Scientific Symposium

26th May 2017
KCCO Meeting room, KCMC

Implementing the Option B+ PMTCT Guidelines in the Kilimanjaro Region: Opportunities for Collaboration

MEETING REPORT

Table of Contents

Abbreviations

ANC	Antenatal clinic
ART	Antiretroviral therapy
DHIS	District health information system
EGPAF	Elizabeth Glaser Paediatric AIDS Foundation
EID	Early infant diagnosis of HIV
KCMUCo	Kilimanjaro Christian University College
KCRI	Kilimanjaro Christian Research Institute
KCMC	Kilimanjaro Christian Medical Centre
LARS	LLAPLa Assessment and Response System Tool
LLAPLa	Life long antiretroviral for pregnant women
LTFU	Loss to follow up
MEPI	Medical Education Partnership Initiative (a program of Fogarty International)
MoHCDGEC	Ministry of Health, Community Development, Gender, Elderly and Children
PLHIV	People living with HIV
PMTCT	Prevention of Mother to Child Transmission
SHAPE UTT	Strengthening Health Systems for the Application of Policy to Enable Universal Test and Treat
SSA	sub Saharan Africa
UTT	Universal test and treat
WHO	World Health Organisation

Executive Summary

On 26th May 2017, the Kilimanjaro Christian Research Institute (KCRI), the Institute of Public Health (IPH) within the Kilimanjaro Christian Medical University College (KCMUCo), the London School of Hygiene and Tropical Medicine and Duke Global Health Institute (DGHI) co-hosted a symposium. The symposium took place in Moshi, Tanzania, to share ongoing research on prevention of mother to child transmission of HIV (PMTCT) in Tanzania.

The symposium brought together a range of stakeholders to discuss how research might best inform the implementation of the national PMTCT guidelines in Tanzania. Panels included updates on PMTCT policy guidelines, training and routine data collection, implementation science research on PMTCT care delivery, and presentations of ongoing research by KCMC students and trainees. Representatives from the Ministry of Health, Elizabeth Glaser Pediatric AIDS Foundation and local health facilities participated.

Tanzania has shown significant progress in the delivery of PMTCT services, which hold the potential to eliminate perinatal HIV infections, improve the health of women living with HIV and prevent the forward transmission of HIV. Symposium participants considered the implementation challenges in the delivery of quality services, the research evidence needed to inform implementation and the opportunities to use research findings to improve and sustain implementation.

The breakout discussion provided participants with an opportunity to reflect on the content presented in the symposium and to think about the role of research in improving the implementation of the PMTCT guidelines. The lively breakout discussion groups noted various challenges in the implementation of PMTCT guidelines, including insufficient knowledge of the contents and implementation status at the facility level. Insufficient resources were also highlighted, referring to both supplies and personnel (for service provision, counselling, defaulter tracing, reporting). At the provider level various challenges were highlighted including low levels of motivation, high workloads, provider burnout and inadequate skills. The groups recognised the challenges in conducting timely, efficient and effective monitoring and evaluation of PMTCT programmes. Various patient level barriers were also discussed including attendance at facilities, uptake of services and adherence to ART. Many of these barriers were discussed in relation to stigma and other contextual factors. The groups brainstormed on different approaches that could be adopted to improve implementation. The groups were encouraged to think about how we can better develop the research agenda to inform implementation. Wider consultation was requested from the group, in order to involve all providers in the development of ideas. Some ideas mentioned during the meeting included observational research from the provider perspective, as well as research around stigma, HIV positive pregnant adolescents and the involvement of men in PMTCT programmes. Additional systems and implementation research was suggested around counselling realities and also the cost effectiveness of different interventions to improve the uptake and effectiveness of PMTCT as well as clinical research particularly around pharmacovigilance. The group recognised the various challenges in conducting quality research and all agreed on the need to create more opportunities to share research findings with a wide and varied audience to promote the uptake of research findings to ultimately improve the implementation of programmes.

The meeting closed with a commitment by all to continue sharing experiences across the diverse group and a voiced wish to conduct an annual symposium.

Session 1:
PMTCT guidelines and scale up in Kilimanjaro region

The first session of the day was chaired by ***Prof Blandina Mmbaga***. The session aimed to bring together implementers and policy makers to describe the realities of implementing the Option B+ PMTCT guidelines in Kilimanjaro.

