population level (eg, for disease detection and surveillance). The availability and timely access to diagnostics are therefore essential to reducing the burden of disease and contributing towards health system strengthening and sustainable development. Despite this, access to appropriate and quality disease diagnostic testing is poor and inequitable in many parts of the world.

Diagnostic value chains or frameworks have been proposed to understand the chain of events between the design and development of a new diagnostic testing device and its adoption by end users. Challenges to the demand and supply of diagnostics exist across all steps of this value chain, with each representing a potential point of failure for successful adoption of technologies. These challenges are compounded by a lack of reliable and comprehensive data to inform planning and support policy decisions.

This session will discuss the diagnostics value chain, focusing largely on diagnosis of infectious

diseases, highlighting the main steps from inception to utilisation, and expanding on challenges and key data gaps. Using evidence from different settings across Africa and a range of disease areas, the session will then draw examples addressing challenges of demand and supply in disease diagnoses along the continuum, highlighting context-specific challenges and solutions.

Defining An Infectious Disease Diagnosis Continuum From R&D To Utilisation: Perspectives On Data Gaps

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Background:

Broad access to rapid and accurate diagnostic tools is essential for the tracking, testing, and treatment of infectious diseases. Despite this, access to appropriate diagnostics often remains poor and inequitable. These issues are compounded by a lack of data across the diagnosis continuum to inform demand, innovation, and the delivery of coherent cost-effective policy.

Aims & objectives:

The primary aim is to propose a simple continuum for infectious disease diagnosis, from design through to implementation. Key challenges to diagnostics demand and supply along the continuum will be highlighted, focusing on the identification of data gaps to inform planning and policy. Special emphasis will be applied to meeting the needs of countries across sub-Saharan Africa.

Methods:

This is a cross-sectional study using a survey distributed online through the Qualtrics platform to identify key data gaps and potential solutions across the diagnosis continuum. The survey is informed by a conceptual framework for introducing diagnostic tools, researched and proposed as part of the study. After piloting and refining the survey, individuals involved in a broad range of activities relating to infectious disease diagnosis will be invited to participate. Participants include programme officers, policymakers, clinicians, laboratory technicians, diagnostic manufacturers, international organisations, donors, and researchers. The survey will not focus on individual diseases specifically, rather, it will focus broadly on data gaps across infectious diseases. Data will be analysed using a combination of quantitative and thematic analysis, focusing on data gaps and potential solutions to better inform decision-making.

Key findings:

Various frameworks for conceptualising the diagnosis continuum have been proposed, largely focusing on point-of-care infectious disease diagnostics. Common elements were used to guide survey questions. These were: i) assessment of need/demand; ii) product feasibility, design, and development; iii) validation and manufacturing; iv) planning, regulatory approvals,

and launch; and v) adoption, scale-up, and impact measurement. Stakeholders responding to the survey identified key data gaps along the continuum, impacting on the successful development and adoption of diagnostic technologies. These will be discussed in detail along with potential solutions to better inform infectious disease diagnosis planning and policy.

Main conclusions:

Defining a continuum for infectious disease diagnosis is useful to highlight the data gaps and barriers mapped to particular stages of the continuum, and to assess their impact on the successful adoption of appropriate diagnostics. These findings highlight opportunities to mitigate data and research gaps and strengthen data generation and dissemination to inform policy and planning.

Experiences with the diagnosis of Female Genital Schistosomiasis and Cervical Cancer in Madagascar

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Background:

Female genital tract disorders are high burden conditions especially in Low- and Middle-Income Countries (LMICs). These disorders include a wide spectrum of medical conditions spanning from sexual transmitted infections, parasitic diseases and cancer among others. Prevention is the most powerful tool to fight many of these disorders. Screening programs exist, but in LMICs they have three main barriers: accessibility, applicability and social stigma. For a better accessibility, the promotion of services at primary level of care is crucial but, in absence of easy to use diagnostics, the applicability of these services is limited. Social barriers limit the accessibility to services, due to stigma, fear and cultural beliefs. Integrated solutions addressing these conditions within existing programs, such as anti-natal care services could address in parallel the main barriers for their management.

Schistosomiasis is a Neglected Tropical Disease (NTD) caused by the trematode Schistosoma and leading to chronic medical conditions such as Female Genital Schistosomiasis (FGS). Cervical cancer (CC) is one of the most common HPV-related diseases. Infections with HPV can naturally resolve or lead to CC through a long-term asymptomatic period. Both diseases are particularly prevalent in Africa, with Madagascar one of the countries with the highest burden of schistosomiasis worldwide.

Aims and objectives:

Our study aimed at assessing the feasibility and applicability of a screening program for CC, HPV and FGS at primary level of care in rural Madagascar.

Methods:

After performing a baseline assessment on the awareness of FGS among Health Care Workers (HCW, n=93) and the general population (n=727), through a mixed-methods approach, we performed an awareness campaign. Afterwards, screening services where offered to a total of 500 women at three primary health care centers of the region of Boeny in Madagascar: Marovay (peri-urban), Antanambao-Andranolava (rural) and Ankazomborona (rural). In-depth interviews were conducted among HCW and women included in the program to explore the service usability and satisfaction from both users and providers perspectives.

Key findings:

Our preliminary data show that the awareness of FGS among both HCW (n=50, 54%) and the general population (n=644, 88%) low. In addition, among the 500 women to whom a screening service was offered, 483 (96.6%) accepted.

Main conclusions:

The preliminary analysis of our intervention, shows a good acceptability of gynecological screening in our study population. We can speculate that the awareness campaign improved acceptability supporting the concept that health literacy represents a crucial element to promote prevention.

Evaluation Of A Mass Screening And Treatment Program For Hepatitis C Virus In Rwanda

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Background:

Though it is well known that timely diagnosis and delivery of antiviral therapy can cure and prevent progression to later stages of disease, access to hepatitis C (HCV) diagnosis and treatment has been limited. Sub-Saharan Africa (SSA), is home to almost 20% of global HCV infections, yet access to services remains very challenging due to limited health system resources. Over the past 20 years, Rwanda has improved access to health care services across numerous indicators. However, less than 1% of HCV patients were on treatment in 2015. To address this, the Government of Rwanda launched a voluntary mass screening and treatment campaign in 2016. As part of the scheme, patients with a confirmed diagnosis are initiated on treatment free-of-charge. As the first screening and treatment program implemented in SSA, it is crucial to evaluate whether this effort has achieved its goal of improving access to HCV care services and reduced HCV burden.

Objectives:

This study aimed to 1) describe characteristics of patients screened and treated during the

mass screening and treatment campaign 2) describe the cascade of care for HCV patients and identify factors associated with drop-out 3) estimate the proportion of patients who achieved sustained virologic response and identify factors associated with treatment failure.

Methods:

We conducted a retrospective cohort study and used secondary data to describe the cascade of care and assess factors associated with treatment failure and drop-out. A retrospective review of medical records was carried out to determine patients testing results and treatment outcomes. The data from patients' charts was combined with screening electronic database compiled during the antibody testing. We generated descriptive statistics to estimate total number of patients screened and their characteristics and the proportion of 1) treatment success and failure 2) completion at each stage of care. We used mixed effects logistic regression to assess factors associated with HCV positivity, gaps in care and treatment failure.

Results:

Analysis is still ongoing, and findings will be available at the time of the conference.

Key findings:

This study provides evidence on who was screened during the mass campaign and HCV patients' characteristics. It also provides evidence on which interventions would be more impactful on the successful treatment of patients with HCV or the level of care that need more responses. The lessons learned from this study can be utilized by officials in other countries with similar settings that are looking to initiate HCV programs.

Community Engagement Initiative To Improve Access To Cardiovascular Diseases Diagnostic Services In Senegal

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Background:

According to WHO projections, the annual number of deaths from non-communicable diseases will reach 55 million by 2030 if nothing changes. In Senegal, according to national surveys done in 2015, 9.4% of adults (18-69 years) had three or more cumulative cardiovascular diseases risk factors and more than 29.8% of the adult population had high blood pressure.

Senegal, through its Health and Social Development Plan 2019-2028, plans to reduce morbidity/mortality due to cardiovascular diseases and risk factors. To respond to this national priority, population-based screening and referral strategies relying on community health

workers can be targeted.

Aims and objectives:

To facilitate access to diagnostic services of cardiovascular diseases risk factors and to improve case management through community-based screening approaches.

Methodology:

A cross-sectional study between December 2020-March 2021 was put in place in the two rural communities of Dielmo and Ndiop-Fatick Region, Senegal. The cardiovascular disease risk factors screened for were: Body Mass Index (BMI), arterial hypertension (AH), hyperglycemia, hyperlipidemia and current and previous tobacco use using point of care tools such as finger prick test. Analysis of sociodemographic, clinical, and biological data was performed with Excel, R, and Stata software; analysis of socio-anthropological data was performed with Kobotoolbox, Excel, Atlas Ti, or Nivo software.

Results:

The participation rate was 89.5% (561/680) among community members aged 18 years or older. 75.0% of participants had at least one risk factor for cardiovascular disease. Dyslipidemia was the most common risk factor (87.6%) and 86.7% had hypoHDLemia. 35.2% of those screened had hypertension, and 6.7% had obesity. Smoking and hyperglycemia were diagnosed in less than 5% of the participants. Further tests (ECG and ultrasound) among participants who scored high on the Framingham Risk Score for Hard Coronary Heart Disease revealed 9% of participants who were found with preciously unknown and untreated abnormal heart functions.

Conclusion:

The study reveals a high prevalence of cardiovascular disease risk factors in rural areas in Senegalese and demonstrating that community-based screening by community health workers can increase access diagnosis and early case identification.

The Potential Of Hta To Inform Decisions On New Health Technologies In Low-Income Settings. The Case Of Malawi

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Background

Health systems face a broad range of policy decisions related to new potentially valuable technologies, including diagnostics tools. These decisions relate to the different stages

through which a technology must pass, from being identified as a potentially viable option within a health care system, to being implemented at scale to provide the greatest impact on population health net of the opportunity costs associated with its funding. Health technology assessment (HTA) offers a set of analytical tools to support health systems' decisions about resource allocation. Although there is increasing interest in these tools across the world, including in some middle-income countries, they remain rarely used in low-income countries (LICs). In general, the focus of HTA is narrow, mostly limited to assessments of efficacy and cost-effectiveness. However, the principles of HTA can and should inform the whole range of policy decisions regarding new health technologies.

Aims and objectives

We examine the potential for this broad use of HTA in LICs, with a focus on Malawi. We develop a framework to classify the main policy decisions on health technologies within health systems. The framework covers decisions on identifying and prioritising technologies for detailed assessment, deciding whether to adopt an intervention, assessing alternative investments for implementation and scale-up, and undertaking further research activities. We explore the value and implications of the framework by applying it in the Malawian context, and mapping each policy decision point to the local health system and governance structure. Using two contrasting health technologies as examples, we outline how decisions are currently made, investigate the current use of HTA and explore to what extent it could further assist local decision-makers. More specifically, we describe how decisions were addressed when introducing CT scanners in the Malawian health system, and we show mechanisms by which evidence can enter policy deliberations using a diagnostic tool, HIV self-testing, as an example.

Findings

Although the scarcity of local data, expertise, and other resources could risk limiting the operationalisation of HTA in LICs, we argue that even in highly resource constrained health systems, such as in Malawi, the use of HTA to support a broad range of decisions is feasible and desirable. The CT scanners and HIV self-testing examples show that an absence of appropriate evidence and analysis can lead to decisions that are detrimental to population health.

Organized Session 6-4

Harnessing Knowledge For Health Systems – The Role Of Co-Producing Knowledge

Authors: *Charles Ebikeme London School of Economics / AHOP*

Description

The COVID-19 pandemic has highlighted the importance of integrating knowledge for health systems decision-making. For the most impact, re-engineering health systems requires knowledge to be used effectively.

The aim of this panel will be to explore the various working methods used to help bridge the gap between research, policy, and practice in development efforts in Africa. This is especially pertinent given the growing need for health research to be suitably channeled into policy and for practice to be meaningfully transformed.

The panel will highlight the role of policy-makers in the process of evidence production. It will showcase how the African Health Observatory Platform on Health Systems and Policies (AHOP) functions to produce knowledge that is responsive to policy-maker needs and priorities. AHOP produces a suite of products including Country Health System & Services Profiles (CHSSPs), policy briefs, comparative and thematic studies, and policy dialogues that benefit from policy-maker input.

The discussion will present perspectives from both the AHOP research community and government representatives within the greater AHOP collaborative, as well as other knowledge brokering platforms that aim to promote evidence-informed policy-making for health systems within the African region.

The discussion will also highlight how each group brings valuable and necessary knowledge resources to enrich research, decision-making, and action. Some of the challenges involved in multi-stakeholder knowledge generation will be examined, with an emphasis on the non-linear pathway that exists from research to policy use.

During this panel session, speakers will engage on some of the institutional, structural, and cultural challenges to evidence generation and use. Participants will showcase efforts, activities, and initiatives that have led to impact, change, and long-term engagement on health policy issues from the wider stakeholder and decision-making community. The panel will feature representatives from AHOP National Centres, the WHO Regional Office for Africa (AFRO), WHO Country Offices in the African region, and Ministries of Health, alongside other Knowledge Exchange Platforms and will reflect on the collaborative efforts at the centre of this partnership. The discussion will explore how the various activities undertaken by AHOP have been guided by policy maker input.

The discussion will be followed by an audience Q&A.

Parallel Session 6-1: Oral

Vaccine Economics: Equity, Distribution And Financing 1

Distributional Benefit-Cost Analysis of Rotavirus Vaccine Coverage in Uganda

Rornald Muhumuza Kananura[1], Gatien de Broucker[2], Ema Sam Arinaitwe[3], Samantha Sack[2], Athony Ssebagereka[1], Aloysius Mutebi[1], Elizabeth Ekirapa Kiracho[1] and Bryan Patenaude[4], (1) Makerere University School of Public Health, Kampala, Uganda, (2)Johns Hopkins Bloomberg School of Public Health, Department of International Health, Baltimore, (3)Ministry of Health, Kampala, Uganda, (4)Johns Hopkins Bloomberg School of Public Health, Department of International Health, Kampala, Uganda

Background:

Diarrhea is the second leading cause of death among children under 5 years of age contributing to 8% of global all-cause mortality in 2017. Past studies have shown that a majority (approximately 45-65%) of childhood diarrheal morbidity and mortality is caused by rotavirus, which is vaccine preventable. Initially planned for 2016, the rollout of the rotavirus vaccine by the Ministry of Health in Uganda started in 2018. In this study we estimate the economic and health impact of the rotavirus vaccine rollout in Uganda considering equity in health outcomes in one of the first distributional benefit-cost analyses conducted in field of global public health.

Methods:

Building on Distributional Cost-Effectiveness Analysis (DCEA) methods by Asaria, Griffin and Cookson, we integrate a valuation of non-health costs inclusive of indirect costs: neither DCEA and Expanded Cost-Effectiveness Analysis (ECEA) incorporate non-health benefits (DCEA) or costs beyond out-of-pocket payments (ECEA). We estimated the baseline health distribution and modeled changes attributable to the rotavirus vaccine with data drawn from modeling estimates of the Vaccine Impact Modeling Consortium. Data on the rotavirus vaccine rollout, including vaccine coverage, doses delivered, vaccine cost, and demographic information on the vaccine recipients come from UNEPI and the Ministry of Health of Uganda. Economic burden data for Uganda used for valuation come from the Decade of Vaccine Economic project with primary data collection conducted in 2017-18.

Results:

Treating an acute diarrhea case costed $7 and $15 (if it required hospitalization) in medical costs, of which 67-73% were covered by the government in public healthcare facilities. Including non-health costs, the societal economic cost of a case climbed to $14 and $53 (hospitalized). About 49% and 71% (hospitalized) of the economic cost were non-health costs. Additionally, we find that the economic burden of diarrhea disproportionately affects households in the poorest socioeconomic strata (SES): over 53% of households in the poorest wealth quintile experienced catastrophic health expenditures, compared to 31% of those in the wealthiest quintile. Further results on the distributional impact of rotavirus will be available in the first quarter of 2022.

Conclusions:

By including non-health and indirect costs in addition to monetizing the health outcomes, DBCA may provide better framework than cost-effectiveness analysis when the goal is to compare health investments with non-health investments. The ability to conduct DBCA will be integrated to the Vaccine Economic Research for Sustainability and Equity toolkit, for generation of country-specific cost-benefit estimates and equity metrics.

Stakeholders' perspectives on internal accountability within a sub-national immunization programme: a qualitative study in Enugu State, South-East Nigeria

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Background

Notwithstanding that weak accountability poses a significant barrier to performance of routine immunization systems and high immunization coverage in low- and middle-income countries, studies on accountability of immunization programmes are scare. This study assessed how contextual factors and roles and interaction of different actors affect data quality and use of data for decision making to improve internal accountability in immunization services.

Methods and materials

We used semi-structured interviews to collect data from routine immunization officials at state, local, and health facility levels (n = 35) in Enugu State in South-East Nigeria between June and July 2021. We adopted maximum variation sampling to select individuals with roles and responsibilities as immunization data producers and data users. The in-depth interview guide explored internal accountability within immunization system guided by dynamic dimensions of accountability in health systems along the axes of power, ability, and justice. Data was analysed thematically using NVivo software (version 11).

Results

Inconsistent use of appointment letters and job description and inadequate orientation of staff limited the ability to support change. Multiple and conflicting roles of facility staff, too many tools, and inadequate training constrain data quality. Although performance standards exist, weak capacity to manage immunization data limits how targets are set or met. Despite use discretions to fill resource gaps, managerial decision space is narrow. Infrequent supervision and poor funding limit the use of supervision to ensure accountability. Weak supervisory feedback mechanism, inconsistent use of monitoring charts, and irregular data review meetings constrain data use. Inadequate staffing, maldistribution, high workload,

and absenteeism hinder immunization data quality and use. Regarding axis of power to spark change, limited financial incentives, salary disparities, insecure work environment, and interrupted supply of working materials demotivate immunisation officials. Low enforcement of sanctions, fear of victimization and political interference threaten the functioning of accountability relationships. In terms of axis of justice, local political leaders have low priority for routine immunization and tend to be more responsive to issues championed at the state level. While community interaction improves uptake of immunization services, and engagement of volunteer health workers, HFC leaders lack capacity to interpret monitoring chart, and the power to hold health workers accountable.

Conclusions

Internal accountability of immunization programme in Enugu State, Nigeria is weak. The study has identified the factors that can be considered in the design of interventions to address the internal accountability challenges in a sub-national immunization programme.

Factors Influencing Uptake of Astrazeneca Vaccine among Hospital Nurses in the Upper East Region of Ghana: A cross-sectional survey

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The COVID-19 pandemic has spread to all parts of the world including Ghana. It has resulted in over 4 million deaths worldwide including deaths among nurses and other health-workers at the frontlines of the pandemic response. Precautionary measures in Ghana now include AstraZeneca vaccine. However, studies on factors affecting uptake of COVID-19 vaccines in Ghana are limited. Therefore, this study aimed to analyse knowledge, attitudes, and uptake of AstraZeneca vaccine among nurses in the War Memorial Hospital, Navrongo, Upper East Region, Ghana. We conducted a descriptive cross- sectional study, randomly sampling 128 nurses aged 21-50 years using paper questionnaires. Results revealed all 128 respondents had heard of the AstraZeneca vaccine but only 54% had knowledge of it. Attitudes toward the vaccine were generally positive (53.1%) and uptake was very good (71.9%). Factors cited by the 28.1% who declined the vaccine included already having been infected with COVID-19, absence during vaccination, lack of trust in vaccine safety or efficacy, or pregnancy and breastfeeding. Multivariable logistic regression analysis revealed that demographic factors were not associated with nurses' knowledge of the COVID-19 vaccine (AOR=0.89; 95% CI=0.28-2.85). Educational status was the only factor associated with nurses' positive attitude towards COVID-19 vaccine uptake (AOR=8.09; 95% CI=2.23-29.36). The Ghana Health Service should provide regular COVID-19 testing and vaccination services for nurses and other health-workers, while increasing COVID-19 information campaigns for health-workers in Upper East to strengthen existing knowledge and vaccine uptake.

Uptake and Coverage of Covid-19 Vaccination in Nigeria: Lessons from Nigeria

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Background:

The COVID-19 Pandemic, regarded as the worse disaster since the great depression in the 1930s, has affected critical sectors of human development, globally. The health system was unprepared for it. Thus, the development of the COVID vaccine was a ray of hope. COVID vaccination was rolled out in Nigeria in March 2021. However, despite vaccination being one of the most cost effective intervention, the uptake and coverage of COVID-19 vaccine has been sub-optimal, due to some supply and demand factors.

Aim and Objectives:

This study aims to access the level of uptake and coverage of the COVID-19 vaccines across the 36 states of Nigeria, and the Federal Capital Territory (FCT), Abuja.

Method:

Secondary data review was conducted using data from the COVID-19 Vaccine database in Nigeria *(COVID-19 Vaccination National Daily Call-in- Data).* Furthermore, a desk review of literature on COVID-19 vaccine hesitancy and apathy in developing countries was conducted. Findings were then triangulated.

Result

The uptake of the COVID-19 vaccine in Nigeria as of 23rd October 2021 was only 5.0% of the targeted population. For the first dose of the vaccine, a total of (*n=111,776,503*) persons were targeted nationwide. However, only 5,539,012 were vaccinated as of 23rd October 2021. Similarly, only 2.6% (*n=2,895,121*) of the population were vaccinated for the second dose. State-wise coverage of COVID-19 vaccine as a proportion of eligible fully vaccinated individuals indicated that; (1) Zamfara State and FCT have the highest coverage record with AstraZeneca phase 1 and 2 with 75% and 71%, respectively. Osun and Ondo States recorded the lowest coverage of the same vaccine with 40% and 34%, respectively. (2) Highest coverage of Moderna vaccine on the other hand was reported from Lagos and Adamawa States with 74%, and 73%, respectively. The lowest coverage of Moderna vaccine was 21% and 20% coverage reported in Kogi and Bayelsa States respectively.

