**Title:**

Quality improvement in community health in Kenya: estimating outcomes for investment decisions

**Presenting Author:**

Meghan Bruce Kumar

Liverpool School of Tropical Medicine

[Meghan.brucekumar@lstmed.ac.uk](mailto:Meghan.brucekumar@lstmed.ac.uk)

+254 733440052

**Coauthors:** Jason Madan (Warwick University), Lilian Otiso (LVCT Health), Miriam Taegtmeyer (Liverpool School of Tropical Medicine)

**Abstract**

**Background**

Health systems strengthening (HSS) interventions are difficult to link directly to the type of clinical outcome measures traditionally used in cost-effectiveness analyses. Quality improvement is an example of an HSS intervention that requires economic evaluation to guide investment decisions around universal health coverage (UHC) by African governments and funders working in the region. Specifically targeted at the community level, where providers’ work is primarily in preventive care and referral rather than treatment, links to these outcome measures are more long-term, more distal and more difficult to attribute. In this paper, we are applying novel methods to estimate the potential benefits of investing in quality improvement in community health systems to ensure high quality UHC.

**Aim/Objective**

The objective of the paper is to evaluate the cost-effectiveness of quality improvement for community health in Kenya.

**Data and methods**

We selected antenatal care (ANC) and testing (for anemia, syphilis, HIV and malaria) conducted in the first ANC visit as a tracer condition that might be identified and referred by community health providers in the selected setting in Kenya. We developed patient pathways for care-seeking and treatment using decision trees. At each decision node in the patient pathway, we identified probabilities of various possible outcomes through literature search and expert opinion from clinical providers in study sites in Kenya.

Next, we identified the probabilities most likely to vary in response to a change (quality improvement) in community health provider behavior based on a system map we developed. Using primary costing data from the intervention, we determined the magnitude of change in intermediate, proximal outcomes of the intervention in the patient pathways required to yield a cost-effectiveness ratio below the selected thresholds.

**Key findings**

We show three key findings (analysis in progress):

1. ANC patient pathway including pre-/post-intervention probabilities
2. System map identifying potential impact and feedback loops from quality improvement intervention
3. Table of results on cost-effectiveness including sensitivity analysis on outcome measures

**Conclusions**

These results should be discussed with policymakers and funders as a potential alternative to traditional cost-effectiveness analyses. This type of evidence, coupled with budget impact analyses, might be more useful than incremental cost-effectiveness ratios to guide decisions about investment in UHC and HSS in general.