Training providers on PMTCT guidelines

Sister Hillu is the PMTCT coordinator at KCMC and a national PMTCT trainer. She took us through an introduction of PMTCT policies in Tanzania, giving a detailed background on the revisions and updates that have occurred over time. Sister Hillu provided the audience with a clear overview of the policy and rationale for Option B+, explaining how the policy should avoid the start-stop-start approach seen in the other PMTCT options, provide a cumulative benefit of reaching more HIV+ women, integrate ANC and ART services and ultimately provide the "last mile of ART decentralisation". Sister Hillu described how their training aims to develop the capacity of the health care workers to establish links within the community, enabling them to deliver PMTCT services and provide comprehensive care for infected women and their families. The training involves various topics to impart knowledge pertaining to HIV care and treatment (testing, initiation and adherence to drugs, infant treatment and care) and to facilitate the reduction in HIV related stigma. The final section of her presentation included a recognition of the multiple side effects associated with the various drugs.

In response to some questions by the plenary, Sister Hillu acknowledged the challenge in responding to the changing guidelines and the turnover of health care providers. She noted the need for multiple trainings, often beyond the resource capacities of the system. Additionally, she noted that whilst her reproductive child health department had "specialised" adolescent health services, there was nothing specific for HIV positive pregnant adolescents, who generally just come to the normal PMTCT clinic. It is not clear what happens to these young mothers after completing the two years in PMTCT.

Implementation of PMTCT programs in the Kilimanjaro region

Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) is the implementing partner of the MoHCDGEC in the Kilimanjaro region. ***Jonathon Mremi*** (Associate project manager, EGPAF) presented on EGPAF's implementation experiences in Kilimanjaro. We heard about the history of EGPAF's support in the region, beginning in 2003 with various different projects (e.g., Call to Action, LIFE, and USAID Boresha Afya). Their support includes developing the capacity of service providers through in-house training, supervision and mentorship as well as providing supplies and infrastructure toresource-constrained areas. EGPAF currently supports 6 regions across the Northern and Central zone of Tanzania. In Kilimanjaro they support all seven councils and therefore indirectly support about 65 facilities. Jonathon described the roll out of Option B+ in the region. Kilimanjaro was included in the second batch of regions in the national rollout schedule, and began roll-out in January 2014 with a series of sensitisation meetings, provider training sessions, and the formation of technical working groups.They also increased supervision and monitoring visits and incorporatied new indicators into the regional quality improvement indicators to improve reporting. Jonathon then presented data showing drastically increased numbers of women testing and moving onto treatment following the initiation of Option B+ in 2014, with similar

trends seen amongst HIV exposed infants. Jonathon presented key achievements, notably that by the end of 2014, all PMTCT facilities in the region were providing Option B+. He stated that Option B+ had reduced the positive rate amongst HIV exposed infants to less than 4% (in-line with the national elimination of mother to child transmission strategy target). However challenges still remain, with a need to ensure a sustainable supply of ART and overcome poor documentation and reporting of services, poor retention, and low male involvement.

In order to address the challenges of Option B+, the MoHCGEC, with support from CDC, developed the LLAPLa Assessment and Response System Tool (LARS). LARS was rolled out in 2016. It aims to assess and provide response to 5 key priority areas for Option B+: (i) monitoring and evaluation; (ii) commodities availability; (iii) quality of HIV testing services; (iv) early retention of pregnant and breastfeeding women on ART; and (v) early infant diagnosis. The LARS has three components: Module I- Site selection or targeting algorithm; Module II –Assessment questionnaire; and Module III – Identify and implement solutions, track response on given time frame. LARS has been incorporated into DHIS. Facilities facing challenges are identified through a selection of targeted indicators (namely % pregnant women received HIV test at ANC < 90%; % pregnant women identified HIV+ who initiate ART <90%; and > 3 HIV+ pregnant women identified in last quarter). RHMT and CHMTs were trained on the LARS tool in September 2016. The system has been implemented for two quarters (Oct – December 2016 and Jan – March 2017). Initial observations suggest that this system can lead to improvements in service delivery; however, more time is needed to see if it will become embedded within the system. Jonathon concluded by describing how an improvement in PMTCT services is a corner stone required to achieve an HIV free generation, recognizing that PMTCT alone is not sufficient and there is a need for improved integration to support the continuum of care.

