What is C-it DU-it?

Facility and community health data is rapidly changing from paper to electronic across Kenya. Multiple digital systems are being developed, but these do not link. Community health volunteers (CHVs) and facility staff need to work together using data to monitor and improve uptake of services. Antenatal care (ANC) is an example of a service where this is important as Kenya in adopting WHO's ambitious target of 8 ANC contacts. This research will demonstrate how to link the data and use it, providing missing evidence on the impact, costs and scale-up of data linkage and use.

Our intervention targets the interface between the community and the facility. Data linkage for data use is at its heart with ANC picked as an example of what is possible. Our short name C-it DU-it (pronounced "see-it; do-it") is an acronym intended to convey 'seeing' linked data (C-it) and 'doing' or acting on the data (DU-it).

Our aim is to strengthen community health systems in Kenya through ANC data linkage and use, learning lessons for other contexts. Our objectives are to:
1. To increase ANC uptake and quality in Western Kenya by
   a. linking community and facility digital ANC data systems, creating a system able to track an individual woman throughout pregnancy and schedule appointments ('C-it')
   b. strengthening the capacity of community work improvement teams to use 'C-it' data for quality improvement and of CHVs to deliver community-based ANC contacts ('DU-it').
2. To co-develop research strategies with county policymakers that address evidence gaps to scale-up community health systems strengthening through 'C-it DU-it':
3. To strengthen the capacity of communities, county managers, Kenyan researchers, and institutions to set the community health research agenda and deliver major implementation research

Our research will be conducted in Homa Bay before scale up to Kisumu, Migori and Kakamega.

A realist evaluation will tell us how, why and for whom the approach worked or did not work. Understanding the

Community Health Worker leaving a homestead after a field visit - Kisumu County.

relationship between the county context, how people responded and outcomes (e.g., political agendas; team working; motivation; local pregnancy beliefs) makes it easier to adapt the approach to other contexts.

A pragmatic cluster-randomised controlled trial in Homa Bay will tell us the impact of linking digital data and the added value (if any) of combining this with training work improvement teams in data use to drive ANC uptake. We will measure the impact on the number of ANC visits and the effects on pregnancy outcomes and quality of care.

Health economic evaluation will identify whether C-it DU it reduces health expenditure for pregnant women accessing and engaging with ANC care and whether the intervention is cost effective.

Scale-up We will adapt and scale-up the interventions using toolkits developed in the trial county to control clusters and 3 additional counties. There will be a chance to refine as results from our research emerge.

Partners with excellent reputations and national influence are leading this study. This study is under the leadership of Homa Bay County co-investigators. LVCT piloted the approach and is a lead player in strengthening community health system and scale-up. KEMRI conducts large health systems trials in Western Kenya. Liverpool School of Tropical Medicine will support us in our research and our data digitisation experts from GiND will develop and test systems for data linkage adapted to each county. We will work with the sub-county county teams and hundreds of community health volunteers that identify pregnancy and refer women to ANC services.