Conclusion

There is a great variation in the uptake and coverage of COVID-19 vaccine in Nigeria. The policy implication for the study is the promotion of behaviour and communication practice, especially in the areas/states identified with low coverage. Strict application of the OECD Trust

Framework will lead to improvement in both utilisation and uptake of COVID-19, and future related vaccination in the country.

Keywords: *Uptake, Coverage, COVID-19 Vaccination, Nigeria*

Parallel Session 6-2

Vaccine Economics: Equity, Distribution And Financing 2

Estimating the cost of COVID-19 vaccine deployment and introduction in Ghana using the CVIC Tool

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Background

In addition to the various measures put in place to control and prevent further spread of COVID-19, Ghana started vaccination in March, 2021. Vaccination of the population is one of the strategic measures the country has adopted in line with global practice. This study estimated projected cost of COVID-19 vaccine introduction and deployment in Ghana.

Methods

Using the COVID-19 vaccine introduction and deployment costing (CVIC) tool developed by a range of partners including WHO and UNICEF, Ghana's Ministry of Health Technical Working Group for Health Technology Assessment (TWG-HTA) in collaboration with School of Public Health, University of Ghana, organized an initial two-day workshop that brought together partners to deliberate and agree on input parameters to populate the CVIC tool. We had a further 2-3 day validation with the EPI and other partners to finalize the analysis. Three scenarios, with different combinations of vaccines and delivery modalities, as well as time period were used. The scenarios included AstraZeneca (40%), J & J (30%), Moderna, Pfizer, and Sputnik V at 10% each; with full vaccination by second half of 2021 (Scenario 1). AstraZeneca (30%), J & J (40%), Moderna, Pfizer, and Sputnik V at 10% each with full vaccination by first half of 2022 (Scenario 2). Equal distribution (20%) among AstraZeneca, J & J, Moderna, Pfizer, and Sputnik V; with full vaccination by second half of 2022 (Scenario 3).

Results

The estimated total cost of COVID-19 vaccination ranges between $348.7-$436.1 million for the target population of 17.5 million (i.e., 57% of the population). These translate into per fully vaccinated person cost of $20.9-$26.2 and per dose (including vaccine cost) of $10.5-$13.1. Again, per fully vaccinated person excluding vaccine cost was $4.5 and $4.6, thus per dose excluding vaccine also ranged from $2.2–$2.3. The main cost driver was vaccine doses, including shipping, which accounts for between 78%-83% of total cost. Further, an estimated 8,437-10,247 vaccinators (non-FTEs) would be required during this period to vaccinate using a mix of delivery strategies, accounting for 8%-10% of total cost.

Conclusion

COVID-19 vaccine deployment and introduction is estimated to cost about 61%-76% of Ghana's 2021 health sector budget allocation for non-remuneration activities and projects. Efforts are required to mobilize the required resources to vaccinate the population against COVID-19, and these findings provide the estimates to inform resource mobilization efforts by government and other partners.

Determining the prevalence of missed opportunities for vaccination and its associated factors in a South Western Nigerian State: A policy imperative for Immunization Agenda 2030

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Background

Missed opportunities for vaccination (MOV) contribute to low immunization coverage rate in Nigeria and other African countries. Its prevalence in Africa ranged between 47.0-62.1%. Addressing MOV was shown to improve immunization coverage rate by 10-30% and very critical for achieving immunization agenda 2030 (IA2030) where everyone fully benefits from vaccines for good health and well being. However, there is paucity of data on MOV in Lagos State, Nigeria, where immunization coverage rates dropped below 60% in some Local Government Areas (LGAs) in 2020. This study aimed at determining the prevalence, identifying factors leading to and developing strategies for reducing MOV in selected health facilities in 5 LGAs of Lagos State.

Methodology

This was a cross-sectional study using mixed methods for data collection in May 2021. Among health workers and caregivers, 600 exit interviews, 300 KAP interviews, 30 key informant interviews and 10 focus group discussions and a brainstorming session were conducted. Quantitative data collected by ODK was analyzed using SPSS version 22 and presented in tables as frequencies and proportions and also in charts. Qualitative data was analyzed thematically and the emerged themes were reported. Ethical approval for the study was obtained from the Lagos University Teaching Hospital Health Research Ethics Committee.

Results

The prevalence of MOV ranged between 3-31%. Second dose of Measles vaccine accounted for

21% of the total eligible doses missed. About 4 in 5 of the health workers had poor knowledge of absolute contraindications for vaccines. A third of the health workers knew about checking the immunization status of any child making contact with the health facilities. About 4 in 10 of the health workers will instruct caregivers to always come with the child health card for every facility visit. Factors associated with MOV include the age of the child, purpose of facility visit, classification and the LGA of the health facility. Reasons for MOV include lack of flexibility in the facility immunization schedules, failure of screening for immunization status by health workers, poor knowledge of eligibility criteria for immunization by health workers, concerns about vaccine wastage and vaccine hesitancy.

Conclusion & recommendation

Prevalence of MOV was substantial resulting from factors associated with the health system and caregivers. Strategies addressing the health system challenges such as strengthening the integration of PHC services, reinforcement and capacity building of the health workforce may help in reducing MOV and improving immunization coverage rate, towards the achievement of IA2030.

An assessment of the quality of routine immunization data in health facilities in Lagos State, South West Nigeria.

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Introduction

The generation of quality immunization data at the sub-national levels especially at the health facility level is essential for prioritizing and tailoring strategies to address immunization gaps and contribute to the overall success of immunization programs in low- and middle-income countries. A rapid review of routine immunization data in Lagos State for the year 2020 revealed that 13 out of the 20 LGAs in the State had inappropriate data accuracy ratios for the Penta 3 antigen. We aimed to assess the accuracy, completeness, timeliness and quality index of routine immunization data using the Penta 3 vaccine as well as the enablers and barriers to the collection and use of quality immunization data in four Local Government Areas in Lagos State.

Methodology

This was a cross-sectional descriptive study using mixed methods for data collection in

May 2021. A survey of 68 facilities and 30 interviews (22 KIIs and 8 FGDs) were conducted. Quantitative data collected by ODK was analyzed using SPSS version 22 and presented in tables as frequencies and proportions and also as charts. Qualitative data was analyzed thematically and emerged themes were reported. Ethical approval for the study was obtained from the Lagos University Teaching Hospital Health Research Ethics Committee.

Findings

The accuracy ratio ranged between 17.6%-88.2% and 35.3%-82.4% at the health facility and LGA levels while the community accuracy ratio ranged between 72.8%-90.4% respectively. The completeness and timeliness of reports was 100% for health facilities in two of the four LGAs. Quality index scores varied in different components of the monitoring system with evidence of using data having the lowest index score at both health facility and LGA levels. Some enablers of quality immunization data include training, supportive supervision, communication of feedback, provision of stipends for internet and airtime and data validation meetings while recurring barriers were poor work experience, staff attrition, high work overload, competing programs, cumbersome data tools and poor workers' attitude.

Conclusion & recommendation

The low data accuracy ratio and QI scores reported in this study point to important challenges to be addressed in order to improve the quality of immunization data in Lagos State. It is therefore necessary to build the capacity of frontline health workers to understand the importance of generating accurate data, taking ownership of the data generated and using same to improve immunization decision making in their health facilities and LGAs respectively.

Keywords: immunization, quality, data, accuracy ratio, quality index.

A Comparative Analysis of the Risk and Odds of Deaths related to Covid-19 Infection and Vaccinations, Cameroon

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Background

Like most vaccines, Covid-19 vaccines can cause side effects, most of which are mild or moderate and might go away within a few days. Other results of clinical trials, however, revealed that more serious or long-lasting side effects are possible.

Aims and objectives

This work aimed at comparing the risk and odds of dying from Covid-19 vaccination with dying from its infection.

Methods

This work made use of secondary data from the Centre of Diseases Control and Prevention (CDC) to get the percentage of death attributed Covid Vaccination in America. This was used to approximate the risk of death in Cameroon because of the lack of data on the risk of vaccination in Cameroon resulting from the low rate of vaccination in Cameroonians.

The number of cases, recoveries, and death of Covid patients were gotten from the daily updates of the worldometer of the 24 of my ay 2021. Data on the current population of Cameroon as of May 23, 2021, was equally gotten from worldometer 2021. Percentages, relative risk ratios, and odds ratios were used for the analysis.

Findings

As of 25 May 2021, 0.27% of Cameroonians were infected with Covid while 0.25% of them had recovered from the infection, 0.0046% had died. The results equally showed that 0.0017% of deaths were attributed to Covid vaccination and 0.0046% deaths to Covid infection. The relative risk and odds ratio comparing deaths from Covid vaccination and infection were 0.38 and 137 respectively. Both figures were far less than 1, thereby indicating that the risk and odd of dying are by far lower among people vaccinated (cases) than amongst non-vaccinated people(Control).

Conclusion

This study, therefore, led to the conclusion that the risk of dying from Covid-19 vaccination is about 3 folds lower than dying from Covid infection especially amongst elderly people. This work thus recommended massive covid vaccination especially for the elderly. The elderly were found to more likely die from Covid 19 infection than the side effects.

Assessing the value of investing in COVID-19 vaccination in Low- and Middle-income countries: A Cost-Effectiveness Analysis

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Background:

Most low- and middle-income countries (LMICs) have largely relied on the COVID-19 Vaccines Global Access (COVAX) Facility to obtain sufficient doses to vaccinate up to 20% of their populations. But evidence on the value and affordability of investing to expand COVID-19 vaccine coverage in LMICs is still lacking.

Objective:

To assess potential tradeoffs between the costs and benefits of investing to increase COVID-19 vaccine coverage in Advance Market Commitment countries (AMCs) participating in COVAX.

Methods:

A decision tree model with a one-year time horizon compared the standard of care (no vaccination) to introducing the BNT162b2 (Pfizer-BioNTech), mRNA-1273 (Moderna), JNJ-78436735 (Johnson & Johnson's Janssen), and ChAdOx1 (Oxford–AstraZeneca) vaccines, standalone or in combination, under alternative coverage scenarios (20%-70% of the population) within AMCs. For each vaccination strategy, the decision included no, partial, or full vaccination. Individuals could subsequently become infected conditional on vaccination status and vaccine efficacy. Infected individuals could either develop a mild disease that resolves within days or become hospitalized. Hospitalized individuals could fully recover or die of COVID-19. Country-specific costs included those related to vaccine procurement, storage (including ultra-cold-chain costs) and distribution, and medical care. Effectiveness was measured in fatalities and disability-adjusted life years (DALYs) averted. The incremental cost-effectiveness ratio (ICER) was measured in cost per death or DALY averted and compared to willingness-to-pay (WTP) threshold of US$50,000/DALY. Model parameters were derived from the clinical, epidemiological, and economic literatures. Costs and effectiveness measures were discounted at 3% annually. One-way and multivariate probabilistic sensitivity analyses were conducted to assess the impacts of parameter uncertainties.

Results:

Preliminary results indicate that relative to no vaccination, all vaccination strategies are highly cost-effective, costing US$200-$9000/DALYs averted. Increasing vaccine coverage is costlier but produces more health benefits, albeit with diminishing returns: the ICER with a coverage level of 70% in all countries is approximately US$15000/DALYs averted. Results also suggest that combination strategies are more cost-effective than single-vaccine strategies. Sensitivity analyses suggest that vaccine cost-effectiveness profile improves with higher attack rates and higher vaccine efficacy but deteriorates with lower vaccine acceptance and higher vaccination costs.

Conclusion:

Supporting and funding vaccination programs in LMICs is critical to containing the COVID-19 pandemic, globally. Our results suggest that expanding coverage is good value for money and can advance this objective, as well as that of vaccine equity.

Parallel Session 6-3

Malaria, NCDs and HIV Research

Reducing health shock, household savings and investments in education: Case of malaria in Mali.

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Background

The findings of several research show that malaria has a negative impact on the standard living of households, but few studies have looked at the immediate effect of malaria reduction on household savings and investments in human capital. The aim of this study was to assess the impact of malaria reduction through interventions during the period of high malaria transmission that coincides with the start of the school year in Mali, on household savings and investments in children's education.

Materials and methods

We conducted a randomized controlled trial consisting of four randomized groups of households in a rural village of Mali (Birga): (i) Control group that received only seasonal malaria chemoprevention (SMC) drugs, (ii) Full intervention group that, in addition to SMC, received Insecticide treated nets (LLINs) and maternal Information on malaria prevention, (iii) SMC + LLINs, and (iv) SMC + Information. We carried-out two surveys in July (pre-intervention period) and December (post-intervention period) 2016 on the same samples to collect information on household characteristics, education expenditures, bed net use, and medical data (clinical examinations, malaria biological tests) among children under 5 years old. We used the difference-in-difference methods to estimates the effects of our intervention by the intention-to-treat (ITT) approach to draw accurate conclusions and local average treatment effect (LATE) which using instrumental variable method to estimate the effect for the compliers.

Results

The ITT estimates imply that, savings and education expenditures had increased by 3194 F CFA (4.9 euros) and 2863 F CFA (4.4 euros) respectively among households in the intervention group. Similar changes have found with LATE estimates, 1847 F CFA (2.8 euros) and 2137 F CFA (3.3 euros) for savings and education expenditures respectively. While these effects were due to an increase in bed net use (+28%) among children under 5 years of age, which led to a decrease in clinical malaria prevalence (-9.1%) in ITT, the mechanism of transmission in LATE could not be clearly demonstrated

Conclusion.

The findings of our study contribute to the literature on the negative impact of malaria at the micro level. Reducing the level of malaria allows households to save and invest in children's education. Although the results of this study imply that effective malaria control is associated with a positive return on human capital, large-scale and long-term studies are needed to better understand this issue.

Systematic review of cost and cost-effectiveness of Seasonal Malaria Chemoprevention (SMC)

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Introduction:

In 2017, malaria killed 435,000 people worldwide. $3 billion USD has been mobilized for its control and elimination, at cost of $2.32 USD per person at risk.

Seasonal Malaria Chemoprevention (SMC) has been recommended since 2012 by WHO in endemic areas and has only reached half of the children targeted. In Mali, from 2013 to 2017, the SMC coverage rate increased from five (19%) to all 65 districts (PNLP, 2018). The cost of SMC per child was $ 0.6 to $ 4.03 USD in 2011 (White, 2011). This study aims to synthesize the literature, presenting the costs, cost-effectiveness, or SMC economic studies.

Methods:

The search was done using key words in electronic databases. Preliminary searches have been conducted to identify key words and databases that will be used for the systematic review. Screening was done independently by two researchers and consisted of a title and abstract review to determine if the article meets the inclusion criteria. At this stage the data extraction consisted of filling in the PRISMA flow diagram. A qualitative assessment of the extracted data was carried out using the CHEERS checklist

Findings:

For search, we used key words in the following databases: PubMed, Embase and CINAHL, 1517 publications were found. The articles were published between 1948 and 2021. The screening allowed us to retain 37 publications that met the inclusion criteria and among which we found the full text for 19. Many of those eliminated during the search full text were eliminated because the abstract only had been published in a conference booklet.

Conclusion:

Conducting this systematic review is an attempt to produce a synthesis of the published studies on cost and cost-effectiveness analyses of SMC worldwide. Limited number of publications selected shows how important it is to conduct this research.

Keywords: Cost, cost-effectiveness, Seasonal Malaria Chemoprevention, Systematic review, Child health, Mali.

Estimating the Economic Burden of HIV/AIDS on Inpatients and Outpatients Living with HIV/AIDS at the Nkambe District Hospital-Cameroon

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Background:

Even though Antiretroviral therapy (ART) services in Cameroon are highly subsidized, people living with HIV/AIDS still incur a non-ART drug cost which places an economic burden on them and their households and may hinder delivery and utilization of the subsidized services.

Objective:

The primary objective was to assess the inpatient and outpatient costs incurred by people living with HIV/AIDS and determine if the cost is a catastrophic burden to the individuals and their households in Nkambe, Cameroon.

Methods:

A single facility-based cross-sectional survey was conducted between February and June 2018 at Nkambe District Hospital, the North West region of Cameroon. A micro-costing analysis was used to determine the direct and indirect cost of treatment and access, as well as the catastrophic health expenditure. Data were collected using an administered questionnaire and secondary data from patients' files. These data were analyzed for the direct and indirect cost of treatment of HIV/AIDS. The catastrophic health expenditure (CHE) was measured by the number of participants whose monthly ART-related household expenditure for outpatient and inpatient visits as a proportion of non-food expenditure was higher than 40%. The 40% threshold has been used in various settings. A total of 348 participants were enrolled (283 outpatients and 65 inpatients).

Results:

The average direct cost of treatment access was 2108.89FCFA ($3.47) for outpatient and

30414.31FCFA ($54.12) for inpatient, giving an annual average cost of 8435.56FCFA ($15) and 121657.24 FCFA ($216.5), respectively. The cost of transportation to the hospital, as well as the cost of non- ART drug services, was significant for those from a rural location and the low-income group. The incidence of CHE was 20.3% for outpatient and 66.7% for inpatient visits, considering a 40% threshold. Factors that determine CHE identified were: use of motorbike as a mode of transport, having a divorced marital status, borrowing and support from family members. The most common coping strategies adopted by participants were increasing working hours and support from friends and relatives. About half of the participants said these strategies were sustainable.

Conclusion:

Subsidization of ART services is not sufficient to eliminate the economic burden of treatment on HIV patients. Implementing effective community dispensation of ARVs and universal health coverage policy in Cameroon will go a long way to help HIV patients and their households.

Cost of Introducing and Delivering RTS,S/AS01 Malaria Vaccine Within the Malaria Vaccine Implementation Program

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Background:

Ghana, Kenya, and Malawi started providing RTS,S/AS01 malaria vaccine in 2019 in selected areas as part of the Malaria Vaccine Implementation Program (MVIP), a coordinated evaluation led by the World Health Organization, with support from global partners. The four-dose malaria vaccine is administered to children between the ages of 5 months and roughly 2 years through the routine immunization system.

Aims and objectives:

This study aims to generate estimates of incremental cost of introducing and delivering the malaria vaccine within the routine immunization programs in sub-national areas of the malaria vaccine pilot countries.

Methods:

An activity based retrospective costing analysis was done from each government's perspectives. Detailed resource use data were extracted from expenditure and activity reports for the period of 2019 and 2020. Primary data from representative health facilities were collected to inform recurring operational and service delivery costs. Costs were categorized as introduction and recurrent costs. The analysis considered a range assumed vaccine price ($2 to $10 per dose). Both financial and economic costs were estimated and reported in 2020 USD

units.

Findings:

Across the three countries, at a vaccine price of $5 per dose, the estimated incremental cost per dose administered range from $2.46 to $3.18 (financial), and $8.83 to $10.78 (economic). The non-vaccine cost of delivery range between $1.20 and $2.50 (financial) and $2.07 and $4.77 (economic). Considering only the recurring costs, the non-vaccine cost of delivery per dose ranges between $0.40 and $1.10 (financial) and $0.96 and $2.67 (economic). Introduction costs constitute between 32% and 66% of the total financial costs. Commodity and procurement add on costs, which includes injection supplies and freight/insurance, were the main cost drivers of total cost across countries.

Conclusions:

The cost estimates generated from this analysis is useful to support country-level decisions on the expanded use of the vaccine. Specifically, it helps in understanding the feasibility of implementing malaria vaccine, inform cost-effectiveness and budget impact analyses of delivering the vaccine through the national immunization programs in respective countries.

Presenting author: *Ranju Baral (rbaral@path.org) on behalf of the Malaria Vaccine Implementation Program (MVIP) team including, PATH, WHO, GSK, and Ministries of Health in Ghana, Kenya, and Malawi.*

Double Burden of Diabetes Mellitus and Hypertension- Assessment of Direct and Indirect Cost of Treatment and their Catastrophic Health Expenditure in Enugu State, South-East Nigeria.

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Background:

The prevalence of diabetes mellitus and hypertension is increasing yearly in low and middle-income countries (LMIC) such as Nigeria. The increasing burden of these non-communicable diseases has led to increase in overall cost of health care.

Aims and objectives:

This study aimed at determining the direct and indirect healthcare cost of diabetes mellitus and hypertension occurring both singly and in co-morbidity and their catastrophic health expenditure in Southeast Nigeria.

Methods:

The study is a hospital based quantitative, cross-sectional, descriptive study done among patients attending the medical outpatient clinics of the Enugu State University Teaching

Hospital, Parklane, (ESUTH) Enugu State, South-East Nigeria. A total of 817 patients were randomly selected from the medical clinic of the hospital. Data was collected using a pre- tested questionnaire. Average direct and indirect costs were estimated and level of catastrophic health expenditure among the respondents were analyzed. Concentration index was used to measure the level of equity in the distribution of the health outcomes.

Results:

Out of 817 patients interviewed, 37% had only diabetes mellitus, 35% had only hypertension while 28% had both in co-morbidity. Direct costs of treating diabetes mellitus and hypertension in the last one month before the survey were $28.40 and $19.35 respectively. Indirect costs for diabetes mellitus and hypertension treatment in one month before the study were $7.36 and $5.51 respectively. Direct and indirect costs for diabetes mellitus and hypertension in co-morbidity were $37.00 and $4.62 respectively. Concentration index showed that diabetes mellitus and hypertension were more evident among the poor than the rich respondents when examined singly, while it is more among the rich when examined in co-morbidity. The catastrophic health expenditure at thresholds of 10%, 20% and 40% of their income were 81%, 54%, and 28% respectively in the last one month before the survey.

Conclusions

Burden of the hypertension and diabetes mellitus both singly and in comorbidity is high amongst the respondents. Safety net information of health insurance is needed to cushion the effects.

Keywords: Non-communicable diseases, Direct and Indirect costs, Catastrophic health expenditure.

Poster Session 4-1

Maternal Health Interventions Poster Session 7

Malaria prophylaxis stock out impact on maternal and birth outcomes in Zimbabwe

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Pregnant women and neonates are more vulnerable to malaria in developing countries. Given frequent shortages of lifesaving drugs, they are burdened by adverse effects of malaria, such as low birth weight and maternal anaemia. This paper investigates the effects of malaria prophylaxis stock outs on health outcomes of pregnant women and their newborn babies in Zimbabwe. To achieve the research objective, the paper used pseudo-panel data model and the 2015 Demographic Health Survey and Ministry of Health and Child Care data on malaria prophylaxis stock outs. The paper found that malaria prophylaxis stock outs occurred frequently and affected the birthweight of babies in Zimbabwe. Therefore, policy makers should invest in pharmaceutical information systems and stock ordering systems to prioritise the prevention of malaria as proposed in the Sustainable Development Goals.

JEL Classification Codes: I10, I18, H57

Reproductive health life course and multisectoral approach for improving maternal and child health and survival.

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Sub-Saharan Africa (SSA) has persistently contributed the largest share of global child mortality of all ages. Most SSA countries are far from achieving the SDG's target of reducing under-five and new-born mortality. To accelerate progress, we need to rethink of new approaches and framework that can mitigate the already known mortality and morbidity risk factors and mortality causes. In this study, I synthesise the recent study results from multiple sources in Uganda to understand child mortality mechanisms and henceforth suggest an alternative coherent approach that can be applied to improve new-born health and survival. Using a decade (2005-2015) health and demographic surveillance data, I found that the probability of a new-born child dying before reaching the age of 10 was 129 per 1000, and the probability of the child aged 5 years dying before reaching the age of 10 was 11 per 1000.

Furthermore, the probability of a live birth dying before 28 days and five years of age was 19 and 1000 per 1000 live births, respectively. Further analysis on the timing of new-born deaths revealed a stagnation in perinatal and new-born mortality rate between 2011-2015. The perinatal mortality stagnated at 32 per 1000 birth, with death within the first day of life stagnating at 26 per 1000 births. Similarly, new-born mortality reduced by 14% from 22 per 1000

in 2011 to 19 per 1000 live births in 2015.

The mortality risk factors for all ages and under-five morbidity risk factors were the same. These were adolescence age, poor wealth positions, low levels of education, rural residence, low birth weight and multiple birth status. Low birth weight and prematurity, antepartum, and intrapartum complications accounted for 94% of all causes of death among new-borns. Malaria, malnutrition, acute respiratory and diarrhoea infection accounted for 88% of all causes of death among children aged 0-5 years. Injuries and gastrointestinal diseases emerged among the top four causes of death in the 5-9 age group, with malaria and malnutrition remaining. 80% of women who experienced new-born mortality had experienced morbidity in pregnancy.

The newborn and 0-3 years remain critical period for child morbidity and mortality. The mortality and morbidity risk factors and mortality causes cannot be only addressed with biomedical interventions. Moving beyond the health sector and the diseases and age-specific interventions, there is a need for approaches that recognise life course and multisectoral collaboration.

The Effect of Maternity Waiting Homes on Health Care Utilisation and Maternal and Child Health

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Background

Despite vast improvements in the past three decades, the global burden of mortality and morbidity from childbirth remains exceptionally high. A vast majority of these deaths occur in low- and middle-income countries and are considered preventable. Currently, 60 countries are on course to miss their SDG targets for neonatal mortality by 2030. As most obstetric complications occur around the time of delivery and cannot be predicted, it is generally accepted that a key strategy to reducing pregnancy related mortality is to ensure women deliver in health facilities under the supervision of trained health care professionals. A policy proposal which has seen renewed emphasis to increase the utilisation of obstetric health care services in the hope of improving maternal and neonatal health outcomes is the construction of Maternity Waiting Homes.

Aims and Objectives

We evaluate the impact of Maternity Waiting Homes on women's utilisation of pre-natal, post-natal and delivery health care services. Additionally, we examine whether there is any discernible impact on maternal morbidity and neonatal mortality.

Methods

We combine information on the construction of Maternity Waiting Homes at health facilities with facility location data from the Service Provision Assessment and retrospective data on births, birth outcomes and obstetric health care utilisation from the Demographic and Health Survey. Our empirical strategy relies on exploiting differential timing in the opening of Maternity Waiting Homes across Malawi. We implement new methods developed to analyse treatment effects using a staggered difference-in-difference approach.

Key Findings

Our findings suggest that Maternity Waiting Homes did not increase the rate of facility delivery in Malawi between 2010-2016. Relatedly, there was no improvement in health outcomes for mothers or new-borns. However, we do find small effects for the utilisation of antenatal and postnatal care. Our results are robust when examining women who reside furthest from health facilities.

Main Conclusions

We suggest that in environments with pre-existing high rates of facility delivery, such as Malawi, alternative policies to improve obstetric health outcomes may be more effective and cost-effective. While we do not suggest that Maternity Waiting Homes are not a prudent policy prescription in some environments, our findings illustrate the issue with one-size-fits-all policy adoption and the spread of popular generic policies without due consideration of their appropriateness to specific settings.

The effect of fee exemption policies on postpartum health outcomes; evidence from the free maternal health care policy in Ghana.

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Ghana like many other Sub-Saharan African countries, encounters persistent maternal health challenges, with very slow progress towards improved outcomes. Most of these challenges are as a result of delayed or poor management of complications that come up during pregnancy, delivery or the postnatal period. For this reason, investing into strategies to increase access to care and the has been explained as a major step in improving overall postpartum outcomes. In 2008, the government of Ghana instituted the Free Maternal Health Care Policy (FMHCP) under the National Health Insurance Scheme (NHIS). The FMHCP was aimed at increasing and improving access to maternal health services, by exempting pregnant women from paying the insurance premium for the NHIS.

The aim of the study is to assess the effect of fee exemption policies on postpartum health outcomes. The objectives of the paper are twofold. First, the study examines the effect of the FMHCP on maternal postpartum outcomes. The study proceeds to assess the interaction

of selected socioeconomic variables with the FMHCP and the resulting effect of maternal postpartum outcomes.

The logit regression model is one of the most effective tools adopted in examining the relationship between the binary dependent variable and explanatory variables. The logit model explicitly states the relationship between a binary dependent variable and a vector of explanatory variables and predicts the logit of the dependent variables for the explanatory variables. The study uses data from repeated cross-sectional data from the Ghana Demographic and Health Survey. The specific rounds of the survey that were utilized were the fourth and sixth rounds, collected in 2003 and 2014 respectively, with 2003 as the baseline.

The study showed that progress to reduce delivery and postpartum complications have remained insignificant. Despite the operations of the FMHCP, there are some 21.42% women who still deliver at home without skilled care, fueled by certain socioeconomic and demographic characteristics. The outcome of this study reveals that, there is need for a comprehensive and holistic maternal health interventions as factors that affect maternal health are multifaceted. The findings also bring to awareness the need to look beyond the policy variable in health policy evaluations. There are many other variables that affect health care utilization and health care habits that go beyond financial demands.

Poster Session 4-2

Health Sector Perceptions and Demand for Services: Poster Session 8

Economic burden of diabetes Mellitus in Kenya: The cost of illness analysis

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Background

Diabetes mellitus (DM) is a chronic disease characterized by high blood sugar levels due to the body's inability to produce enough energy and insulin, where a hormone is involved in the metabolism from glucose input. In Africa, the last estimated $9.6 billion spent in 2019 was spent on caring for DM patients, among other NCDs, and spending on the same chronic disease is likely to grow exponentially in the coming years. In Kenya, the total health expenditure per capita is reported at around US$78.6, with health expenditures accounting for about 4.5% of total government spending. The study aims to estimate the direct and indirect costs of Diabetes mellitus in Kenya from a societal perspective, with 2019 as a reference year.

Methodology

The cost of illness approach was used to estimate the economic burden of diabetes mellitus in Kenya. The approach identifies and measures all the costs of diabetes mellitus, including direct and indirect costs. The full economic cost of DM illness was estimated for the year 2019. In addition, a societal perspective was employed to include costs incurred by the country's Ministry of health, DM patients, and family members.

Results and Discussion

The 552,400 adult cases reported in 2019 resulted in a total economic cost of USD 372,184,585, equivalent to USD 674 per DM patient. The total direct costs accounted the highest proportion of the overall costs at 61% (USD 227,980,126), whereas indirect costs accounted for 39% of the total economic costs (USD 144,204,459). Costs of medicines accounted for the largest costs over the total economic costs at about 29%, followed by the income lost while seeking care at 19.7%. Other costs that accounted for more than 10% of the total costs include productivity losses (19%), diagnostic tests (13%), travel (12%). The rest of the cost categories accounted for less than 5%. Efforts should be made to reduce the costs of these medicines to enhance care. The high indirect costs reported, majorly in income lost by patients while seeking medical care, are 19%.

Conclusions

Despite data limitations, the estimates reported here demonstrate that DM imposes a substantial economic burden on Kenya's health care system, patients, and families. Access to affordable health services such as DM education, regular blood glucose screening initiatives, and increasing local manufacturing of medicines can reduce the economic burden of DM and increase the health outcomes of the population and their contributions to society.

Health system responses and capacities for COVID-19 in Nigeria: a scoping review

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Background:

Prior to the index case in 2019, there was no official preparedness plan on ground and inadequate public awareness on COVID-19 in Nigeria. Health system financing and infrastructural development was at a very low point This study aimed to find out information and determine capacity of the Nigerian health system responses to COVID-19 in the country.

Methods:

A scoping review of media and official documents and journals, published from 1st December 2019 to 31st December 2020 was done. Other online news sources that have consistently reported health systems response to COVID-19 in Nigeria, were also reviewed. Geographical scope of articles was national and sub-national. The search was conducted in English and performed in PubMed, Google Scholar and Scopus.

Results:

Nigeria's International Health Regulations (IHR) score at point of entry (PoE) 1 & 2 was 3 and 1 in 2019. Routine capacities established at points of entry was improved after the index case, however, effective public health response at point of entry, remained the same. After the index case, a presidential task force to organize response to the pandemic and oversee nationwide lockdown measures was inaugurated. However this brought about poor access to food and income by millions of Nigerians. Non health responses such as conditional cash transfers and welfare packages were haphazardly done and deemed not to have met the adequate economic response need.

By December 31st, 2020, Nigeria had 70 free laboratories from an initial 13 before the pandemic. Available testing platforms were G-expert, open PCR, Corbas and Abott, with a capacity to test 2500 samples a day, only half of this was achieved due to inadequate human resource supply. Equipment, infrastructure and supplies received a boost after the index case but still considered inadequate, as there were 350 intensive care unit (ICU) beds prior to index case, by 31stDecember there were 450 ventilated ICU beds. Local production and sourcing of materials were encouraged though this remained below par at 14 mobile testing booths. Health worker infection rose as shortage of PPE's was cited as a cause.

Conclusion:

Nigeria's health system response and capacity to handle COVID-19 is quite poor and grossly inadequate. There is a need to increase the number of health workforce in the country and institute adequate accountability mechanisms to ensure prudent and focused management of health funds.

Examining Health Sector Stakeholder Perceptions on the Efficiency of County Health Systems in Kenya

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Background

Efficiency gains is a potential strategy to expand Kenya's fiscal space for health. We explored health sector stakeholders' understanding of efficiency and their perceptions of the factors that influence the efficiency of county health systems in Kenya.

Objectives

To understand the perceptions of health sector stakeholders on efficiency and the factors that influence it as an initial step in efficiency analysis.

Methods

We conducted a qualitative cross-sectional study and collected data using three focus group discussions during a stakeholder engagement workshop. Workshop participants included health sector stakeholders from the national ministry of health and 10 (out 47) county health departments, and non-state actors in Kenya. A total of 25 health sector stakeholders participated. We analysed data using a thematic approach.

Key Findings

Health sector stakeholders indicated the need for the outputs and outcomes of a health system to be aligned to community health needs. They felt that both hardware aspects of the system (such as the financial resources, infrastructure, human resources for health) and software aspects of the system (such as health sector policies, public finance management systems, actor relationships) should be considered as inputs in the analysis of county health system efficiency. They also felt that while traditional indicators of health system performance such as intervention coverage or outcomes for infectious diseases, and reproductive, maternal, neonatal and child health are still relevant, emerging epidemiological trends such as an increase in the burden of non-communicable diseases should also be considered. The stakeholders identified public finance management, human resources for health, political interests, corruption, management capacity, and poor coordination as factors that influence the efficiency of county health systems.

Conclusion

An in-depth examination of the factors that influence the efficiency of county health systems could illuminate potential policy levers for generating efficiency gains. Mixed methods approaches could facilitate the study of both hardware and software factors that are considered inputs, outputs or factors that influence health system efficiency. County health system efficiency in Kenya could be enhanced by improving the timeliness of financial flows to counties and health facilities, giving health facilities financial autonomy, improving the number, skill mix, and motivation of healthcare staff, managing political interests, enhancing anticorruption strategies, strengthening management capacity and coordination in the health sector.

The relationship between healthcare ownership and the demand for health services in Malawi

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Background

Non-profit faith-based providers (FBPs) deliver 30-70% of all care in Sub-Saharan Africa (SSA) and are often located in rural and remote areas where there are no other accessible providers. FBPs differ from public providers as they usually charge user fees, are perceived to provide higher quality of care and offer fewer reproductive services. Therefore, it is likely that the ownership of accessible health facilities impacts the demand and utilisation of services. Limited descriptive research on differences in healthcare management in SSA utilises data on patients who present at the facility. It is unknown how the ownership of facilities affects the demand for health services which may subsequently lead to health disparities.

Aims and Objectives

The objectives of this study are to investigate how geographical access to different types of ownership of health facilities impacts the use of services in Malawi. Specifically, we are interested in exploring heterogeneous effects of access to FBPs and public providers across service domains and demographic groups. Such findings will inform about inequalities in the access to health care depending on the service environment.

Data and Methods

We analyse the 2015-2016 Malawi Demographic and Health Survey (DHS) and the 2013-2014 Malawi Service Provision Assessment (MSPA). Geographical access is defined as the existence of a MSPA facility within a predefined radius of a DHS village using spatial matching. We will use individual-level regression models to estimate the relationship between the access to a facility by ownership, and the likelihood of reporting to have visited a faith-based or a public provider for services such as new-born, maternal, child and reproductive health. We

will also investigate the relationship between ownership and the frequency and continuity of service use and perceived barriers to care. Heterogeneity analyses will investigate whether marginalised groups, such as poor or unmarried women, are more or less likely to utilise certain services by ownership.

Key findings

Preliminary descriptive findings suggest that fewer women seek family planning and treatment for children's diarrhoea and fever at nearby FBPs relative to nearby government facilities. On the other hand, there is a higher demand for giving birth at nearby FBPs.

Conclusion

This study is the first to present evidence on differences in the use of healthcare services by the ownership of available providers in SSA. Such evidence will help to guide government decisions regarding the need for supplementary public healthcare investment or fine-tuning of public-private arrangements.

When the law is ambiguous: ethical dilemmas of accessing second-trimester abortion services during the COVID-19 pandemic in Ghana

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Background

Ghana has fairly liberal abortion law, implemented through comprehensive standards and protocols. Yet, challenges around access and provision of safe second-trimester abortions, within the context of the law still remain.

Aims and objectives

In this paper the authors explored the ethical dilemmas of accessing second-trimester abortion services during COVID-19 pandemic in Ghana.

Methods

An interest-analysis of seeking and providing safe second-trimester abortion services during the COVID-19 pandemic in Ghana was done. Using principles-based analysis of the Ghanaian abortion law, four ethical dilemmas of seeking and providing safe second-trimester abortion services within the context of the law during the pandemic in Ghana are examined: (1) Should special facilities be designated for second-trimester abortions during a pandemic? (2) Should a risk of COVID-19 be a basis for assessing second-trimester abortion in Ghana? (3) Should self-managed abortions be legally accepted during the COVID-19 pandemic? (4) Should second-trimester abortion seekers be denied access if not an emergency?

Key findings

Despite the liberal abortion laws in Ghana, abortion seekers and providers continue to experience ethical conundrums alike as they try to maneuver between the abortion law, personal values, and genuine concerns for seeking or providing induced abortion either on-demand, medical or legal grounds even in the midst of the COVID-19 pandemic in Ghana. Whereas abortion seekers act in desperation whilst seeking abortion services, the providers make substantial effort to work within the confines of the laws although some are tempted to slightly stretch the interpretation of the law in certain instances and to make such bending of the law ethically justifiable to themselves to benefit from the crisis. Additionally, it was noted that Ghana lacks research on demand and availability of second-trimester abortions during pandemics to inform national abortion policy and program decisions.

Conclusion

Each of the key findings outlined have ethical implications for safe abortion care in Ghana. Hence, empirical research is required to further explore the demand for second-trimester abortions and availability of providers for safe services during a pandemic to inform policy and program decisions to avert unsafe abortion-related fatalities that may be emanating from the ethical dilemmas of accessing second trimester abortion during the pandemic.

Organized Session 7-1

Covid-19 Impact And Response: In Country Experiences From Multiple Countries

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Description

The COVID-19 pandemic has led to disruption of prevention and treatment services worldwide. The direct impact of COVID-19 on health services include clinics and hospitals in many hard-hit countries have been overwhelmed with patients with COVID-19. Second, COVID-19 mitigation policies and patients' fears of getting COVID-19 from health care settings affected service use. For example, during the first lockdown period in South Africa, there was a weekly decrease of about 48% in TB Xpert testing volumes. Third, human and budgetary resources intended for managing conditions such as TB and HIV have been redirected to COVID-19 testing and treatment. Fourth, international travel restrictions and regional COVID-19 outbreaks led to temporary interruptions in supply chains for drugs, vaccines, and other health commodities. Fifth, the economic consequences of COVID-19 increased financial barriers at the household and national levels to maintain routine health services.

In the short term, health budgets have been threatened or reduced in a number of cases, but the COVID-19 crisis also represents an opportunity to catalyze major long-term UHC financing reforms in many countries.

This panel aims to share findings from multiple countries on the impact and response of COVID-19. Our panelists are outstanding researchers and policy makers from different countries with multiple disciplines. The first two presentations will share evidence of the impact of COVID-19 from three different perspectives: the first presentation will focus COVID-19 impact on HIV financing in Nigeria; the second presentation extended the impact to health systems and lessons for future emergency preparedness in Kenya. Then the third presentation focus on Ethiopia's response to COVID-19 with an assessment on whether Ethiopia's social assistance were pro-poor. The last presentation will discuss countries' readiness for the COVID-19 vaccine. Results from a multi-country survey and two in-depth bottleneck analysis on Sudan and Ghana will be shared. Discussants will further the discussion on scaling up COVID-19 vaccine and preparedness for future pandemic.

This panel will contribute to the important discussions and propose recommendations on (i) how to effectively deploy COVID-19 vaccines in Africa (ii) how to mobilize additional public sector health financing from external and domestic sources; and (iii) how to rapidly strengthen countries' health delivery systems.

COVID-19 impact on HIV COVID-19 on HIV financing in Nigeria

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COVID-19, the most devastating pandemic since the 1918 influenza pandemic, has had severe health and economic impacts, including in Nigeria. Nigeria is experiencing 'a twin shock'—a COVID-19 pandemic shock and a separate, economic shock. Nigeria has the third largest HIV epidemic worldwide yet these economic shocks will likely affect the financing of many different social sectors, including health.

A literature review and secondary data analysis has been performed to estimate the impact of COVID-19 on HIV health financing. With the global and national economic effects of COVID-19, donor funding, domestic public financing and private out-of-pocket spending for HIV could all be under threat. In the short term, donors have responded to COVID-19 by mobilising additional funding to respond to the pandemic, such as financing COVID-19 vaccine development efforts. However, in face of post-COVID-19 austerity, ODA could be one of the first spending items that get cut. We are also seeing existing ODA flows to HIV being redirected to COVID-19. Meanwhile, with the shocks to the Nigerian economy, the government will struggle to meet its commitments to fund the budgetary allocation to HIV. Private domestic funding for HIV will probably also fall due to declining income and loss of jobs. Affected households may be unable to afford the cost associated with seeking HIV care in health facilities.

A fall in funding for Nigeria's HIV response would have short and long-term. Short term impacts include the limited access to drugs and loss to follow-up. And in long term, with stock-outs and loss to follow-up, adherence is compromised and drug resistance may develop.

Given the risks of HIV resurgence because of the COVID-19 crisis, bold proactive steps are needed, such as integrating HIV into the National Health Insurance Scheme, locking in donor commitments to HIV and building a robust health system.

The impact of COVID-19 on health systems and lessons for future emergency preparedness: a qualitative study in Kenya

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Background

Kenya reported its first case of COVID-19 on 12th March 2020. Over the course of the COVID-19 pandemic, the Kenyan government has responded through various health and non-health strategies to mitigate the impact of the pandemic on its population. This study aimed to understand the key measures adopted in Kenya to tackle the COVID-19 pandemic, understand how the pandemic impacted the health sector and the population more broadly, and how future policy priorities and health emergency preparedness can be strengthened through the lessons learnt from the COVID-19 pandemic response.

Methods

We conducted semi-structured interviews using purposive sampling to identify in-country stakeholders involved in the COVID-19 response and with a firm understanding of how the pandemic affected the Kenyan healthcare system. 15 key informant interviews were conducted between September 2020 – February 2021 with national and regional government officials, development partners, non-government and civil society organization representatives, and healthcare professionals. A deductive approach was used to analyze and code the interview data using NVivo software.

Findings

The initial prompt response of the Kenyan government to introduce measures to curb the pandemic, proactively share information and raise awareness was noted by most respondents. However, there were shortcomings in managing effective provision for testing, isolation, and quarantine services. Health services were negatively impacted due to overwhelmed health facilities and personnel, which affected continuity of essential, routine and non-essential health services due to reallocation of resources and facilities to cater to rising COVID-19 cases. Respondents also highlighted that vulnerable groups, especially poor families in informal settlements, women, and disabled persons were disproportionately affected by the lockdowns and curfews imposed to curb the pandemic. Respondents further discussed overall resources constraints, lack of personnel and supplies, along with coordination issues between national and county governments.

Respondents also highlighted opportunities to improve future pandemic preparedness and health system strengthening. Respondents suggested the need to create an emergency fund within the Ministry of Health to minimize financial shocks and access to funding during future health emergencies. They also called for reforming the public financial management laws to allow flexibility and improved facilitation and fund utilization both at the national and county level. Additionally, respondents recommended greater multi-sectoral collaboration, investments in health information systems and human resources for sustainable expansion of capacity to respond to future health emergencies.