Monitoring of PMTCT Programme roll-out; an overview of data management

Dr. Prosper Njau is a Programme officer within the national PMTCT programme within the MoHCDGEC. He presented the theory of the PMTCT programme and the monitoring and evaluation structures, describing the various successes and challenges of the programme. The PMTCT programme has four components with corresponding activities: (i) primary prevention of HIV; (ii) prevention of unplanned parenthood; (iii) prevention of vertical HIV infection; and (iv) the reduction of adverse outcomes. Prosper re-iterated the points of Sister Hillu by describing the evolution of the policy since 2000. He then presented four different schematics illustrating (i) the programme logic (and data sources); (ii) the monitoring and evaluation framework (indicating the different data sources and actors); (iii) the aggregate data flow from the individual patients through to the national repository; and (iv) the electronic and paper based data flow from the different sites (paper vs computerised) into the DHIS and then the national database. The presentation highlighted the implementation realities and inherent complexities present in a system spanning a large country of varied capacity. Prosper discussed the serious challenge surrounding data quality, in particular the very limited capacity to collect the data due to limited human resources. At most facilities there are no specific personnel dedicated to the entry and management of data. Prosper recognised that service providers' priority is to treat the patients; however they are also mandated to collect and enter a large amount of data. Additionally, he stated that whilst some data is captured and there exist large data sets at both the aggregate and patient level, there is limited capacity to analyse the data. Even when analysis does take place, very few of the research findings are translated into practice and policies. He felt that more effort

is needed to use data to inform programme and epidemic modelling, as has been done in the past using the routine programme reports and special surveys.

The session ended with a lively discussion in which questions were asked pertaining to (i) the role of men in PMTCT, which all agreed is important but an area requiring further research; (ii) mental health assessment and monitoring, also an area needing more focus; (iii) problems in the ARV supply chain, especially of Neviripine syrup and OI treatments; and (iv) LARS system, which many felt requires evaluation and further work to better engage the districts.

Session 2:
On-going research on the implementation of Option B+ PMTCT guidelines

The second session of the day focused on current research projects in areas pertaining to PMTCT in Tanzania and beyond. ***Dr. Jenny Renju*** introduced the Strengthening Health Systems for the Application of Policy to Enable Universal Test and Treat (SHAPE UTT) project. The study was funded by the MRC/Wellcome from January 2017 through to December 2020. This project aims to address a critical evidence gap by ascertaining heath systems preparedness for delivering Universal test and treat policies in Tanzania, Malawi and South Africa. The presentation gave a background to the inception of the project, first describing a Gates funded study investigating mortality across the HIV care and treatment cascade in 10 health and demographic surveillance sites across SSA. A series of contextual studies were conducted, which included: (i) documentation of the HIV policies and WHO guidelines; (ii) an assessment of policy implementation in 156 health facilities; and (iii) a qualitative study in which 263 PLHIV, 53, health care workers and 43 relatives of those who died from HIV were interviewed from 7 health and demographic surveillance sites to further explore the bottlenecks in care. Dr. Renju gave a brief overview of the findings from each of these studies and explained how the SHAPE UTT project provides an opportunity to build on these studies. The longitudinal perspective, gained through an updated policy review and conducting another round of facility surveys and qualitative interviews, will enable them to capture how Option B+ (test and treat for pregnant women) has impacted the health system. We know that Universal test and treat policies will place increased demands on the health system, primarily through patient loads. However it is not clear how these patient loads can and will be absorbed into the existing health services or how a guideline-based high quality standard of HIV care can be achieved. Lessons learned from the implementation of Option B+ across multiple countries can help to not only improve current programmes, but also provide important lessons for the implementation of Universal test and treat to the general population. Within the project, the team will also conduct a detailed costing study in which they will explore how the estimates in the initial costing predictions for Option B+ align with the implementation realities. This will provide insight to future economic evaluations for UTT and evidence to inform the choices about the roll-out models to be applied in different settings. The project is still in the initial set up stage and has been focused on team recruitment and submission to ethics. Data collection is expected to begin with the facility survey and the costing study in September 2017.

Dr. Blandina Mmbaga and ***Dr. Melissa Watt*** provided an overview of a two-year study funded by the U.S. National Institutes of Health, examining postpartum HIV care engagement under Option B+. Observational data across multiple countries has suggested that one-third to one-half of all women who start ART during pregnancy are lost to care

within six months after childbirth. This study was designed to identify the implementation challenges across the PMTCT "treatment cascade", and to support women's long-term care engagement through pregnancy and the postpartum period. The study is guided by an implementation science framework, which identifies barriers and enablers of program delivery and leverages knowledge for effective delivery approaches. The research team is working in nine facilities that provide PMTCT services in the Kilimanjaro Region, and pursuing three aims: (i) to examine the facility-level factors in the implementation of Option B+; (ii) to examine patient-level factors that impede or support care engagement among women initiating or continuing ART under Option B+; and (iii) to identify opportunities to improve implementation of Option B+ so that it enhances and promotes continuous care in HIV services following childbirth. Methods include clinical observations, key informant interviews with providers, a cohort of 200 women enrolled during pregnancy and followed through 12 months postpartum, and qualitative in-depth interviews with a subset of 24 women. In order to identify implementation opportunities, the team will conduct focus group discussions with stakeholders, and hold a feedback meeting to share and discuss the study findings. Data collection for the study is on-going, with preliminary results expected in 2018.

Session 3:
KCMC trainee research on PMTCT

The third session provided an opportunity for KCMC trainees to present their on-going research in the area of PMTCT. Presenters included three MSc students in Epidemiology and Biostatistics, two PhD candidates in Epidemiology and Biostatistics, one physician supported by the KCMC MEPI program, and one MPhil candidate in Public Mental Health at the University of Cape Town. The panel demonstrated the strengths of the KCMC trainees, and highlighted opportunities to involve trainees in PMTCT research. Below is a snapshot of the presentations.

Festo Mazuguni and Dr. Prosper Njau

Title: Retention outcomes related to the implementation of Option B+ in Kilimanjaro region and nationally
Study objective: To determine retention in care among HIV infected women initiated on Option B+, and to investigate possible predictors of retention in Moshi Municipality, Tanzania.
Methods: Retrospective cohort of 507 newly HIV diagnosed pregnant women enrolled in PMTCT in the Moshi Municipality from February 2014 to December 2015. Data was collected from patient medical records and examined for loss to follow up (>90 days late for a clinic appointment). Kaplan-Meier methods were used to examine LTFU, and cox proportional hazards regression models were used to examine predictors of risk of LTFU.
Findings: At 3 months after enrolment in PMTCT, 19.9% of women were LTFU. During the overall study period, 52.4% of women were LTFU. Being young (<25) and not having a treatment supporter were significantly associated with LTFU.

Dr. Michael Mboya

Title: Uptake of early infant diagnosis (EID)
Study objective: To describe the trend in the uptake of EID first test in Dar es Salaam from January 2014 to December 2016, and to determine the incidence rate of HIV infection among HIV exposed infants in this population.

Methods: Analysis of the Management and Development for Health database, representing 248 PMTCT sites and 12,417 HIV-exposed infants. Data were cleaned and recoded, and STATA was used to describe the population and HIV incidence.
Findings: Uptake of EID has increased over time, from 53.2% in 2014, to 57.3% in 2015, to 69.1% in 2016. Only 63.5% of records indicated the use of infant nevirapine syrup (23.4% of records had missing data), and 81.7% indicated the use of cotrimoxazole (9.0% had missing data). The incidence of HIV infection was 2.42 per 1,000 child months.

Dr. Nicholaus Mazuguni

Title: Drug resistance amongst women initiated onto Option B+
Study objective: To describe HIV drug resistance and associated virological patterns among women on Option B+ in Northern Tanzania.
Methods: 148 HIV-infected pregnant women attending PMTCT clinics in the Kilimanjaro Region have been enrolled in the study. During pregnancy, the study is collecting viral load, biochemistry profiles, and resistant mutations (among those with a detectable viral load). The lab functions are assessed again at 6 months postpartum.
Findings: 60% of women had initiated ART during the index pregnancy, while 40% were already established on ART at the time of pregnancy. During pregnancy, 28% of women had non-detectable viral loads, 48% had viral loads <1000, and 24% had elevated viral loads >1000. Women who were newly diagnosed the most likely to have elevated viral load levels. Data collection during the pregnancy period is still on-going.

Dr. James Ngocho

Title: Depression and anxiety among HIV infected pregnant women in Kilimanjaro region Tanzania
Study objective: To determine the prevalence & predictors of antenatal depression & anxiety among women living with HIV in Kilimanjaro region, Tanzania.
Methods: A cross-sectional study was conducted with 142 HIV-infected pregnant women enrolled in any of nine PMTCT sites in the Kilimanjaro region. Data was collected in approximately the third trimester of pregnancy, following a minimum of one month of ART use. Depression symptoms were measured using the Edinburgh Postnatal Depression Scale (EPDS) and anxiety symptoms were measured using the anxiety subscale of the Brief Symptom Scale (BSI). Standard cut-off scores were used as indicators of mental health distress (EPDS $\geq$10, BSI $\geq$1.01).
Findings: 27% of women met criteria for depression, and 26% met criteria for anxiety. Factors associated with both outcomes were: having food insecurity, having lower social support, having higher levels of HIV-related shame, and having more negative attitudes toward the pregnancy. In addition, not being in a relationship was significantly associated with depression.

Dr. Ola Jahanpour and Dr. