**Abstract for AFHEA 11-14 March 2019**

**Theme: Securing Primary Health Care (PHC) for all: the foundation for making progress on Universal Health Coverage (UHC) in Africa**

**Sub-theme: Key methodological changes in health economics and policy analysis specific to Africa**

**Title:** Using the full income approach and other methods to estimate benefits and costs of national antiretroviral programmes – understanding different results and policy guidance in West, Southern and Eastern Africa

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**Background**: Sustaining antiretroviral therapy (ART) is a large cost confronting many of Africa’s health systems. Analyses are required to inform decisions about whether to prioritise ART over alternative investments, either in health care, or in other development and social sectors. Evaluations of investment in ART can use a variety of methods, including cost-benefit, cost-utility and cost-effectiveness analysis. The Full Income (or Value of a Statistical Life -VSL) approach to valuing benefits in financial terms is a new method, made prominent when the Lancet Commission used it to analyse investments that could lead to convergence in health status of low and upper income countries. There is limited experience of applying VSL to a broader range of interventions and countries.

**Objectives:** 1) Assess benefit-cost ratios for ART using the Full Income approach and compare them to alternative methods of economic evaluation; 2) Identify and understand differences in Full Income results between regions and countries; 3) Assess the usefulness of Full Income for policy decision-makers.

**Methods:** We quantified cost benefit and cost utility measures of the historical scale-up of ART 1996 to 2015 in Eastern, Western and Southern African countries, using different methods but comparable calibrations. The most recent country-specific Spectrum/AIM files were used to quantify epidemiological and demographic impacts of HIV and ART in countries grouped by region. ART cost estimates included drugs and service delivery, and were based on unit costs collated for previous global resource needs estimates supplemented by other sources. Estimates adjusted for avoided costs of non-ART end-of-life care. Benefits of ART were quantified in financial terms using the VSL approach and then also by estimating productivity losses. Projections of DALYs averted were obtained from Spectrum.

**Results:** Full Income estimates indicate that for every $1 spent on ART globally, $3.50 in benefits were gained. Full income benefit:cost ratios varied substantially between different income categories and regions, with the largest ratios in Eastern and Southern Africa. Estimates of Full Income economic benefits of ART averaged between two and three times those based on productivity gains. Estimates of costs per QALY or per DALY show less variation between country categories and generally compare well with pcGDP benchmarks.

**Conclusions.** Cost benefit estimates based on Full Income and productivity gains are useful to show returns on investment to Finance Ministries and other funders in sub-Saharan Africa. They also strengthen arguments for increasing overall spending on health care to achieve UHC.

**397 Words**