Social Assistance In Ethiopia During Covid-19: A Time-To-Event Analysis

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Introduction

Ethiopia, the most populous country in Africa, experience high burden from COVID-19 and 75% of the households reported a reduction or total loss of income due to COVID-19. We aim to assess whether Ethiopia's social assistance measures were pro-poor.

Methods

We used time-to-event data collected through High-Frequency Phone surveys on COVID-19 and pre-pandemic data on household socio-demographic characteristics from Ethiopia Socio-

Economic Survey (2018-19) for this analysis. We employed a semi-parametric Cox proportional model to analyze time-to-event data and evaluate whether the time to receive government assistance during the COVID-19 response of 2020 differed between poor and non-poor Ethiopian households.

Results

We included 3247 households for analysis. A third of these households were located in the urban areas, around a fourth were female-headed, and nearly half of the households had a household head with no prior schooling. Around 14.0% of households in Ethiopia received some form of government assistance at least once by January 2021, within ten months from the start of the COVID-19 pandemic. In this ten-month timeframe, government assistance had reached a higher proportion of poor households (18.8%) than non-poor households (10.6%). Similarly, the Ethiopian government reached a higher proportion of other vulnerable households by January 2021. For example, 16.9% of rural households, 23.8% of female-headed households, and 15.9% of households with uneducated heads received government assistance vis-a-vis 9.9% of households in urban areas, 10.8% of with male-headed households, and 11.1% of households with educated heads.

The Kaplan-Meier failure function for poor and non-poor households indicates that the probability of receiving the first government assistance was higher for poor households than non-poor households between March 2020 and January 2021. Even after holding all other variables constant, the expected hazard from the Cox PH regression was 1.71 times higher in poor households than in non-poor households. In other words, poor households were 71% more likely to receive the first government assistance than non-poor households at any point in time in ten months after the start of the pandemic.

Conclusion

In a public health emergency, government assistance is crucial to cushion vulnerable households from health, food, and income shocks. However, government assistance is effective only when it reaches the most vulnerable people on time. We found that the government social assistance in Ethiopia was pro-poor in assisting.

COVID-19 Vaccine Country Readiness Assessment: Results From A Multi-Country Survey And Bottleneck Analysis

Wenhui Mao, The Center for Policy Impact in Global Health, Durham, NC

Background:

With the development of effective COVID-19 vaccines, there is a need to ensure that these vaccines are successfully administered to end the global pandemic. Many low- and middle-income countries (LMICs) face financial and logistical challenges to rolling out COVID-19 vaccines. We aim to assess vaccine delivery preparedness and identify challenges impeding vaccine scale-up.

Methods:

A cross-sectional Qualtrics survey was developed with five modules: (i) vaccine planning; (ii) population prioritization; (iii) financing and procurement; (iv) vaccine administration and delivery; and (v) vaccine uptake. The survey was rolled out between January-June, 2021 across LMIC stakeholders actively involved in the country's COVID-19 vaccine planning and delivery, including government officials, development partners, implementing agencies, experts, and academics. Bottleneck analysis was assessed on vaccine manufacture or procurement, supply and cold chain, providers that give vaccines and vaccine hesitancy based on publicly available data for Ghana and Sudan.

Findings:

A total of 48 survey responses were received from 28 countries: 19 from Sub-Saharan African (SSA), 9 each from Central and South Asia, and Latin America & the Caribbean (LAC), 6 from North Africa and West Asia, and 5 from East and Southeast Asia region. All countries reported having vaccine taskforce and regulatory authorities in place for planning and implementation. Respondents from East and Southeast Asia reported high levels of overall preparedness for vaccine delivery, while respondents from SSA and LAC reported lower levels of overall preparedness. The biggest challenges for vaccine scale-up cited by respondents from SSA and LAC were geographic access to remote populations, supply chain, cold storage, and cost barriers. Most SSA countries reported major financing shortfalls despite planned budgetary provisions and relying heavily on COVAX for procurement. Countries reported using mixed procurement arrangements with 50% of SSA and LAC countries using UNICEF and regional pooled procurement, along with self-procurement. For both Ghana and Sudan, the primary bottleneck in scaling up COVID-19 vaccine is the procurement of COVID-19 vaccine, followed by vaccine hesitancy. Positive lessons include Ghana's employment of drone in deploying vaccine and Sudan's deep engagement with UNICEF in the vaccine delivery.

Interpretation:

Our survey identified capacity constraints, especially in financing and procurement of COVID-19 vaccines. Supporting the COVAX facility and providing external financing and technical assistance to LMICs can help to ensure equitable access to COVID-19 vaccines. Longer-term investments in procurement systems, financing capacity, and delivery will help strengthen overall health systems.

Organized Session 7-2

The Coaching Approach: Building Capacity for Sustainable Health Systems Change

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Description

There have been many calls over the years to reimagine traditional technical assistance and find better ways to support country-led change. This impetus to support country-driven change has galvanized a global community of stakeholders, committed to improving how technical support for health systems strengthening is provided, to build the Coaching Approach. The Coaching Approach draws mainly on country and regional experts to support country change processes, supported by global coaches and mentors as needed. Working through existing systems and processes, coaches bring technical expertise and evidence adapted to suit particular country contexts, and they help facilitate more robust, country-led processes through learning-by-doing.

This approach requires strong skills in stakeholder engagement, process facilitation, knowledge translation and communication, in addition to technical expertise. In order help health systems strengthening experts build and refine these skills, Results for Development (R4D) and its partners have, over the past year, launched a three-module e-learning series. The three e-learning modules include:

1. Introduction to the Coaching Approach, which details what it means to be a coach or a mentor and how those in this role can help strengthen country processes and build lasting capacity;
2. Designing and Facilitating Effective Processes which focuses on both the “how” and importance of process facilitation; and
3. Remote Coaching, which highlights the skills required to provide technical support and facilitation remotely.

In addition to building the sorts of skills featured in the e-learning modules, The Coaching Approach seeks to put country expertise at the center of health system strengthening efforts in low- and middle-income countries. In response to this ambition, we developed the Experts Database, a repository seeking to elevate the profiles of health systems experts in countries requesting technical support. This database works to connect practitioners and policymakers with local and global health experts and organizations to support health systems change.

R4D proposes a 90-minute session led by experienced coaches and mentors, who have co-developed the coaching approach, to share experiences and introduce the resources available

to adopt and apply this approach. These coaches will also promote continued, joint learning among this community of experts through a small group experience-sharing exercise. This session will be in English, with simultaneous French translation provided.

Introduction to the Coaching Approach

Cheickna Touré, Results for Development (R4D), Bamako, Mali

In this session, we will provide a primer on the Coaching Approach, a way of providing technical support that moves beyond traditional technical assistance in two important ways:

Who provides the support? The coaching approach draws mainly on country and regional experts who can be supported by global coaches and mentors as needed.

How the support is provided. Support in the coaching approach connects to, respects, and helps to improve upon existing country processes for decision-making, policy implementation and execution of day-to-day functions.

Coaches and mentors are not the doers of work — they are not invited in to produce static outputs like presentations and reports for countries. Rather, coaches and mentors guide countries as they work through their own health systems challenges. They can serve as a sounding board for ideas and help ask tough questions. Instead of telling countries what to do (or what not to do), they share contextualized insights based on their own knowledge and experiences. Coaches help countries focus on the how of achieving a successful outcome and have the humility to know they do not have the “right” answers.

A coach or mentor may provide support to the design of the process, and they may support countries as they go through some of these steps or the entire process. Coaches and mentors make sure evidence and technical knowledge are brought into the process in a contextualized and appropriate way that is adapted and usable. They also make sure that the capacity of country partners is strengthened to carry out the activity on their own next time—this includes making sure that systems are in place to institutionalize or reproduce the process.

Designing and Facilitating Effective Change Processes

Oludare Bodunrin, Strategic Purchasing Africa Resource Center (SPARC), Nairobi, Kenya

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Coaches can play different roles as they support country partners—sometimes as a technical resource person, and sometimes as a process facilitator, guiding the overall process of solving the health system challenge, and bringing in additional coaches and mentors for specific technical issues. In this session, we will look at how effective facilitators can add value and help to improve country processes to more effectively engage the right stakeholders, bring in evidence that is relevant and contextualized, and transparently build toward solutions that are technically valid, feasible in the current context, and have buy-in and ownership of those who will be part of implementing them.

When countries are faced with a health system challenge, they typically go through a series of similar steps to resolve the challenge, regardless of the technical area. First, a problem or challenge or other need for change is identified. Challenges can be surfaced in many ways, such as through routine monitoring, stakeholder voices, or sometimes political pressure. The second step is examining evidence to better understand the problem and identify options for solutions. The solution is then selected from among different options. Once a solution has been identified — whether it is a policy, intervention, or some other solution — it needs to be designed and then implemented. And finally, there is some type of monitoring, evaluation and learning from implementation.

Process facilitation can add value throughout these steps. A facilitator can act as a legitimate broker to guide the process through consistent engagement with the stakeholder group over the period of time needed for a process to reach decisions and design and implement solutions.

Remote Coaching

Dr. Kéfilath Bello, MD, MPH, PhD Student, Centre de Recherche en Reproduction Humaine et en Démographie (CERRHUD), Cotonou, Benin

In this session, we will provide an overview of remote coaching, an approach to providing technical support to a change process through virtual engagements. A fully remote or hybrid (virtual + in-person) coaching engagement can be designed to support a local change process. In these situations, there is likely some in-person interaction happening locally, but the coach is not co-located and is providing some or all coaching through virtual means. During the COVID-19 pandemic, most forms of technical support have needed to be delivered remotely. However, even after the pandemic, remote coaching skills will still prove helpful when designing and implementing a hybrid engagement.

When the coach is unable to be physically present, he or she can still support a country change process through virtual process facilitation using a mix of online meetings, virtual consultations, and e-communications.

A remote coach needs to:

- Remotely support the key counterpart(s) to design the coaching process with virtual engagements in mind
- Virtually collaborate to provide technical inputs for the process and co-produce outputs of the process
- Participate remotely in meetings and facilitate virtual discussions at key points in the process
- Identify other technical experts and facilitate their virtual engagements at the right points in the process

Designing and facilitating effective remote coaching engagements requires skills to:

- Build trusting relationships through remote interactions, keeping in touch through regular virtual check-ins, phone calls, and e-communications
- Design and facilitate different interactive formats such as virtual working group meetings, remote briefings, and virtual workshops, with a mix of dialogue and information sharing.
- Facilitate virtual feedback loops to continuously adapt and improve your coaching support and keep everyone motivated.

Success of remote coaching can be measured at individual, group, and systems-levels, ultimately contributing to improvements in health, education, and nutrition outcomes.

Methods *for collecting participant feedback include:*

Post-event feedback (e.g., virtual survey or brief poll) at the conclusion of a virtual meeting or event

Virtual checkpoints (one-on-one outreach calls or emails, "pause and reflect" meetings) with country partners to solicit feedback at key moments in the process

Post engagement follow-up with country partners (e.g., one-on-one outreach and/or a brief online survey) 3-6 months after the conclusion of the engagement to assess how the change process has progressed and the impact it has had.

Parallel Session 7-1

Health Insurance And Willingness To Pay

Supporting the development of a health benefits package in Uganda: a constrained optimisation framework

Sakshi Mohan[1], *Simon Walker*[2], *Freddie Ssengooba*[3], *Elizabeth Ekirapa Kiracho*[3], *Chrispus Mayora*[3], *Aloysius Ssennyonjo*[3], *Candia Tom Aliti*[4] *and Paul Revill*[5], *(1)Center for Health Economics, University of York, York, United Kingdom, (2)University of York, United Kingdom, (3) School of Public Health, College of Health Sciences, Makerere University, Kampala, Uganda, (4)Ministry of Health, Government of Uganda, Kampala, Uganda, (5)Centre for Health Economics, University of York, York, United Kingdom*

Background

Health Benefits Packages (HBPs) are a key tool in the path towards universal health coverage (UHC). Methods for developing a list of interventions for inclusion into the HBP have typically used standard cost-effectiveness analysis (CEA) methods based on maximising health subject to an overall financial constraint. In reality, at least in the short run, there are many other constraints which limit the healthcare system's ability to provide care. Explicitly factoring in these constraints results in an HBP that can be implemented given health system capabilities and allows for the exploration of the value of investing to expand constrained resources.

Methods

This study uses a linear constrained optimisation approach. 128 interventions across 10 disease programs are considered with data on DALYs averted, full intervention cost, consumable cost, health worker time requirement by cadre, and maximum feasible coverage of interventions compiled using published literature and government documents. The objective of the approach is to find the optimal set of interventions to maximise the net disability-adjusted life years (DALYs) averted, i.e. total DALYs averted by an intervention less its cost divided by the marginal productivity of the health system. This is subject to three categories of health system constraints - i. *the budget for purchasing consumables*, ii. *the size of the health workforce (by cadre)*, iii. *the maximum feasible coverage level for each intervention (based on other demand and supply-side constraints).* We further use the approach to calculate the marginal value of investing additional resources towards purchasing consumables or hiring additional health worker time.

Findings

Out of the 128 interventions analyzed, 68 interventions were included in the optimal HBP for Uganda, resulting in total of 53.8 million net DALYs averted. Further, investing only $39 towards hiring additional nutrition officers' time could avert an additional net DALY; this increased to $55, $56, and $123 for nurses, pharmacists and doctors, and $971 for expanding the consumable budget.

Conclusion

The public health system of Uganda can avert a total of 53.8 million DALYs, net of opportunity costs by implementing the proposed HBP. In terms of the marginal value of additional resources in the health system, investing in health workers generates much higher returns than investing in consumables.

Inequality in household willingness to pay for national Social Health Insurance Scheme in Zambia

Kabaso Mulenga, *University of Witwatersrand, Braamfontein, South Africa*

Background

Zambia is in the process of implementing a National Social Health Insurance Scheme to achieve the goal of universal health coverage. This paper investigates socioeconomic inequalities in household willingness to pay for National Social Health Insurance.

Methods

The paper used data from the representative Zambia Household Health Expenditure and Utilization Survey. Contingent Valuation was used to elicit willingness to pay using a bidding game technique. Interval, Tobit, Heckman and logistic regressions models were used to examine the relationship between the ability to pay and willingness to pay. Concentration indices and curves were used to measure inequalities in willingness to pay, while non-linear Oaxaca-Blinder and Wagstaff decompositions were used to identify the factors that contribute to these inequalities.

Results

More than 80% of Zambians were willing to pay for National Social Health Insurance for their households, which came to an average of K90.76 ($4.31) per month per household. Interval, Tobit and Logistic regressions identified a positive correlation between the ability to pay and willingness to pay. The concentration indices for socioeconomic inequalities in willingness to pay were estimated at 0.389 for the absolute outcome variable and 0.196 for the dichotomous outcome variable. In the non-linear Oaxaca-Blinder decompositions, the most important factors that explain the willingness to pay gap were location (20%) and marital status (-5%). The Wagstaff decomposition results suggest that monthly household expenditure (92%) and access to health insurance (-8%) make large contributions to the inequalities in willingness to pay.

Conclusion

The results of this paper imply that the contributions to the National Social Health Insurance Scheme by households need to be adjusted for the ability to pay. Thus, to make the scheme

affordable, the government should consider a policy of varying contributions according to the ability to pay in addition to exemptions and subsidies. Furthermore, policymakers should target programmes that increase households access to health insurance and create employment and income-generating activities that absorb everyone regardless of their socioeconomic status.

Is Paying for Performance Brings Incremental Effect on Health Vertical Programs? An analysis based on geographical display of a case-control study on HIV/AIDS in Mozambique

Omer Zang, *University of Dschang, Bujumbura, Burundi and Pierre Nguimkeu, Georgia State University, Atlanta, GA*

Background.

Paying-for-Performance (PfP) is a purchasing instrument which involves financial incentives being rewarded to health workers and/or facilities for reaching pre-specified performance measures or targets related to quality and quantity of health services. Performance measurement are made frequently by third-party entities measuring quantity and quality in separate streams. PfP has been extensively analyzed to demonstrate impact on a variety of horizontal care such as maternal, newborn and child healthcare, but almost no findings are reported on what could be the impact (conceptual, operational and on results) of the purchasing mechanism on a vertical program.

Aims and objectives.

The aim and objective of this paper is to assess the incremental impact PfP may have on a HIV/AIDS vertical program in Mozambique. Some other horizontal services are included in this assessment to test if the impact on the vertical program, if any, would deter impact on other services. The paper disaggregates the results according the level of development of targeted provinces to better discuss their heterogeneity.

Method.

The paper has used analysis of a quasi-experimental impact assessment using propensity score matching associated with difference-in-difference regressions on health facility-based routine data in southern and northern provinces in Mozambique. Data pertained to HIV/AIDS-related health outcomes and health service utilization indicators; and to Reproductive, Maternal, and Child Health and Nutrition indicators. Analyses were further improved in their technical specifications of indicators and geographical display to elicit better analyses and discussions of the heterogeneity of the findings.

Results and conclusions.

The results show that PfP can lead to incremental impact on a vertical program, with even more relative effect in less developed settings. Besides, they suggest that PfP can instill a more purposive definition of indicators with improved quality content and outcomes. In addition, with PfP financing as an increment to a vertical program, the health system can leverage on other non-vertical program indicators (and dimension) to improve HIV/AIDS service utilization and vice-versa. Ultimately, unlike in most settings in developing countries where there are separate streams for PfP volume verification and quality assessment, the findings suggest that, for operational efficiency, services targeted with PfP in a vertical program can be defined directly with enough quality content and be assessed in a single stream.

Adverse selection in health insurance markets: Evidence from South Africa using panel data

Pamela Halse, *Stellenbosch University, Stellenbosch, South Africa*

Background:

Adverse health events can be expensive and unaffordable with catastrophic financial and welfare implications. Health insurance provides a form of financial protection against future unpredictable healthcare expenditure. Insurance companies operate through the principle of risk pooling where healthier members (who claim less than they contribute) subsidise sicker members (who claim more than they contribute). The notion of risk pooling in a voluntary insurance market creates a conducive environment for adverse selection to exist.

In South Africa, health insurance (termed medical schemes) membership is voluntary, but in most cases a necessity to access private healthcare. Insurers must follow open enrolment and community rating requirements meaning they cannot deny applicants membership or differ their premiums based on the individual's age and health status. Understanding people's insurance purchasing behaviour is necessary as the country moves towards a National Health Insurance.

Aim:

Examine whether an increase in anticipated need for healthcare and therefore higher healthcare expenses will drive people to purchase health insurance. We consider the effects of individuals' characteristics on their propensity to insure through using cross section analysis and panel data.

Methods:

We use the National Income Dynamics Survey data sets. The analysis focuses on respondents from the last wave who experience adverse health shocks such as being diagnosed with a chronic condition(s) as well as their self-assessed health status. We include pregnancy/births and biomarkers like BMI and blood pressure. Typical explanatory variables like income, education, age and risk appetite are also factored into the analysis. The dynamic panel level analysis over the last three waves (excluded time invariant variables) and focuses on health indicators and changes over time. It includes two lagged variables (perceived health and chronic health)

Key findings:

In the cross-section analysis, statistically significant variables are income, population group, marital status, education and formal sector employment. The significant health indicator is chronic conditions. In the fixed effects panel analysis pregnancy was significant, but both lagged variables were insignificant, although chronic conditions without the lag were significant.

Conclusions:

There may be some adverse selection built into the South African health insurance market, but socio-economic factors appear to be major contributing factors to individuals' insurance purchasing decisions. Pregnancy being significant in the panel analysis may be because health insurers must cover all pregnancies in full.

Regaining policy attention for a capitation payment reform within the National Health Insurance Scheme of Ghana: A prospective policy analysis

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Background:

Reforming healthcare provider payment mechanisms to incentivize healthcare providers is essential for ensuring quality healthcare delivery during the COVID-19 pandemic. Capitation as a provider payment mechanism gained policy attention by the Ghana National Health Insurance Scheme (NHIS) and was piloted in the Ashanti Region between 2012 and 2017. Recent studies revealed that the implementation of the policy was suspended due to inappropriate framing of the policy in policy communications, actor contestations, challenges with certain design provisions of the policy, and a loss of political support following a change in government. Despite the suspension of the policy, capitation remains a provider payment reform option under consideration by the NHIS.

Aims and objectives:

Using the Geneau *et al.* (2010)'s policy analytical framework, the study assessed what is required to regain policy attention for the re-implementation of the Ghana NHIS capitation policy. The study specifically explored how to: i) appropriately reframe the policy; ii) create political opportunities; and iii) mobilize resources for policy re-implementation.

Methods:

A qualitative prospective policy analysis was implemented in the Ashanti region of Ghana in December, 2019. Data was gathered from media reports and semi-structured interviews with a purposive sample of 19 regional, district and facility level policy implementers. The face-to-face interviews were tape-recorded and transcribed. Thematic analysis of data was done using NVivo 12 software.

Key findings

In terms of reframing, stakeholders argued that the name capitation should be replaced with a different name and public communication on the rationale for capitation should be shifted from the cost containment frame to its health benefits frame. Policy education should also be refined to reflect clarity in policy provisions for emergency care, capitation rates, and procedure for choice of providers. Furthermore, stakeholders opined that to create political opportunities for policy re-implementation, a politically sensitive approach with broader stakeholder consultations and involvement should be adopted, and that policy communication should be evidenced-based and led by politically neutral agents. Finally, the study revealed the need to improve the service delivery capacities of health facilities, especially the lower-level facilities, by resourcing them with improved infrastructure, consumables, improved information management systems and well-trained personnel as a pre-requisite for policy re-implementation.

Conclusion:

The study calls for an effective reframing, creation of political opportunities, and mobilization of needed resources to reattract policy attention to the capitation payment policy in Ghana.

Parallel Session 7-2

Evaluation Of Health Financing Systems

Operational and structural factors influencing enrollment in community-based health insurance schemes: an observational study using 12 waves of nationwide panel data from Senegal

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Background and aims

Community-based health insurance (CBHI) has been implemented in many sub-Saharan African countries as a strategy to increase financial risk protection in populations without access to formal health insurance. While the design of such social programs is fundamental to ensure equitable access to care, little is known about the operational and structural factors influencing enrolment in CBHI schemes. In this study, we took advantage of newly established data monitoring requirements in Senegal to explore the association between the operational capacity and structure of CBHI schemes – also termed 'mutual health organizations' (MHO) in Francophone countries – and their levels of enrolment.

Methods

We used novel nationwide administrative panel data collated by the National Agency for Universal Health Financial Protection of Senegal to investigate the association between the performance of the national CBHI scheme and a set of operational and structural factors at the MHO level. The dataset comprised 12 waves of quarterly data over the period 2017-2019 and covered all 676 MHOs registered in the country. Primary analyses were conducted using dynamic panel data regression analysis.

Key findings

We found that higher operational capacity significantly predicted higher performance: enrolment was positively associated with the presence of a salaried manager at the MHO level (12% more total enrollees, 23% more poor members) and with stronger partnerships between MHOs and local health posts (for each additional contract signed, total enrollees and poor members increased by 7%, and 5%, respectively). However, higher operational capacity was only modestly associated with higher sustainability proxied by the rates of enrollees up to date in their premium fees. We also found that structural factors were influential, with MHOs located within a health facility enrolling fewer poor members (-16%). Sensitivity analyses showed that these associations were robust. No significant heterogeneous effects were found

based on a range of demographic, socioeconomic, and health-related characteristics.

Conclusions

Our findings suggest that policies aimed at professionalising and reinforcing the operational capacity of MHOs could accelerate the expansion of CBHI coverage, including in the most impoverished populations. However, they also suggest that increasing operational capacity alone may be insufficient to make CBHI schemes sustainable over time.

Electronic Claims Processing and Efficiency: the Case of the Ghana National Health Insurance

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Background

The National Health Insurance Scheme (NHIS), operated by the National Health Insurance Authority (NHIA) was introduced in Ghana in 2003 to provide financial protection to the population for healthcare utilization. There has been a significant increase healthcare utilization since the introduction of the scheme. This makes the scheme an important tool for the achievement of universal health coverage. However, the scheme is facing financial challenges, with the cost of claims rising at a high rate. The NHIA has therefore introduced electronic claims processing to improve the efficiency in claims processing.

Aims and objectives of the research,

The aim of this research is to find the efficiency gains of the electronic claims processing method in terms of resource use.

Methods used,

The study used claims data from the NHIA for both paper based and electronic claims processing. Additional data on resource use was also included. The data analysis involved the computation of adjustment rates for selected health facilities before and after the introduction of electronic claims. Resource input mainly analysed was labour hours.

Results

The results showed that adjustment rates increased with electronic claims. Please I need to supress the results pending NHIA's approval. I will be happy to share when the approval comes. Thanks

Conclusion

A shift to electronic system improves the quality of claims processing. Please I have to supress the rest. Thank you.

An economic evaluation of health insurance coverage for children affected with Burkitt lymphoma in Ghana

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Background

Every year, there are more than 1,300 new cases of childhood cancer in Ghana, approximately two-thirds of which are Burkitt lymphoma (BL). Close to 50% of children affected with BL die, as a result of delayed care seeking and treatment abandonment. The financial burden of care seeking is often the main reason for treatment delay and abandonment. Yet childhood cancer is not covered by the National Health Insurance service (NHIS). In this study, we analyze the financial and economic impact of extending health insurance coverage to children with BL in Ghana. This study was part of a health technology assessment evaluating the management of childhood cancer in Ghana, conducted by the Ministry of Health.

Methods

We developed a Markov model in Microsoft Excel to estimate the costs and effects of BL treatment when NHIS was provided compared to the status quo where NHIS does not cover care for childhood cancer. A cost-effectiveness analysis (CEA) was undertaken from the societal perspective; and in addition, a budget impact analysis (BIA) taking the perspective of the NHIS. The time horizon for the CEA was a lifetime and, the BIA was estimated over a five-year period. Both costs (US$) and effects, measured using disability adjusted life years (DALYs), were discounted at a rate of 3%. Probabilistic sensitivity analysis was done to assess uncertainty in the measurement of the incremental cost-effectiveness ratio (ICER).

Results

In the base-case analysis, the intervention (NHIS reimbursed treatment) was less costly than current practice (US$8,302 vs US$9,558). The intervention was also more effective with less DALYs per patient than the standard of care (17.6 vs 23.33), with an ICER of US$219. The probabilistic sensitivity analysis showed that the intervention is likely to be both less costly and more effective than current practice in 100% of the 1,000 simulations undertaken.

Conclusion

Providing health insurance coverage to paediatric patients with BL is potentially highly cost-effective. The effectiveness and cost-saving of this strategy is driven by its positive impact on treatment initiation and retention. Based on this evidence, Ghana should consider prioritizing funding for cancer treatment in children.

Assessing the Role of Social Protection in Making Health and Health Financing Systems in Africa More Resilient To Pandemics: A Scoping Literature Review

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Background:

Social protection is a recognised strategy for poverty reduction, as articulated in the Sustainable Development Goals (SDGs 1, 3, 5, 8 and 10), with a proven role of supporting children and families. Social protection helps connect families with healthcare, nutritious food and quality education to a targeted group of people. The COVID-19 Pandemic affected globally the health system, health financing, at the time when the global health systems were unprepared for it. The COVID-19 crisis has brought social protection to the forefront as a crisis response tool. Several social protection interventions were implemented and scaled up across several developing countries, to serve as a COVID-19 response mechanism.

Aim and Objectives:

to examine the various social protection interventions and assess their impacts towards acceleration of resource availability for health services, and other spendings to mitigate the impact of the COVID-19 Pandemic in selected developing countries and to guide future pandemics response mechanisms in Africa.

Method:

Social Protection Crisis Response and System Strengthening Framework was applied in the context of developing countries. Additionally, Scoping Literature Review was used on various social protection responses to COVID-19 among developing countries.

Result

Social protection coverage in some selected developing countries were reported and documented from the review. For example, Pakistan refugees covered by United Nations High Commission for Refugees' Emergency Cash Transfer: 31%, Malawi COVID-19 Urban Cash Intervention (target coverage for 2021 rollout): Around 28% for both refugee and urban coverage respectively. While in Nigeria, the COVID-19 Urban Cash Transfer (target coverage for 2021 rollout) and Sierra Leone Emergency Cash Transfer were as low as 5% each on the urban population scheme.

Conclusion

Social protection can be a force to reckon on, particularly during pandemics. It is a far-reaching instrument towards poverty eradication, increasing access to basic services including health, education and minimising out of pocket health expenditure among the vulnerable population.

Social protection serves as a gateway to both universal health coverage and attainment of the Sustainable Development Goals as well as an effective response against pandemics in Africa.

Keywords: *Social Protection, Health System, Health Financing, Pandemic, Africa*

Parallel Session 7-3

Maternal, Adolescent And Child Health Interventions_FR

Public financial management and health in Sub-Saharan Africa : evidence from a quantitative review over 2005-2018.

Yann Tapsoba, *independent Consultant, Ouagadougou, Burkina Faso and Hélène Barroy, WHO, Geneva, Switzerland*

Sub-Saharan African countries face a shortfall in funding, especially public funding, to achieve UHC and the SDGs by 2030. More effective and efficient management of available public resources would enable countries to reduce waste and achieve better health outcomes. Improving the effectiveness and efficiency of health spending depends on the ability of governments to ensure strengthened public financial management (PFM). Advocacy for PFM requires evidence of its positive effect on health system performance.

This paper examines the effect of PFM quality on health outcomes using ordinary least squares (OLS), based on a sample of countries in sub-Saharan Africa. The results indicate that better PFM quality, proxied by PEFA scores, reduces maternal and child mortality. The estimated effect on non-communicable disease (NCD) mortality is not statistically significant.

Further analysis by PFM dimension reveals overall negative and significant effects on maternal and child mortality and a non-significant effect on NCD mortality. Results-based budgeting remains associated with insignificant effects on mortality indicators, while external audits have no statistically significant effect on maternal mortality. Predictability and control in budget execution is the PFM dimension associated with the highest effect on maternal and child mortality.

The evidence shows that the quality of PFM reduces maternal and child mortality in countries that prioritize the health sector most in their budget allocation. These effects remain insignificant in those where health is less prioritised. Effective governance and political stability and the absence of socio-political violence increase the negative effect of PFM quality on maternal and child mortality.

Perception of Covid-19 and Behaviours of Pregnant Women in the Bamako District (Mali)

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Summary :

The coronavirus pandemic has had negative effects on economic, social and political activities worldwide. The implementation of the barrier measures declared by the WHO in March 2020 has affected many vulnerable people, including pregnant women. These restrictive measures

are likely to influence pregnant women's attendance at health facilities but may also affect their psychological health. The low rate of spread of Covid in Mali means that the population has a different perception of the disease and does not appreciate the barrier measures in the same way. It is therefore necessary to examine the perception of pregnant women about Covid-19 and the barrier measures in order to prevent and limit the contamination of this at-risk segment of the population.

The objective of this article is to find out the determinants of pregnant women's perception of CORONAVIRUS disease and to analyse the effect of the perception of Covid on prenatal consultations.

A non-probability sample with the quota technique was used to interview 200 pregnant women in the (6) reference health centres of the Bamako district at the end of September 2021. On the one hand, the partial results of the Multiple Correspondence Analysis (MCA) show that women who declare that covid-19 is an invented disease are married with a higher level of education and do not regularly listen to information on covid-19. Those who think that covid is a God-made spring are single women with secondary education. Those who think covid-19 is a mystical disease are of divorced marital status and have no education. Of the women surveyed, 92% do not regularly listen to information on Covid, 95% are not vaccinated, 98% declare not to trust vaccines and government communications on Covid, and finally, Covid measures have affected prenatal consultations for more than 80% of them. On the other hand, the econometric analysis confirms that the level of perception negatively influences prenatal consultations during the pregnancy period. Awareness-raising policies do not seem to have had the desired effect, leaving many doubts about Covid-19, even among those at risk, i.e. pregnant women.

Key words: Covid-19, antenatal consultation, maternal health, Mali.

Determinants of health care renunciation among women in Côte d'Ivoire: the case of the district of Abobo Anonkoi-3

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Introduction:

The purpose of not seeking care is to identify unmet needs for care that a health condition would have justified. This behaviour seems to be more frequent among women than among men. The objective of this study was to analyse the determinants of the renunciation of care among women in the city of Abidjan.

Methods:

This was a cross-sectional study conducted from March to May 2019 in Anonkoi-3, a peri-urban neighbourhood in the commune of Abobo, north of the city of Abidjan. Socio-demographic, economic, health status and health care abandonment characteristics of women in the neighbourhood were collected by means of a questionnaire. Univariate analyses and logistic regression models were used to measure the association between the different types of renunciation and each of the women's characteristics.

Results:

The sample consisted of 423 women with a mean age of 32 ± 12 years. Renunciation of consultations with general practitioners concerned 72.3% of the women. Among the specialists, consultations with the ophthalmologist (25.1%), the dentist (22.0%), and the gynaecologist (14.9%) were the ones that women gave up the most. After the consultation, 31.2% of them gave up on other care. They most often refused to buy conventional medicine (19.6%) and preferred to use street and traditional medicines (87.9%).
All other things being equal, women aged 28 to 38 (OR= 2.5 [1.3-4.7], p= 0.013), craftswomen and shopkeepers (OR= 3.2 [1.5-7.4], p= 0.004) and those learning a trade (OR= 2.4 [1.1-5.5], p=0.028) gave up significantly more care.

Conclusion:

Socio-economic inequalities seem to be most important for women, which leads them to forego care. It is therefore necessary to work to reduce these inequalities.

Key words: Women, renunciation of care, precariousness, social inequalities, Ivory Coast

Adolescents sexual and reproductive health: Identification of priority interventions in Senegal

Oumy Ndiaye, *Université Cheikh Anta Diop, Thiès, Senegal, Abdoulaye Diallo, Ministry of Health of Senegal, Senegal and Samba Cor Sarr, Ministry of Health of Senegal, Dakar, Senegal.*

Background :

Access to reproductive health services is a right for all. Senegal is therefore committed to programmes aimed at improving the health of individuals, particularly adolescents.

Objective:

To establish promising interventions for improving adolescent reproductive health in Senegal.

Methods:

To form a working group bringing together researchers, decision-makers, and structures in charge of adolescent health in Senegal to develop different interventions in adolescent reproductive health in Senegal.

Based on WAHO criteria and taking into account the country's ARH needs, we selected a set of criteria. The scoring method applied to these criteria made it possible to select the different priority interventions in adolescent ARH in Senegal.

Results:

Several areas of ARH interventions in Senegal were selected. The criteria included consideration of social determinants, consideration of proximal determinants, consideration of knowledge, behaviours and lifestyle of adolescents, sustainability, innovation, potential for scaling up, consideration of cultural values and maturation. Four interventions were selected as promising interventions. These were the girls' schooling project, the promotion of family life education clubs, the school pregnancy eradication project and the teen/youth spaces.

Contribution of the study:

Through a systematic approach, this study identified promising interventions to ensure improved adolescent reproductive health in Senegal. Therefore, this research is essential to support effective initiatives to improve adolescent reproductive health in Senegal.

Economics of Adolescent Sexual and Reproductive Health Interventions in Ghana: A Situational Analysis

Dr. Ama Pokuaa Fenny, PhD, Institute of Statistical, Social and Economic Research, Accra, Ghana

Globally, Africa is considered to be a very young and growing continent, with more than half of the population under the age of 30. In the Economic Community of West African States (ECOWAS) region in particular, more than 33% of the population is aged between 10 and 24. Therefore, the potential demand for Adolescent Sexual and Reproductive Health (ASRH) services among the young population is expected to be high. Although some countries have developed plans to address and improve ASRH, there is a lack of information on the cost of these interventions. There is also little or no information on the lack of resources or the requirements for scaling up these interventions. The study aims first to identify 'priority' or effective interventions to improve ASRH in Ghana and Senegal. Second, these identified interventions will be costed. The study will also assess resource needs, funding gaps and identify funding strategies to implement priority ASRH interventions in Ghana and Senegal using a multi-component and multi-sectoral approach. Finally, in collaboration with key

national stakeholders, the study will develop innovative and sustainable resource mobilization strategies for financing priority or effective ASRH interventions in Ghana and Senegal. Given that government health budgets in Africa remain low, it is important to understand effective ways to mobilise equitable and sustainable domestic resources to fund ASRH interventions in Africa. The criteria for identifying priority ASRH interventions are based on the West African Health Organization (WAHO) framework for identifying effective interventions to address ASRH challenges. Our preliminary results suggest that priority ASRH interventions in Ghana are largely those classified as cross-cutting and multi-sectoral, including adolescent clubs, adolescent empowerment interventions, capacity building interventions and digital health interventions.

Adolescent Sexual and Reproductive Health in Senegal: Analysis of Promising or Effective Interventions.

Oumy Ndiaye, *Cheikh Anta Diop University, Thiès, Senegal*

Background :

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Contribution of the study :

Through a systematic approach, this study identified promising interventions to ensure improved adolescent reproductive health in Senegal. Therefore, this research is essential to support effective initiatives to improve adolescent reproductive health in Senegal.

Organized Session 8-1

Towards Building Back Better Health Systems: Why Health Systems Efficiency Matters

James Avoka Asamani, World Health Organization, Harare, Zimbabwe and Juliet Nabyonga-Orem, World Health Organization, Brazzaville, Congo, Brendan Kwesiga, WHO Kenya Country Office, Nairobi, Kenya, hristmal Dela Christmals, North-West University, Potchefstroom, South Africa.

Description

As countries in the African region seek to transition to higher-income status, it is expected that there would be a corresponding reduction in external donor funding, and governments would have to rely on domestic sources to fund health services increasingly. In addition, shocks to economies such as the impact of the COVID-19 pandemic have hurt African countries with already sub-optimal levels of health system performance. Therefore, improving efficiency in health systems across African countries is urgent now than ever. Previous studies have examined the technical efficiency of healthcare delivery institutions and others on system-wide analysis of (in)efficiency within countries or across countries. Nevertheless, depending on the input and output measure selected and the methodological choices and rigour, the available evidence on health system efficiency in Africa seem to be inconsistent, sometimes conflicting or even confusing. We conducted a series of analyses to systematically assess the level of (in)efficiency of health systems in Africa and the associated explanatory factors, triangulating from the literature and empirical analysis. This organized session presents three (3) papers that address the efficiency in Africa from a systematic literature review and meta-analysis, a multicounty data envelopment analysis and a country case study from the lens of cross programmatic efficiency in the context of donor transition.

The State And Drivers Of Health Systems Efficiency In Africa: A Systematic Review And Meta-Analysis.

Christmal Dela Christmals, North-West University, Potchefstroom, South Africa, Juliet Nabyonga-Orem, World Health Organization, Brazzaville, Congo and James Avoka Asamani, World Health Organization, Harare, Zimbabwe

Introduction:

Low-and-middle-income countries, especially in Africa, have inadequate domestic resources to invest in health towards attaining universal health coverage (UHC), but the available resources have not always been used efficiently. Thus, in addition to the advocacy for increased investments in health, countries must improve efficiency and provide more healthcare services within the limitation of their resources. It is, thus, necessary to understand the level of (in)

efficiency in Africa and what drives it. This systematic review synthesized up-to-date evidence on the level of (in)efficiency of health systems in the Africa region and its drivers.

Methods:

A systematic literature review was conducted, guided by the PRISMA 2020 statement. Related studies were grouped and meta-analyzed, while others were descriptively analyzed. A qualitative content synthesis was employed for synthesizing the drivers of efficiency.

Results:

Overall, 39 studies met a predetermined inclusion criterion and were included from a possible 4,609 records retrieved through a rigorous search and selection process. Using the random-effects restricted maximum likelihood (REML) method, the pooled efficiency score for the Africa region was estimated to be 0.77 (95% CI: 0.66-0.83) – implying that on the flip side, health system inefficiencies across countries in the African region was approximately 23% (95%: 17% - 44%). Across 22 studies that used Data Envelopment Analysis (DEA) to examine efficiency at health facilities and sub-national entities, the efficiency level was 0.67 (median efficiency score = 0.65). Thus, facility-level studies tended to estimate low levels of efficiency as compared to health system-level studies. Across the studies, 21 significant drivers of efficiency, including population density of the catchment area, governance, health facility ownership, health facility staff density, national economic status, type of health facility, education index, hospital size and duration of inpatient stay (bed occupancy rate) were reported.

Conclusion:

With approximately 23% (17-34%) inefficiency in the health systems in Africa, improving efficiency alone will yield an average of 34% improvement in resource availability in Africa -assuming all countries are performing similar to the frontier countries. However, with the low level of health expenditure per capita in Africa, the efficiency gains alone will likely be insufficient to meet the minimum requirement for universal Health Coverage.

Measuring Technical Efficiency Of Health Systems In The African Region: A Two-Stage Data Envelopment Analysis With Tobit Regression

James Avoka Asamani, World Health Organization, Harare, Zimbabwe and Juliet Nabyonga-Orem, World Health Organization, Brazzaville, Congo

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Background:

The 2010 World health report highlighted improvements in health system efficiency as a critical factor in achieving universal health coverage (UHC) as 20-40% of all resources spent on healthcare are estimated to be wasted (WHO, 2010). Therefore, there is a need for increments in healthcare expenditure on the one hand and the need to improve efficiency, on the other hand, to manage health care costs better and improve health outcomes and sustainability towards UHC. Using a systematic review of evidence to guide variable selection, this presents findings of a cross-sectional data envelopment analysis (DEA) to estimate the level of (in)

efficiency in countries and the underlying factors driving inefficiency.

Methods:

We examined technical efficiency using the Data envelopment analysis (DEA). The inputs used in the DEA are Current Health Expenditure per capita (CHE), health workers and hospital beds per 1000 populations. The output measurements of health system outcomes were life expectancy at birth and under-5 mortality.

Findings:

Analysis is ongoing, and the preliminary estimates show that the Africa region has an average efficiency score of 75.41% (95% CI: 69.05% - 81.76%), the lowest, however, 34.8% in Cameroon while ten countries are likely efficiency frontiers. Also, 21 countries (44.68%) seem technically efficient, but 23 (49%) have significantly lower efficiency scores than the frontier countries and could be considered technically inefficient. Some countries ranked lowly in the output-oriented model had a relatively better rank when considered for the input-oriented model. In the second stage analysis, a Tobit regression model is used to explore the main divers of the differences in efficiency scores between countries. The preliminary results of this empirical analysis tend to be consistent with meta-analysis from a systematic review, but substantial variations are observed in some countries, which points to the uncertainties surrounding multi-country health system-level efficiency analyses. Hence, cross-sectional efficiency analysis should always be interpreted with caution – thus, regular analysis to track changes over time may be more informative for system improvements.

Conclusion:

Inefficiency is prevalent in 49% of the Africa region. This must, however, be interpreted with caution as efficiency scores are highly sensitive to the selection of variables, period of data and choice of methodology.

Situating Donor Transition in the Path to Universal Health Coverage (UHC): Lessons from across programmatic efficiency assessment in Kenya

Brendan Kwesiga, WHO Kenya Country Office, Nairobi, Kenya

Background:

Meaningful progress towards Universal Health Coverage (UHC) will depend on resources being available to the health sector to provide sufficient coverage with quality health services. However, Kenya's renewed focus on moving towards UHC comes when donors are transitioning from directly supporting the health sector. Kenya's commitment to UHC provides an opportunity for Kenya to approach donor transition from a UHC lens to ensure sustainability and system resilience. With this background, this study set out to identify cross programmatic inefficiencies in implementing priority health programs that depend significantly on donors and explore ways of addressing them.

Methods:

Using a cross-sectional design, data were collected through document review and key informant interviews and at national and in a sample of three counties. We adopted a system-wide approach to analyzing efficiency across the selected health programs. The selected programs were HIV, TB, Immunization, RMNCAH, & Malaria. The approach included mapping implementation of the programs across the four core health system functions (service delivery, stewardship/ governance, generation of human and physical resources/inputs and health financing). Based on this, we map areas of duplication, overlap and misalignment between the different programs across the broader health system aspects related to the programs.

Results:

Donor funded programs in Kenya have multiple funding flows and different incentive structures that result in misalignment with broader health system goals. On the input side, there is still program based human resource management leading to duplicative roles, suboptimal staff performance and overreliance on contracted staff. Despite previous efforts on supply chain rationalization, there is still fragmentation in supply chains resulting in a lack of coordination in supplies and complimentary compromising access to health services. There are also challenges observed in multiple data systems and mechanisms for reporting, data quality assurance and data use across the programs. The misalignments across the health system functions and the governance structures for the programs affect effective service delivery, including public health functions.

Conclusion/Recommendation:

As countries plan to transition from donor resources while on the path to scaling up UHC, the focus should not just be on aiming at just replacing donor dollars with domestic dollars as this is neither efficient nor sustainable. Cross programmatic efficiency identifies potential health system overlaps/misalignments that could be addressed as Kenya transitions from donor support to sustain access to priority services and the system becomes more resilient.

Organized Session 8-2

Are Low- And Middle-Income Countries Prepared For Transitions Away From Donor Financing For Health? Evidence From Ghana And Nigeria

Authors: *Yewande Ogundeji, Health Strategy and Delivery Foundation, FCT, Canada, Wenhui Mao, The Center for Policy Impact in Global Health, Durham, NC, Osondu Ogbuoji, The Center for Policy Impact in Global Health, Durham, NC.*

Description

The global health landscape is undergoing a rapid and profound set of transitions that threaten to stall or even derail progress in health improvement. Over the next few years, more than a dozen lower middle-income countries (LMICs) will graduate from multilateral development assistance in health (DAH), yet many still have large pockets of poverty and high mortality and lack the domestic capacity to tackle these challenges alone.

Gavi and the Global Fund to Fight AIDS, TB, and Malaria, US President's Emergency Program for AIDS Relief (PEPFAR), are major players in the financing of disease control programs. Since 2000, over US$ 109 billion and US$ 24 billion have been spent by donors on HIV programs and vaccination respectively. As countries are experiencing economic growth, a shift is expected from external donor funding for health towards domestically funded systems that deliver results. Accordingly, in recent years, donors have begun tapering (or have plans in place to taper) foreign development assistance. However, there is evidence that large-scale public health programs are often not sustained beyond donor support.

Consequently, it is important to analyze risks, gaps, and challenges, as well as resource implications as countries prepare for these transitions. Insights from these assessments will facilitate better planning to ensure that programmatic gains are sustained upon donor withdrawal.

The proposed organized session will present country perspectives on transition preparedness, Including resource and policy implications, and experience with transition planning in Ghana and Nigeria. The first presentation will focus on findings from interviews and discrete choice experiments with stakeholders in Ghana to explore their perspectives on transition. The second presentation will present evidence from benefit incidence analysis highlighting Who benefits from the Expanded Programme on Immunization (EPI) in Ghana. The third presentation will highlight knowledge, capacity, and policy gaps (and opportunities) relevant to funding transitions in Nigeria. The final presentation will focus on stakeholders' experiences with planning for Nigeria's transition from Gavi financing for routine immunization.

Transitioning from donor aid for health: perspectives of national stakeholders and evidence from a Discrete Choices Experiment (DCE) in Ghana

Wenhui Mao, The Center for Policy Impact in Global Health, Durham, NC

Background:

Ghana's shift from low-income to middle-income status will make it ineligible to receive concessional aid in the future. While transition may be a reflection of positive changes in a country, such as economic development or health progress, a loss of support from donor agencies could have negative impacts on health system performance and population health. We aimed to identify key challenges and opportunities that Ghana will face in dealing with aid transition and analyze the preferences of in-country stakeholders for potential policy options to manage donor exits.

Methods:

We conducted key informant interviews and a binary choice Discrete Choice Experiment (DCE) with attributes and levels developed based on interviews. We performed directed content analysis of the interview transcripts and data from DCE was analyzed by fitting a Hierarchical Bayes model using Lighthouse Studio 9.7 (Sawtooth Software).

Results:

18 stakeholders from the government, civil society organizations, and donor agencies in Ghana identified challenges more frequently than opportunities. All stakeholders believe that Ghana will face substantial challenges due to donor transitions. Challenges include: difficulty filling financial gaps left by donors, the shifting of national priorities away from the health sector, lack of human resources for health, interrupted care for beneficiaries of donor-funded health programs, neglect of vulnerable populations, and loss of the accountability mechanisms that linked with donor financing. However, stakeholders also identified key opportunities that transitions might present, including efficiency gains, increased self-determination and self-sufficiency, enhanced capacity to leverage domestic resources, and improved revenue mobilization.

We analyzed data from 76 respondents; 50 (68.5%) were from government agencies, nine (12.3%) from non-governmental organizations (NGOs), and seven (9.6%) from donor agencies. Stakeholders agreed that a transition readiness assessment was needed and developing a national transition management plan was strongly preferred. Stakeholders preferred that the government alone should bear the primary responsibility for transition preparedness. For post-transition funding for health, stakeholders preferred increasing government allocation to health over the other options. For systems strengthening interventions, stakeholders preferred improving efficiency of the health sector.

Conclusion:

Stakeholders in Ghana believe transitioning away from aid for health presents both challenges and opportunities. The challenges could be addressed by conducting a transition readiness assessment, identifying health sector priorities, developing a transition plan with a budget to continue critical health programs, and mobilizing greater political commitment to health. The loss of aid could be turned into an opportunity to integrate vertical programs into a more

comprehensive health system.

Who benefits from the Expanded Programme on Immunization (EPI) in Ghana: evidence from benefit incidence analysis

Osondu Ogbuoji, The Center for Policy Impact in Global Health, Durham, NC

Ghana's expanded programme on Immunization (EPI) is mainly funded by government, with significant support from donors including Gavi, the Vaccine Alliance. As Ghana has become a lower middle-income county and is approaching graduation from Gavi, we aim to assess who will be most affected by the Gavi transition by analyzing who benefits the most from the current EPI. Using service use data from the 2017 Living Standards Survey and cost information from secondary sources, we conducted a benefit-incidence analysis to assess if households from lower socioeconomic groups preferentially benefited from the EPI in Ghana. We specifically included polio, Penta, Rotavirus, Measles, Vitamin A, BCG, and Yellow fever vaccinations for analysis. We found that over 96% of children under five years have been vaccinated in Ghana, with higher coverage in the urban areas (99.3%) than in rural areas (94.9%) and equal (96.4%) for both male and female children. Coverage was lower (93.9%) among poorer households compared to the wealthier (99.1%) households. A small fraction (7.4%) of households made direct out-of-pocket payments for the immunization services received. The proportion was higher in rural areas (8.3%) compared to urban areas (5.5%). The distribution of benefit from the selected EPI vaccines were pro-poor for the whole population regardless of types of vaccines and the CI ranges from -0.087 to -0.153 ($p<0.05$). In other words, the poorer households preferably benefited more from the current EPI program in Ghana, and they tend to be affected more after Ghana graduates from donor's support on EPI programs. To address this concern and to maintain the equitable distribution of vaccine services after transition, more resources need to be mobilized domestically to support the EPI program. It is therefore important for Ghana to adopt a strategy going in to a complete transition that will prioritize resource mobilization and allocation for program such as the NIP that received significant donor support.

Is Nigeria On Course To Achieve Universal Health Coverage In The Context Of Its Epidemiological And Financing Transition? A Knowledge, Capacity And Policy Gap Analysis

Yewande Ogundeji, Health Strategy and Delivery Foundation, FCT, Canada

Introduction

Nigeria is undergoing transitions in the healthcare system that include a double burden of infectious and non-communicable diseases, and transition from concessional donor assistance towards domestic financing for health. These transitions will affect Nigeria's attainment

of universal health coverage (UHC). Therefore, it is important to analyze current policies, stakeholders' capacity, and knowledge for UHC advancement within the context of these transitions.

Methods

We conducted a qualitative study, including document review and semi-structured interviews with 18 key informants (KIs) from government ministries, departments, and agencies (MDAs), development partners, civil society organizations, and academia. The interview transcripts were analyzed using NVivo 11 to identify themes based on similarities and differences in the data.

Result

Stakeholders were generally knowledgeable about the transitions that Nigeria faces, particularly around disease burden, donor assistance, and domestic financing, but not demographic transitions. Capacity gaps identified by respondents included poor capacity to implement health insurance schemes at subnational levels, poor information/data management to monitor progress towards UHC, and limited communication and interagency collaboration between MDAs. Furthermore, participants in our study expressed that current policies driving major health reforms like the National Health Act appear adequate to support UHC advancement in theory, but poor policy implementation is a key challenge. Key informants emphasized that this poor implementation was due to a lack of policy awareness, low government spending on health, and poor evidence generation for information to support decisions.

Conclusion

The study found that there are major challenges in terms of knowledge and capacity for UHC advancement in the context of these transitions, including poor knowledge of demographic transitions, poor capacity for health insurance implementation at sub-national levels, low government spending on health, poor policy implementation, and poor communication and collaboration among stakeholders. To address these challenges, collaborative efforts are needed to bridge knowledge gaps through targeted knowledge products, improved communication and inter-agency collaboration, and increased policy awareness by identifying, engaging, and building the capacity of policy champions for domestic resource mobilization and other health financing reforms.

Enhanced monitoring for Routine Immunization (RI) financing in Nigeria: A transition strategy towards full self-financing for RI

Yewande Ogundeji, Health Strategy and Delivery Foundation, FCT, Canada

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Introduction

Childhood immunization is one of the most cost-effective public health interventions to reduce child mortality. However, Nigeria still has the highest number of unimmunized children in

the world, estimated at 4.3 million children in 2018. Since 2000, Gavi, the Vaccine Alliance, has worked to improve access to new and underused vaccines for children living in the world's poorest countries as part of attaining universal health coverage. In June 2018, the Board of Gavi approved an extension of the transition period of its immunization support to Nigeria from 2021 to 2028. Nigeria is now expected to transition to the fully self-financing phase, assuming full responsibility by 2028. This self-financing will require scaling up of budgetary provisions by the government of Nigeria for immunization over the period 2019-2028. To improve Nigeria's efforts towards self-financing of routine immunization, we provided technical assistance on the development of a monitoring framework for monitoring and tracking immunization financing; we also engaged key stakeholders to validate and align on the framework.

Methods

First, we conducted a desk review of the immunization financing space to understand the players and activities in the landscape. Then we performed diagnostics and analysis to develop a vaccine financing monitoring framework. Additionally, we conducted key informant interviews with 12 stakeholders involved in RI programming at the National level. Transcripts, notes, and memos from the interviews were coded and analyzed thematically.

Findings and Discussion

Overall, the findings from the study indicate that the federal government of Nigeria (FGoN) is committed to increasing the budgetary allocation to immunization financing. The 2021 budget saw an increase in vaccine financing as a service-wide vote. Additionally, the application of the vaccine financing monitoring framework revealed that the proportion of annual vaccine procurement expenditure released from government budgetary resources has increased significantly in the last two years from less than 5% in 2018 to 28% in 2019 and 33% in 2020. However, some stakeholders expressed the need to move immunization financing to a first-line charge in the budget, so it remains guaranteed in the budget for immunization financing. The findings from the key informant interviews highlighted the different roles of stakeholders in the current country coordinating mechanism for routine immunization. Stakeholders confirmed that there are several processes in place to avoid the misuse of funds, which involve tracking specific indicators and navigating existing bureaucracies with the disbursement of funds.

Parallel Session 8-1

Political Economic Dynamics In The Health Sector

The Impact of Politics on Healthcare Seeking Behaviors: The Case of Covid-19 in Northwest Region of Cameroon.

Dingana Therence Nwana, *University of Bamenda, Cameroon, Bamenda, Cameroon*

Background:

Globally, health concerns have been on a rise ranging from malnutrition, non-communicable diseases, climate change, and above all infectious disease burden. The recent COVID- 19 outbreak has uncovered weaknesses within global healthcare systems. COVID-19 has ignited debates amongst health experts, economists, and politicians worldwide. This has also led to polarization in international politics affecting health globally. The resulting division has taken focus away from the global response needed to curb the deadly disease, resulting in slow economic advancements and millions of lives lost and yet the solution still seems futile.

Aims:

We sought key stake holders' perceptions and views on the impact of politics in global health challenges with particular interest on the COVID-19 pandemic in the northwest region of Cameroon. And how these perceptions guide their healthcare seeking behaviors.

Methods:

A purposive sampling method was used to identify 300 key stake-holders and a face to face questionnaire administered. The data was analyzed using a thematic analysis to identify their perceptions of the political impact on COVID-19 pandemic and to decipher their healthcare seeking behaviors.

Findings:

The conventional medicine had her integrity questioned and their role belittled by 74% and 58% respectively in the context of COVID-19. Sixty-eight percent of the stake holders resorted to what they believed works best for them. And 87 % blamed political/administrative pressure as the root-cause of COVID-19 vaccine denial, and refusal to use conventional healthcare services for COVID-19 treatment.

Conclusion:

There should be global response to a pandemic like COVID-19. Science has been trusted for years and should be given the right of place in the context of health crisis. Scientific research and finding should have huge support from the political/governing powers. Political/ administrative pressure in the context of health crisis like the COVID-19 can be hugely

counterproductive.

Political Prioritisation for Performance-Based Financing at the County Level in Kenya: 2015 to 2018

Dennis Waithaka[1], *Lucy Gilson*[2], *Benjamin Tsofa*[3], *Edwine Barasa*[4] *and Marsha Orgill*[2], *(1) Kemri-Wellcome Trust Research Programme, Nairobi, Kenya, (2)University of Cape Town, South Africa, (3)KEMRI-Wellcome Trust Research Programme, Kilifi, Kenya, (4)Health Economics Research Unit, KEMRI-Wellcome Trust Research Programme, Nairobi, Kenya*

Background:

Performance based financing was introduced to Kilifi county in Kenya in 2015. This study investigates how and why political and bureaucratic actors at the local level in Kilifi county influenced the extent to which PBF was politically prioritised at the sub-national level.

Methods:

The study employed a single-case study design. The Shiffman and Smith political priority setting framework with adaptations proposed by Walt and Gilson was applied. Data was collected through document review (n=19) and in-depth interviews (n=8). Framework analysis was used to analyse data and generate findings.

Results:

PBF was not prioritised at the county level in Kilifi after donor funding for the initiative ended in 2018. Political prioritisation of PBF at the county level in Kilifi was influenced by contextual features including the devolution of power to sub-national actors and rigid public financial management structures. It was further influenced by interpretations of the idea of 'pay-for-performance', and specifically, its framing as 'additional funding', as well as over key PBF design features.

Conclusion:

Health reformers must be cognisant of the power and interests of national and sub national actors in all phases of the policy process, including both bureaucratic and political actors in health and non-health sectors. This is particularly important in devolved public governance contexts where reforms require sustained attention and budgetary commitment at the sub national level. There is also need for early involvement of critical actors to develop shared understandings of the ideas on which interventions are premised, as well as problems and solutions.

A review of corruption and accountability issues in Nigeria's COVID-19 response: Implications for health systems governance

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Background:

Flexible and urgent health spending during public health emergencies distorts procurement processes and potentially encourages corrupt practices in health systems. This can erode public confidence, resulting to poor compliance to health safety measures during public health crisis. Thus, anticorruption in health, and in pandemic responses is key.

Aims and objectives:

Our review aims at underscoring the COVID-19 resource space in Nigeria, reflecting through generated resources and how they were used. We sought to understand corruption areas that might have affected optimal use of aggregated resources to optimize responses to the pandemic. Also, we try to look out for evidence of anticorruption within the Nigerian space, and around similar low resource settings which we can build upon in future.

Methods:

COVID-19 related articles (reports from various government bodies and CSOs) on resource mobilization, appropriation, public perceptions towards accountability and anticorruption, were reviewed. **Findings** were organised under three themes: i) mobilized resources for COVID-19, ii) evidence of corruption or anticorruption in spending them and iii) implications for health systems governance.

Results:

About N36.3b ($US93.5m) was raised through 295 donations to federal and state governments, to combat the virus. Additionally, Nigeria appropriated N10b ($27m) to epi-centres and the disease control agency in the country. Whilst information on available resources are freely available, that on expenditure has been opaque, which has generated heated concerns. While anticorruption evidence appears scarce in our review, we were able to identify a few. Key to the anticorruption measures we found is the involvement of the grassroots.

Conclusion:

Lack of evidence of optimal utilization of resources under the frames of accountability and

anticorruption has aroused public concerns and trust in the actual existence of a pandemic. Diminished health worker motivation connects with industrial actions.

Recommendations:

CSOs need to be actively engaged in driving government to show accountability, through partnering with multilateral organisations and donors to increase pressure on government to be accountable with resources mapped out for pandemic responses. Health workforce groups and Associations also need to actively engage government and demand accountability. Finally, conversations on corruption and accountability issues that affect health systems should be encouraged.

International Aid coordination between theory and practice

Wafa Mataria, *American University in Cairo, Cairo, Egypt and Aliaa Aboutera, American University in Cairo*

The international aid (IA) industry suffers from coordination difficulties on vertical and horizontal levels due to the presence of various actors in such industry. The main objectives of the study are to explore the IA actors, means of IA coordination and relate these means to concepts of coordination. The study analysis the IA coordination structure using the Bouckaert et. al (2010) conceptualization of the theoretical models of coordination.

According to the analysis, the three models of coordination are present in the case of IA. Hierarchy-based model is present in the vertical coordination between the central level and periphery level in the public sector as well as between donors / international organizations and recipient governments. Hierarchy guarantees rules based relations but poses the challenge of rigidity resulting in decreased alignment of aid. Network-based model can be detected in horizontal coordination between ministries involved in multi-sectoral aid funded programs and between donors. Network-based coordination helps in reducing duplicity and waste of resources. Nevertheless, it is based on trust and information sharing which is not always present between different actors. Market-based coordination takes place between government on one side and NGOs or private for profit organizations on the other side. It is seemingly an easy coordination approach, nonetheless, it depends on NGOs and private organizations capacities.

Different coordination structures were established at both international and national levels to overcome the complexity of coordination between the numerous IA actors. These structures proved to suffer many shortcomings. IA coordination structures' shortcomings are due to: first, the large numbers of actors with different jurisdictions which requires a comprehensive complex method of coordination. Second, all aid coordination structures, except for some structures created by governments, concentrate on one type of actors, they do not cover the long chain of actors in aid. Thus they facilitate coordination at one step of the aid process but

not along the entire process. And third, network coordination approach is greatly used in aid although it is the most fragile type of coordination.

The paper recommends the strengthening of recipient government coordination structures to be able to coordinate aid within its institutions and with donors, IOs, NGOs and private sector as a promising solution to the international coordination problem. The paper also concludes that further research is required to develop more effective coordination mechanisms that encompass all actors in the IA chain.

The policy dynamics of COVID-19 vaccination in Ghana: A political priority framework approach

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Ghana became the first African country to take delivery of the first wave of AstraZeneca/ Oxford vaccine from the COVAX facility. This promising start of the vaccination roll out is yet to translate into accelerated full vaccination of many populations. The arrival of the COVID-19 vaccines and the vaccination process have been subjects of intense internal political contentions characterised by diverse interpretations and issue characteristics of the vaccines that adversely shape attitudes to vaccination. Drawing on the tenets of a policy analytical framework, we conducted a rapid review of media reports, journal articles and documents reports on ongoing debates, discussions and issues relating to political dynamics, framing of the vaccination, social constructions generated around the vaccines and stakeholders' actions linked to the development trajectory of the vaccination. We found that the COVID-19 vaccination has mainly been framed along the lines of public health, gender-centredness and universal health coverage. Vaccine acquisition and procurement were riddled in politics between the ruling government and the largest main opposition party. While the latter persistently blamed the former for being politically rhetoric rather than tactically responsive in supplying sufficient vaccines, the former blamed the inability to secure vaccines on vaccine nationalism crowding out fair distribution. Government's efforts to increase vaccination coverage to target levels were stifled when a deal with private suppliers to procure 3.4 million doses of Sputnik-V turned dramatic and collapsed. Amidst the vaccine scarcity, the government developed a working proposal to produce vaccines locally which attracted considerable interests among pharmaceutical manufacturers, political constituents and donor partners. Regarding issue characteristics, hesitancy for vaccination linked to ill perceptions of vaccines safety provoked political led vaccination campaigns to induce vaccine acceptance. In conclusion, scaling up vaccination requires political unity, harmonised frames, managing stakeholder interest and tackling risk factors undermining vaccination as a social duty.

Parallel Session 8-2

Building Resilient Health Systems

Health financing as a key pillar to accelerate Universal Health Coverage: the case of resilient health systems in Nigeria

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Background:

Health Financing is key in building resilient health systems and essential for countries to achieve Universal Health Coverage. As health systems globally work to re-build and restructure following the COVID-19 pandemic, it is crucial that sustainable health financing is embedded into these plans.

Objectives:

To review the role of health financing in health systems strengthening, and its role in supporting the development of resilient Primary Health Care (PHC) systems which can better respond to future pandemics. Furthermore, examine how health financing can be used alongside other health systems pillars such as Human Resources for Health (HRH) to improve coverage of essential health services and ultimately achieve Universal Health Coverage (UHC).

Methods:

A desk review was carried out to analyse the current composition of health financing at the PHC level within Nigeria, and how this interacts with health systems performance and the achievement of national and international targets. Evidence of the country's progress towards achieving UHC was also reviewed, through analysis of quantitative data on varying components of UHC, such as service coverage, equity, and financial protection. A review of the current policy in place to support progress towards UHC was also undertaken, with emphasis on how it can be further strengthened given the changing macroeconomy in the post-covid era. Finally, a scoping review was carried out to understand further the interaction between health financing and other health pillars such as HRH in achieving national health targets such as increasing coverage of essential health services.

Key Findings:

The study identified the critical role that health financing has in accelerating progress towards UHC in Nigeria, with a focus on ensuring sustainability and innovation in the application of health financing methods. Options for accelerating progress towards crucial components of UHC were outlined, exploring the joint role of HRH and other health pillars in achieving resilient health systems.

Conclusions:

Sustainable health financing is key to building resilient health systems following the COVID-19

pandemic, and essential in achieving the goal of Universal Health Coverage. It must be used alongside HRH other health pillars to be most effective. As the health systems globally aim to re-build following the COVID-19 pandemic, health financing must be at the centre of these plans.

Local government coordination of responses to COVID-19 in the context of the national response in Ghana

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Background:

Public health emergencies are complex and the involvement of and coordination between multiple sectors is important for health emergency preparedness and response. City-level governments, in particular, play an important role in responding to complex challenges such as health emergencies since they are responsible for acting on the wider determinants of health which sit outside the traditional remit of the healthcare system.

Objectives:

We describe and analyze the actors, governance structures, roles and coordinating mechanisms and faciliators and barriers within local government and between central and local government in the Covid 19 response in Ghana during the first wave of the covid-19 outbreak and lessons for dealing with health security threats in low and middle income countries.

Methods

We conducted a single cross sectional case study of two municipalities in the Greater Accra region of Ghana. Sources of data came from a desk review (with 573 documents – 526 media reports and 47 reports and strategies) and 23 key informant indepth interviews conducted in February and March 2021 with local government officials and municipal health management team staff in the two municipalities.

Key findings:

Coordination between the national government and local government was in the form of directives and guidelines; training, and provision of funds and logistics. Most emergency response structures at municipal level were functional except some Public Health Emergency

Mangement Committees. Inadequate resources (funds and logistics) challenged all aspects of the response. During risk communication, assemblies and health directorates worked in an uncoordinated fashion. A biased selection and distribution process, as well as a lack of bottom-up approach in planning and implementation was common during the distribution of relief items and undermined the possibility of targeting and selecting appropriate beneficiaries.

conclusions:

Despite the high commitment of the government of Ghana to a whole of government and a whole of society approach, local governance of the pandemic was challenged in several ways. We recommend equipping health facilities for case management and surveillance, effective monitoring of the distribution of relief items, a bottom up approach to the planning and implementation of relief interventions, and the identification of additional sources/ mechanisms of financing public health emergencies at all levels.

Are own-source revenues an option for primary health facilities to sustain operations during the COVID-19 pandemic? Findings from Makueni County in Kenya

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Background

Revenue sources for primary health care (PHC) facilities in Kenya include national and county government grants, Danish International Development Agency (DANIDA) funds, and own-source revenues such as reimbursements from the National Hospital Insurance Fund (NHIF) for its various schemes, including the free maternity program Linda Mama. However, PHC facilities do not always have the necessary funds to provide services, especially during a pandemic.

Aims and Objectives

This mixed methods study explored the sustainability of public PHC facilities financing in Makueni county. We analyzed financial data from all revenue sources between fiscal year (FY) 2017/18 and FY 2020/21 and assessed how the availability of funds impacted PHC facilities' COVID-19 response.

Methods

We carried out in-depth interviews with facility managers and the County Health Management Team in Makueni and analyzed financial records from 40 out of 60 public PHC facilities in the county. We purposively selected facilities based on claims and service volumes to capture 99% of the Linda Mama data; the other 20 PHC facilities account for only 1% of the total number of Linda Mama claims in the county.

Key findings

Linda Mama revenue, the most significant own-source revenue for PHC facilities, grew more than 10 times between FY 2017/18 and FY 2020/21. This is a result of county and facilities efforts to optimize NHIF claims submission.

In contrast, the national level funding amount, transferred annually, remained constant during the same time period. County government grants, transferred quarterly, and DANIDA grants increased in the first three FYs and reduced by 25% and 50% respectively in FY2020/21. From FY 2021/22, the national grant will no longer be available to all public PHC facilities in Kenya.

Due to routinely delays in disbursement of grants to PHC facilities, managers relied on Linda Mama revenue to sustain operations during the COVID-19 pandemic to purchase emergency personal protective equipment, medicines, and pay utility bills.

Conclusion

Linda Mama has proved to be an important and reliable revenue source for Makueni's PHC facilities, especially in times of crisis. All public PHC facilities in the county can retain and use their own source revenue so they were able to immediately use Linda Mama funds when COVID-19 crisis hit compared to other funding sources which were delayed and only available periodically. This was crucial for PHC facilities to provide essential and COVID-19 services and highlights the importance of continuing to increase own-source revenues and facility autonomy.

Examining the social and economic impact of COVID-19 pandemic on Internally Displaced Persons & Host Communities in Nigeria - working to build resilience amongst the most vulnerable populations in the face of future pandemics

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Background

An estimated 2 million people are residing in Internally Displaced Persons (IDP) camps across the Northeast States of Nigeria, resulting from the decade-long insurgency by the militant group Boko Haram. The effects of the COVID-19 pandemic have exacerbated the humanitarian need with the number of people estimated to be in urgent need of humanitarian assistance rising since the outbreak began. The pandemic has further worsened inequities which has posed major social and economic threats, with a devastating knock-on effect for the most vulnerable population living in different settings experiencing varying effects of the COVID-19 pandemic.

Objective

To examine the social and economic impact of the COVID-19 pandemic amongst marginalised

communities in Nigeria and assess the effectiveness of community-based interventions in addressing inequities amongst IDP communities to guide future policy efforts.

Methodology

A mixed-method approach was undertaken including key informant interviews alongside desk review. Semi-structured interviews were carried out with vulnerable and marginalised women of IDP camps and host communities to understand the direct and indirect impacts of COVID-19 on their lives.

Key Findings

Key impacts of the COVID-19 pandemic were identified, including limited access to mitigation methods, unmet health needs, impacts on livelihood, disruptions to education, food, markets, and WASH facilities were also noted.

Conclusion

It is obvious that COVID-19 has negatively impacted the social and economic status of the host communities and Internally Displaced Persons in Nigeria irrespective of their demographic and location, there is need to trigger investment and behavioural changes that will reduce the impact of future shocks and increase society's resilience to these tragedies by focusing on methods of prevention, stabilization, transformation, and sustainability to cater to the most vulnerable populations.

Strengthening donor support for capacity strengthening - A systems analysis of global health aid

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Technical assistance (TA) in international aid has long been criticized for being poorly coordinated, disempowering, shortsighted, self-interested, and not holistic or systematic in solving public health challenges. While strengthened capacity is often an implicit or explicit objective of TA, there is growing recognition that TA does not inherently contribute to capacity strengthening and may actually undermine existing capacities or forge dependencies on external support. The COVID-19 pandemic has spurred renewed interest in capacity strengthening and TA — as primary mechanisms for global health aid — to foster country ownership and support country institutions to lead their health agenda. However, despite increasing rhetoric, operationalizing newer and better approaches for technical assistance are limited.

The aim of this research was to interrogate systemic barriers to achieving more sustainable and

country-driven capacity strengthening models for global health aid. We co-created a vision for improved donor support for capacity strengthening and used a system mapping process to explore the interconnected ecosystem of partners and system behaviors that are impeding progress. The process was based on Global ChangeLabs System Acupuncture® methodology - an approach used to identify the critical change points in a system and develop innovative interventions and actions to drive system-wide transformation. The system mapping was informed by 1) previous re-imagining TA work in DRC and Nigeria, 2) rapid literature reviews, including specific to gender inequities in health systems, 3) a co-creation system mapping virtual workshop bringing together 40 participants from 12 countries, 4) semi-structured interviews with 50 donor representatives and partners, and 5) monthly meetings and discussion sessions with an inter-agency donor working group.

The co-creation process surfaced a set of nine key challenge areas ("Critical System Dynamics") that must be addressed in order to disrupt current failures in the global health aid ecosystem and move towards the vision for improved capacity strengthening to achieve better health outcomes. This work provides a new perspective on the systemic barriers and offers guidance for donors and country decision makers to leverage in their strategy design and programmatic decision making to move towards more system-aware approaches to health assistance.

Parallel Session 8-3

Building Back Better Health systems

An Enshrined Business Mindset and the Commitment to Make Every Effort Count: Governmental Public Health Messaging During the Covid-19 Pandemic in Rwanda

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As an increased number of the Coronavirus (Covid-19) cases crested over the East Africa Community (EAC), member states redoubled their efforts to provide clear and austere public health massaging to their citizens aimed at containing the virus. Using Rwanda as case study, this paper contains an exploratory analysis of the government Covid-19 policy messaging strategy, and its effectiveness in adherence to Covid-19 preventative measures. Using a qualitative text analysis methodological approach, we analysed over a 3 months period (December 2020 – February 2021) public documents and other Covid-19 government messaging policy directives to explore the extent to which messaging carried a more nouned impact on people's adherence to preventative measure including wearing face-masks, social distancing, reduction of employees at workplaces, and closures of publics places such as schools and places of worship. This study found that the Rwandan government's streamlined lines of communication from the presidency through the ministries to the community was key in delivering trusted public health messages, and this was found to have played a key role in public adherence to government Covid-19 directives.

Keywords: Covid-19, EAC, Rwanda, Business Management, Public Trust.

Examining Uganda's COVID-19 funding mechanism, response and purchasing for a resilient health system: Reflections from sub-national governments and the frontlines

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Background

Like many countries, Uganda has decentralized responsibility for health service delivery. The capacity of local governments to weather shocks and sustain health service delivery is key. At the outset of the COVID-19 pandemic, the Government of Uganda (GoU) mobilised funds to finance national- and district-level COVID-19 response activities. Effective resource mobilization, allocation, and use is key to health system resilience during health emergencies,

and much can be learned from the interactions between COVID-19 pandemic response and public financial management (PFM) systems.

Study aims and objectives

This study assesses Uganda's COVID-19 funding mechanisms, documenting health purchasing arrangements and comparing the *de jure* versus *de facto* autonomy levels for fiscal and operational decision-making by districts and health facilities. The study describes how COVID-19 financing evolved during the pandemic, with attention to how funds were mobilized and used to pay providers, and how they were accounted for.

Methods

A cross sectional study was conducted across 43 health facilities in 8 districts. In-depth interviews at the national level helped to clarify macro-level financing and purchasing decisions for COVID-19 and overall healthcare programs. Descriptive and comparative statistics were calculated to show implementation progress, and qualitative data collected through open-ended questions were analyzed using conventional content analysis (CCA) to determine the pattern of financial flows and spending priorities for COVID-19 interventions. Supplementary information was extracted from relevant laws, policies, and guidelines that govern the financing of sub-national health services in Uganda.

Key findings

This study determined the fiscal and operational autonomy sub-national governments and facilities have within the public health system. Findings highlighted (1) how GoU and districts mobilized resources to respond to the pandemic, (2) the evolution of rules and practices for strategically purchasing during the pandemic and what opportunities were seized and missed, and (3) lessons about vital adjustments in PFM especially during emergencies like COVID-19. Lessons also related to the tensions between preparedness and escalated COVID-19 healthcare and between public and private partnerships in financing emergency response programs.

Main conclusions

The COVID-19 pandemic prompted rapid efforts by the GoU to mobilize funds and channel them to service providers. New approaches to purchasing emerged, prompting adjustments to PFM practices. Uganda's experience sheds light on whether health emergencies can increase government willingness to grant greater fiscal and operational autonomy to local governments and frontline facilities.

Examining the Resilience of the Mental Health System, Access and Delivery of Mental Health Services in Ghana

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Background:

A resilient mental health system is paramount to the provision of quality mental health services to everyone everywhere. However, the critical resources and financial investment needed to strengthen the mental health system in Ghana for better health outcomes remains a mirage. Many vulnerable people with Mental, Neurological and Substance use (MNS) disorders who needs care do not get the care they need, when they need it and where they need it.

Purpose:

The study aimed to investigate the resilience of the mental health system, access, delivery, and sustainable financing mechanisms at the primary care level for improved policy and programme intervention for better mental health outcomes.

Methods:

A cross-sectional exploratory qualitative study design was used for the study. Data were collected through in-depth key informants' interviews; complimented with observations, in four districts of 3 regions from November -December 2019. A total of 44 key informants' interviews were conducted: 4 District Directors of Health Services, 4 Regional Mental Health Service Coordinators, 16 Mental Health Nurses, and 8 General Nurses, and 12 Mental Health Caregivers. Qualitative data were coded and analyzed using thematic content analysis approach and descriptive statistics. Desk review of published and grey literature were also conducted and analyzed to compliment the field data. **Results** were triangulated for consistency and validity.

Results:

We found that mental health and neurological disorders services were highly stigmatized, neglected in funding, infrastructure, human and material resources at all levels of care, as compared to the other services of the health care system. Funding support of mental health services by the Districts, Municipal and Metropolitan Assemblies were highly insignificant. Religious bodies and Non-governmental Organizations (NGOs) played a very important role in funding mental health services at the community level.

Conclusions:

The mental health System in Ghana is very weak in funding, human resources, and inequities in the distribution of resources are pervasive. Mental health services are almost neglected, and stigmatization of mental illness, and mental health personnel is rife. We recommend that Government should partner with the private sector to prioritize and strengthen mental health service in Ghana, through health promotion, education, and adequate earmarked funding.

Key Words: Access, Delivery, Ghana, Mental Health System, Funding, Stigmatization, Resilience.

Building a Resilient Health System for Handling Epidemics in Nigeria: The Health system strengthening and health emergency funding gaps

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Background

The advent of COVID-19 pandemic has put Governments across Africa under pressure to reinforce measures to contain the spread of COVID-19, fearing that Africa fragile health systems will become too overwhelmed if the disease spreads uncontrollably which will further worsen the socioeconomic lives of the people. As part of the lessons learnt in Nigeria, health system strengthening and emergency funding for pandemic is key to achieving health system resilience to enable the country prepare towards tackling the present and future pandemics. Although the establishment of Nigerian Center for Disease control (NCDC) in 2018 to Prevent, detect, and control diseases of public health importance is a step in the right direction, it is essential to act and make the necessary investments nationwide to establish a strong and resilient health system that can respond effectively to future health emergencies, absorb shocks, and adapt to changing health demands.

Objectives

The objective of the paper is to identify and discuss health system strengthening and emergency funding gaps that must be considered to attain Nigerian health system resilience that can tackle the present and future pandemic. Specifically, the paper seeks to;

1. Discuss health system resilience in the context of the Nigerian health sector
2. Identify and discuss the Nigerian health system strengthening and emergency funding gaps in the context of health system resilience
3. Identify and discuss steps to building a resilient health system in Nigeria

Methodology

The paper specifically adopts content analysis and systematic review. Content analysis and systematic review also entails analysis of cross-country experience of policies in achieving health system strengthening and sources of covid-19 emergency funding.

Key findings

The study shows that the major health system strengthening gaps is embedded in inability of the health system to achieve development in the six building blocks that is typical of a resilient health system. These include; health information, health workforce, essential medicines, health systems financing and leadership and governance. There is emergency funding gap as 5% of Basic Health Care Provision Funds (BHCPF) allocated for emergency is not sufficient and access to the fund is a major problem due to bureaucracy and lack of implementation of the BHCPF

Main conclusion

The study concludes that investment in the development of the six building blocks of the health system will fill the health system strengthening gap. Innovative health financing can also leverage on emergency funding to meet the health system funding gap.

Multi-sectoral collaboration (Public and Private Sector) for the delivery of Quality Healthcare Services in the Context of COVID-19

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Background:

The COVID-19 pandemic has brought about a spike in the demand for healthcare services and most countries are struggling with their capacity to maintain the delivery of essential health services while trying to respond to testing, tracing and treatment and delivering COVID-19 vaccines. Government alone can not handle this crisis alone. A fully mobilized and organized range of health system actors - in both the public and private sector needs to keep health systems working.

Aim: Examine the level of Public and private sector collaboration to maintain a functional healthcare system in response to the COVID-19 pandemic

Methodology: This study focused on Nigeria and a qualitative method was used, which includes: conducting an initial desk review to understand the existing mechanisms for public and private sector engagement, reviewing scientific publications, program technical reports and grey literature, this was further complemented with semi-structured key informant interviews with healthcare stakeholders working in the public and private sectors. Interview transcripts were analysed thematically using Atlas ti qualitative data analysis software package.

Key Findings: The public and private sectors collaborated in many ways to mount a strong response to tackle the COVID-19 pandemic in Nigeria at National and sub-national levels. The private sectors complemented the Government's programs by carrying out key activities to tackle COVID-19 which includes the development of rapid diagnostic kits, health workforce training, disease surveillance, reporting, financial support etc.

Conclusion:

Multi-sectoral collaboration between the public and private healthcare stakeholders was found to be very useful towards mobilising Financial and Human resources while responding to the sudden effects of the COVID-19 pandemic on the health systems and maintaining the delivery of essential healthcare services. However, a well structured public and private sector dialogue and engagement mechanism needs to be institutionalised to enable the Government to provide the required oversight and stewardship to enable the private sector to deliver quality and affordable healthcare services towards responding to future health emergencies and

achieving Universal Healthcare Coverage for all by 2030.

Parallel Session 8-4

Innovations To Improve Health Systems

The Role of Innovative Service Delivery Models in Improving Equity in Ghana - Implementation Research on Primary Care Provider Networks

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Background:

Equity is essential for achieving the Universal Health Coverage. Primary Care Provider (PCP) Networks are an innovative service delivery model designed to promote equitable access to Primary Health Care (PHC) services within the Community-based Health Planning and Services (CHPS) in Ghana.

Objectives:

Implementation research explored the role of PCP Networks in advancing equity, especially among the poor, women, and residents in rural or hard to reach areas.

Methods:

The study used mixed methods and was conducted in South Dayi and South Tongu districts. 500 randomly selected households were surveyed. Findings were disaggregated by household wealth – measured by the Equity Tool - gender of the household head and household location. Categorical variables were cross tabulated and Chi-squared tests were used to investigate significant differences of all variables relative to household characteristics. Multi-variate regression analysis was done to estimate the effect of different factors on utilization of care. Qualitative methodology included 14 focus group discussions and 17 in-depth interviews with community members, PCP Network practitioners and managers. Thematic analysis was employed.

Findings:

Majority (88.4%) of households where a member reported illness or injury sought care in a facility, but only 3.9% of these visited CHPS. Members of the wealthiest households were 1.4 times more likely to visit a facility than the poorest ones. 48% of the households in the highest quintile traveled <1km to the health facility compared to 20% of households in the lowest quintile. 45.3% of Urban households travelled <1km compared to only 21.8% of rural ones.

These findings were supported by the qualitative results, where respondents noted preference for higher level facilities. Improvements in service delivery practices were noted by Network

practitioners and managers, mainly through resource-sharing, improved teamwork, joint outreach, and collaboration on referrals among Networks. But respondents also highlighted factors that likely prohibit the Networks from promoting equity, including some quality variables such as the availability of drugs, supplies, infrastructure, insurance at CHPS, and absence of transport options. Networks should engage strategically with communities, local government, and private sector to alleviate some of these barriers.

Conclusions:

Patterns and preferences of health service in districts are inconsistent with the Networks' equity enhancing efforts, and various demand and supply side factors inhibit PCP Networks from successfully implementing equity enhancing practices. Future research should focus on the role Networks can play in improving service availability and quality – as key factors in their ability to promote equitable PHC.

Practitioner treatment variation: A South African spinal pathology case study

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Background:

Treatment variation has implications for patient outcomes and costs, both of which are vital for funders to understand as healthcare systems move towards value-based contracting. Developing value-based contracting is important in South Africa as the country plans to implement a National Health Insurance (NHI). Currently, practitioners in the South African private sector have discretion in how they treat patients with spinal pathologies which results in significant treatment variation. There is no formal monitoring and reporting of health outcomes that is necessary to assess if the various practitioners' treatment decisions improve patient outcomes.

Aim:

To assess treatment variation of various spine pathologies in South Africa through investigating supply side factors including surgeon characteristics that influence surgeons' treatment decisions

Methods:

We conducted a survey with four vignettes of spine surgeons. We summarize surgeon characteristics and calculate the Index of Qualitative Variation (IQV) to determine the degree of variability within each of the four vignettes. We provide two-way tables with Pearson Chi-square statistic to test significance. Statistically significant variables were included in regression analyses. We compare survey responses to the recommendations from a panel of spinal surgeon specialists. Then, because healthcare systems are moving towards value-based contracting, we introduce a cost component to illustrate the financial implication of the

treatment variation.

Key findings:

Surgeons selections on treatment options varied for each of the vignettes. Vignettes 1 and 4 have high levels of variability with IQVs above 0.75. Four surgeon characteristics were significant in at least one of the vignettes: number of surgeries per month, designated service providers, length in practice and university. These characteristics remained significant in the subsequent regression analyses. Surgeons did not consistently select the Panel's preferred treatment options and 19% of the surgeons selected treatment options that the panel did not think were suitable for one of the four vignettes. Analysis of costs revealed large financial implications between conservative and procedural treatments.

Conclusions:

The variation in findings is unsurprising given the lack of clear guidelines for spinal pathology. It provides a strong case to move towards improving and implementing outcomes reporting and value-based reporting. This will help to identify care that is less effective and steer surgeons to evidence based treatment that provides value to the patient and funder. This is necessary as the government develops the NHI packages.

How Kampala rapidly deployed a new health information system to support pandemic surveillance and response in Uganda's largest urban area

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Background

Sub-national governments throughout Uganda receive daily COVID-19 case alerts from the Ministry of Health. The Kampala Capital City Authority (KCCA) is responsible for the health of 4.5 million people who are either residents or daily commuters into the city from surrounding districts. To effectively manage case alert data and response activities, the KCCA developed a City Health Information System (CHIS) to support case investigation, contact tracing, and strategic re-deployment of scarce health system resources.

Study aims and objectives

This study describes the development of a new health information system for pandemic response in Uganda's largest urban area. With a focus on the first nine months of the pandemic, it unpacks the motivations for deploying the CHIS, its relationship to incumbent systems (e.g., DHIS2), and the process for defining indicators and data elements. It also examines the role the CHIS played in response management and resource allocation decision-

making. Finally, it identifies lessons for responding to future health emergencies in urban areas.

Methods

All data came from official policy documents and the authors' recollections and personal records. All contributing authors were directly involved in the design, implementation, and use of the CHIS in their capacity as government officials and partners.

Key findings

The CHIS was developed to augment existing health management information systems, whose data were insufficiently granular to support effective coordination of surveillance and response activities across the Kampala metropolitan area. Consultations with health system stakeholders informed the definition of key indicators, which were aligned with the national and city pandemic response plans. Implementation required training of surveillance teams and regular data quality assessments. As the pandemic progressed, several KCCA bodies came to rely on the CHIS for their operations and decision-making. District and site-linked case data enabled the real-time identification of hotspots and re-deployment of key resources, such as personnel and vehicles, to address them. The CHIS became a key platform for coordinating and tracking case investigation, contact tracing, and patient evacuation activities.

Main conclusions

The CHIS greatly improved access to and use of real-time data to inform decision-making for the COVID-19 response throughout the Kampala metropolitan area. Evidence from the CHIS guided operations and informed key policies, such as the imposition and later easing of lockdowns. Efforts are ongoing to harmonize the CHIS with national information systems. Other urban areas spanning multiple jurisdictions could similarly benefit from tailored information systems for pandemic response.

Necessity Drove Public-Private Collaboration in the COVID-19 Pandemic: Uganda's multi-sectoral approach to the COVID-19 response

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Background

Historically, engagement between Uganda's public and private health sectors has generally been modest and informal. Although policy frameworks and forums exist for public-private partnerships in health, they have not consistently yielded sustained collaboration in the planning, financing, or delivery of health services. Nonetheless, early in the COVID-19 pandemic, both government and private sector actors recognized the potential value of

partnerships to the national response. To bolster the country's multi-sectoral approach to pandemic response, the public and private sectors developed new modalities for joint planning, policy framing, and implementation.

Study aims and objectives

This study examines and documents the role of Uganda's private sector within the country's multi-sectoral approach to COVID-19. It describes the process of private sector engagement by the government and the key roles of private actors in mobilizing their sector and putting in place new policy frameworks to strengthen future responses.

Methods

The roles played by private sector health system actors in the COVID-19 response were determined through purposeful review of government policies and pandemic response reports, complemented with consultations with Ministry of Health (MOH) officials, prominent private sector bodies, and national and district COVID-19 task force members.

Key findings

Since March 2020, private sector actors have heeded to the Office of the Prime Minister's call to support Uganda's pandemic response. In partnership with the Kampala Capital City Authority (KCCA), the Uganda Healthcare Federation (UHF), a private sector umbrella organisation, mobilized and capacitated private providers to augment the strained public health system for COVID-19 case management in the country's largest urban area. More recently, in anticipation of vaccine availability and to formalize public-private collaboration, the multi-stakeholder national COVID-19 task force developed the *Ugandan Framework and Guidelines for Private Sector Inclusion in the COVID-19 Vaccination National Response*. Extensive policy reviews and consultations, led by the UHF and ThinkWell, were key to the framework's design. Its adoption marked an unprecedented commitment to multi-sectoral partnerships among the MOH, pharmaceutical companies, private providers, distributors, associations, and more.

Main conclusions

The partnerships formed in the COVID-19 response have fostered solidarity and collaboration for current and planned public health interventions. Private sector contributions are especially important to expanding equitable vaccine access, maintaining cold chain integrity, and surveillance. Recognizing the place of the private sector, government should identify mechanisms to leverage private sector actors both in ensuring the continuity of essential non-COVID-19 services and supporting national responses to future pandemics.

Effects of insurance tariff design on oxygen supply in public hospitals

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Medical oxygen therapy is core in treatment of respiratory illnesses including advanced COVID-19. In public hospitals across Low-Income Countries, supply systems operate sub-optimally due to limited production, irregular plant maintenance and sub-optimal oxygen prices. Rwandan hospitals are reimbursed through health insurance schemes for oxygen consumption of their patients, for which there is a single tariff. While procured by price in volumes, hospital reimbursement claims for oxygen are calculated by hours of use, and not volumes used (cylinders or liters). During utilization, oxygen consumption is recorded at an hourly rate to reflect the average tariff paid per hour. This research explored whether the current tariff rates allowed for hospitals to break even, given different oxygen flowrates required to treat various medical conditions. It also modelled tariff scenarios that could optimize the provision of oxygen therapies.

Records for 37,809 non Covid patients in 25 hospitals, between June 2019 and June 2020, were used to estimate oxygen therapy utilization across different wards (average of 9 wards per hospital). These included 20 District Hospitals, 4 Referral Hospitals and 1 Provincial Hospital. The duration of treatment and average flowrate, as recommended by clinical guidelines, was used to estimate total oxygen consumed per patient, and financial implications on hospitals were estimated based on their revenue and total oxygen procurement costs. Analysis of the records showed median flow rate was approximately 10L/min with the upper quartile having a wider variation of flow rates, and the average duration on oxygen therapy was 50 hours per patient. The model developed considers both therapy duration and volume of oxygen used during the therapy, minimizing the marginal revenue obtained at lower flow rates and the loss obtained while using high flow rates. This almost guarantees that hospitals will not operate at a loss while also reducing liability to the insurance company for therapies requiring low flow rates.

(1) Oxygen tariffs should be influenced by the volume of oxygen administered to specific patient types as an initial step to harmonize them. (2) More ideal would be to switch to a volume-based tariff. This analysis informs policy makers on the link between prices and utilization of oxygen therapy, and the important linkage of consumption to patients' oxygen flowrate requirements. Accurate oxygen flow administration (LPM), and the use of pulse oximeters help regulate the oxygen flow as patients stabilize; practices that need to be improved to control effective utilization and in effect costs.

Control of Covid-19 in the DRC: Analysis of the main control measures taken during three waves from March 2020 to August 2021

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Democratic Republic of the)

Introduction

Since December 2019, the world has been facing an emerging disease, Covid-19, declared a pandemic by the WHO on 01/30/2020. The DRC recorded its first case in March 2020. Since then, many measures have been taken to control the epidemic.

The objective of this study is to identify the main response measures taken during this pandemic in the DRC and to analyze them in terms of who took them, why, how and where.

Methodology

This is a case study on the fight against Covid-19 in the DRC. The documentary review and the semi-structured interviews of the key informants (face to face, by telephone or by videoconference) made it possible to collect data.

Results

Once the epidemic was declared, national authorities took measures to control this first wave: 14-day quarantine of travelers from countries affected by Covid-19; suspension of flights from affected countries; implementation of control measures. A technical secretariat and a presidential task force composed of scientists have been set up to help the authorities make decisions informed by the evidence. Thus, to limit the spread of the epidemic, the President of the Republic has decreed a state of health emergency: travel ban, closure of schools and universities, etc. (from March 24 to July 21, 2020) combined with individual prevention measures (correct wearing of masks, hand washing, physical distancing). For its part, the technical secretariat has adopted, based on the results of certain observational studies, a therapeutic protocol combining Chloroquine with Azithromycin. In Kinshasa, the initial epicenter of the epidemic, the increase in cases and their concentration in the commune of Gombe had led the governor to decree from April 06 to June 29, 2020, the confinement of this commune to limit the spread of epidemic. In December 2020, during the 2nd wave, the President decreed a national curfew still in effect. The flagship measure during the 3rd wave remains vaccination against Covid-19 in the most affected cities.

Conclusion

During successive waves, measures were taken to control the epidemic. But some have had significant collateral effects on the daily lives of the population. Their application in the future requires a balance between the desired effectiveness and the undesirable collateral effects on the population.

Key words : Mesures de contrôle, Covid-19, RDC

Parallel Session 8-5

Engaging Stakeholders To Use Evidence For Policy Making

Engaging Stakeholders in Nigeria to identify gaps and develop strategies for improving evidence use in health policy.

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Background:

The practice of utilization of evidence from research findings in formulating health policy by stakeholders in Nigeria is relatively minimal. This may be attributable to relative insufficient capacity to generate and utilize health policy and systems research (HPSR) findings. The

Aim

of the consortium of stakeholders in Nigeria supported by the Health Systems Global African forum, which organized a virtual convening for key local stakeholders, was to engage stakeholders to collaboratively identify gaps, opportunities, as well as develop strategies and tools to improve the use of evidence in health policy making.

Methods:

The convening was a 2-day virtual participant-driven conference which held in August 2020. The participants included health and political policy makers, researchers, philanthropists, global health practitioners, the media, civil society and other stakeholder groups. Various formats were combined for effective participation and deliberation on issues including plenary sessions, panel discussions led by seasoned practitioners, academics and policy makers vast in the field of HPSR, as well as question and answer sessions after each panel discussion. The outcomes were shared with stakeholders through policy briefs, advocacy sessions and publications.

Key findings:

Gaps identified include poor funding of context-specific health systems research and

capacity building, gender inequality in evidence generation and decision making, poor multi-sectoral collaboration, weak health financing policies, ineffective mechanisms of knowledge translation, and poor utilization of research findings by policy makers. Other gaps that were found included poor linkages between researchers, policy makers, implementers and beneficiary communities/groups. Others were absence or minimal co-creation or co-production in research design especially non-involvement of beneficiaries. Recommendations provided include multi-sectoral approach to problem solving, country ownership and development of concrete research agenda that is informed by the society, focusing research questions on the right places and the right people, including gender analysis in HPSR in order to promote gender equity and building interpersonal relationships in order to strengthen the relationship among researchers, policy makers and practitioners.

Main conclusion

The stakeholder convening provided a forum for open discussions on key gaps and potential mitigating strategies in evidence-informed policy making. The broad bottom-up approach employed provided realistic opinions to be tested and employed to improve evidence generation and utilization. Lessons learned from this engagement can be adopted in similar contexts across sub-Saharan Africa and beyond.

Measurement and decomposition of inequity in access to Essential Health Services in the context of Universal Health Coverage in the African Region

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Background:

While African countries have committed to the goal of Universal Health Coverage, it is critical that the improvements in both coverage and financial risk protection are equitably distributed across the population. Policy markers within the African region need to not only understand the extent of inequality but also factors that explain the observed inequality. This study set out to measure and explain the extent of socio-economic inequality across essential health services key to the attainment of Universal Health coverage.

Aims and objectives:

This study set out to measure and explain the extent of socio-economic inequality across essential health services key to the attainment of Universal Health coverage.

Methodology:

Data for the analysis was obtained from nationally representative samples from Demographic and Health Surveys for countries in the region. Socio-economic status is measured using a wealth index generated through principal component analysis UHC Service Coverage indicators were adopted from the WHO UHC Service Coverage Index. Indicators span the service-related sub-indices of the UHC index namely, reproductive and maternal health services, infectious diseases and non-communicable diseases. The concentration indices for these three service areas were used as the primary measure of inequality and they were decomposed into their determining factors using a generalized linear model with binomial logit link.

Results:

Across the 47 countries included in the analysis, coverage for reproductive and maternal health services, infectious diseases and non-communicable diseases demonstrated pro-rich inequality. The largest contributions to inequality were driven by education, health insurance coverage and socio-economic status. Urban/Rural divide was also important contributors in the measured inequality of all four services.

Conclusion:

The findings indicate that inequality remains an important challenge for attainment of UHC in Africa. Although actions will be needed within the health sector to address this challenge, multisectoral investments beyond the scope of the health sector especially the education sector will also need to be addressed.

Data to support decisions: what is the quality of economic evaluations and their data sources for non-communicable diseases conducted in Sub-Saharan Africa? A cross-sectional analysis

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Background

Decision-makers in sub-Saharan Africa (SSA) faced unprecedented challenges during the Covid-19 pandemic to make decisions to allocate health resources in the face of scarce resources together with constrained data availability and quality. Despite the appropriate focus on the pandemic, the burden of non-communicable diseases (NCD) increasingly needs more attention. Economic evaluations can help to determine which health interventions should be funded or included in any universal health care (UHC) benefits package. The data and sources

for these analyses need to reliable and relevant to the country of interest.

Aim

To describe the aspects of economic evaluations and assess the quality of the data sources used in all published economic evaluations relevant to two NCD in SSA.

Methods

We systematically searched selected databases (PubMed, EMBASE, CINAHL, Scopus) for all published economic evaluations for cardiovascular disease and diabetes in SSA. We screened studies and extracted data using the iDSI reference case with 11 principles (e.g. evidence, health outcomes, costs) to measure the adherence of studies to reporting (score of 21) and methodological aspects (score of 19). We assessed and described the quality of data sources using a hierarchical scoring system.

Key findings

From 7,297 retrieved articles, we selected 35 studies; most focused on medicines. Half the studies (51%) had first authors based in Africa, most were from a single country (83%), had a utility-linked outcome (e.g. DALY or QALY, 69%), were either cost-effectiveness (or utility) analysis (80%), had an analytical model (71%), took a health care system perspective (60%), and used a threshold measure related to Gross Domestic Product (57%). Adherence to reporting aspects was higher (mean 81%, average 17/21, five had perfect scores) than adherence to methodological aspects (mean 67%, average 13/19). The strongest areas concerned transparency, comparators, and evidence but the weakest areas were uncertainty, budget impact, and equity. Data sources - and their quality - were various and included both locally-derived sources and international databases (e.g. WHO).

Conclusions

While many economic evaluations were of high quality, there is room to improve the sources and quality of data integral to analyses in SSA. We need more information on budget impact and equity considerations. A politically-supported and sustained focus on developing and maintaining reliable and locally-relevant data sources (perhaps with a regional approach) will lead to better evidence to support decision making in SSA within the context of UHC and health benefits plans and resilient health systems.

COVID-19 and income-related mental health inequality in South Africa

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Background:

Following the outbreak of COVID-19 towards the end of 2019, South Africa, like most countries, was placed in a full national lockdown in March 2020, and economic, physical, and entertainment activities and mobility were severely restrained in an effort to contain the pandemic. Given differences in socioeconomic statuses, individuals' coping abilities in the face of the threat of exposure to the virus and its consequences differ. Current evidence suggests that the pandemic and related public health measures instituted to slow down the spread of COVID-19 have worsened existing inequalities, with the burden of the pandemic being disproportionately borne by the vulnerable. However, there is literature that suggest that shocks like pandemics, wars, and civil conflicts narrow inequalities. Be that as it may, the economic impacts of COVID-19 containment measures will affect the incidence, prevalence, and distribution of mental ill health, now and for years to come.

Objective:

The present study was aimed at ascertaining the impact of the COVID-19 pandemic on income-related inequality in mental health in South Africa, which is a highly unequal middle-income country.

Methods:

Data used were drawn from the last three rounds of the South African National Income Dynamics Survey (NIDS) and the fifth round of the NIDS-Coronavirus Rapid Mobile Survey (NIDS-CRAM). The recentred influence functions (RIF) regression decomposition method was employed to ascertain the influence of the COVID-19 pandemic on inequality in depressive symptoms related to per capita household income in South Africa. Health. Depressive symptoms were screened using the 10-item Centre for Epidemiological Studies Depression Scale (CESD-10) (Radloff, 1977) in the NIDS and the Patient Health Questionnaire (PHQ-2) (Kroenke, Spitzer & Williams, 2003) in the NIDS-CRAM.

Findings:

We found that the distribution of good mental health was pro-rich before and during the pandemic. We also found that the COVID-19 pandemic has significantly less influence on income-related mental health inequality when measured using the shortfall relative concentration index and the Wagstaff index, but not when measured using the Erreygers index or the attainment relative concentration index.

Conclusion:

Although the positive association between good mental health and affluence remains, the COVID-19 pandemic increases mental health problems amongst the affluent. The developing mental health effects of the COVID-19 pandemic can be offset by tractable policy measures to reduce historical inequalities.

Parallel Session 8-6

Uhc Policy Processes And Reforms_FR

Equity and financial risks protection in access to health care for all in Côte d'Ivoire

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Universal health coverage (UHC) is a key element of Côte d'Ivoire's health policy. Although health outcomes have improved over the past decade, significant inequalities remain. However, some of its indicators are among the highest in West Africa and its health service coverage is stronger than many low-income countries. Developing a policy to provide access to health care for all Ivorians requires identifying barriers to access, as well as the characteristics of non-users.

The study explores the 2019 and 2020 Household Living Conditions Surveys. We use Benefit Incidence Analysis (BIA) to determine the use of different health services by socio-economic group. Logistic regressions are also used to identify correlations between access to care and the incidence of Catastrophic Health Expenditure (CHE). The regression analysis identifies the determinants of household vulnerability to CHD by geographic and socio-economic variables.

The IYB indicates that only mobile clinics and community health worker interventions benefit the poor. Although typically in rural areas, clinics do not benefit the poor.

The main reason for low utilisation of services is that they are not affordable. In 2019, 27 per cent of households reported not seeking health care despite being ill. Of these, 48 per cent said they did not seek care because the price was too high. For the lowest wealth quintile, this figure was 67%.

Use of services varies by education, wealth and department. Households in the wealthiest quintile used 2.6 times more health services than those in the least wealthy quintile. The latter face less DCS compared to the richest quintile as they forego care.

This paper presents new elements and opportunities for Côte d'Ivoire to achieve UHC. Côte d'Ivoire needs to: 1) prioritise pro-poor policies, including the provision of an essential package of services at the primary level, 2) strengthen pro-poor programmes such as mobile clinics, and 3) target rural populations. This should be complemented by strategies to waive or reduce fees for the poor but this requires strong coordination between public, private and NGO providers.

Antenatal care utilization in Côte d'Ivoire from 2010 to 2020 and fee exemption policy

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Background :

Free health care policies have been adopted in many countries in sub-Saharan Africa to remove financial barriers to accessing health services. These policies target vulnerable populations such as pregnant women and children aged 0-5 years. In Côte d'Ivoire, a policy of free health care for pregnant women has been in force since April 2012 in order to improve maternal mortality indicators. This study aims to document the effects of the abolition of fees on the use of health services in Côte d'Ivoire. It aims to assess the effects of free care among pregnant women from 2011 to 2020.

Material and Methods:

This is a longitudinal study with a descriptive aim over 11 years (2010 to 2020). Data were obtained from the national DHIS2 information system and the SIGL supply chain management software. Data on the availability of free tracer drugs for the year 2020 and on the use of ANC consultation services (1st and 4th ANC) were extracted from the different databases as well as the number of health facilities within 5 km and the ratios of health personnel/population.

Results:

An increase in the number of NPC1 and NPC4 was observed over the period averaging 6.2% and 5.5% respectively. NICU and ANC4 coverage increased by an average of 4.4% and 8.5% respectively. However, the ANC drop-out rate remained stable over the 11 years with an average of 59.3%. The number of women who performed their first ANC in the first trimester of pregnancy represented half of all ANC1 recorded in 2010. The availability of drugs for the mother-child programme was estimated at 52.5% in 2020, while that of all health products was 56%. The ratio of health workers to the population has been in line with the WHO standard since 2017. On average, 70% of the population lived within 5 km of a health facility.

Conclusion :

Despite the fee exemption measure, women do not follow the ANC recommendations of the mother-child programme. The causes of non-adherence need to be documented in order to improve the levels of use of maternal health services.

Key words: Pregnant woman, Antenatal consultations, Universal health coverage, Côte d'Ivoire

Health financing in South Kivu province in Democratic Republic of Congo: evidences from operational research.

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The health financing system in the province of South Kivu is still characterised by a lack of resources and an almost non-existent and irregular contribution from the state. This context remains unfavourable to the achievement of Universal Health Coverage in the province (UHC).

Through operational research, this study maps and evaluates existing health financing mechanisms with a view to drawing lessons for reforming the financing of the provincial health system in South Kivu and moving towards UHC.

The results indicate that health financing remains fragmented and characterised by a multitude of actors deploying insufficiently harmonised and coordinated interventions. Cost recovery and external support to strengthen the health system are the most common financing approaches used in the province. The development of mutual health insurance schemes can contribute to improving access to health care for the population, even if their coverage rates remain extremely low. Results-based financing (RBF) and free care, financed mainly by technical and financial partners, are irregular and insufficiently sustainable.

In view of this situation, it is suggested that an integrated strategic purchasing model be adopted: i) anchored in local institutions, ii) appropriate for all stakeholders and, iii) focused on joint implementation of mutual health insurance, free care, RBF and cost recovery for the most affluent. It is also recommended to set up a support fund for the provincial health system in order to strengthen the mobilisation and pooling of foreign support and budget resources.

Finally, it is proposed to operationalise the “Single Contract” initiative with a view to harmonising, pooling and ensuring the sustainability of the partners’ support programmes for the province. This operationalisation will involve: i) strengthening policy dialogue, ii) developing an investment case to be used as an advocacy tool for resource mobilisation, and iii) creating a platform for regular monitoring and evaluation of financial commitments and disbursements under the leadership of provincial health authorities.

Magnitude and determinants of catastrophic out-of-pocket payments for health care in Burkina Faso

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Background:

Since the Covid 19 health crisis in 2020 following the Alma Ata Declaration of 1978, equity in access to health care services has become an important political concern for all nation states.

Objectives:

The objective is to analyse health financing by households. More specifically, the aim is to analyse the extent of out-of-pocket payments and their determinants in relation to the challenges facing health financing policy in Burkina Faso.

Methods:

We use the ability-to-pay approach at the 10%, 25% and 40% thresholds recommended by the Sustainable Development Goals (SDGs) and the World Health Organization (WHO). The data come from the Harmonized Survey on Living Conditions of Households (EHCVM) of the West African Economic and Monetary Union (UEMOA), 2018 edition 1 of Burkina Faso; and cover 7,010 households for the statistical analysis and 6,460 households for the regression by the probit model.

Findings:

The magnitude of catastrophic care expenditure decreases as the threshold increases from 5% to 40% with an amplitude of 5%. It varies from 10.29% to 0.66% in incidence and 1.13% to 0.28% in intensity respectively. Households spend 15.98% to 83.61% of their ability to pay on health care. Its determinants are: wealth, age, marital status, household size, education level and industry. The gender approach to the determinants confirms almost the same results. It supports the adage that “poverty has a female face”. For the few women who are exempted from exorbitant expenses, this depends mainly on their own bargaining power with their spouses, the education level of their spouses, the region of residence and/or the ethnic origin of their spouses.

Conclusion:

A better targeting of health financing policies for all in Burkina Faso can be envisaged by starting with the sensitisation of households to join the Universal Health Insurance (UHI) as well as the sensitisation to maintain their healthy living environment.

Keywords: equity, direct payments, gender, Universal Health Insurance.

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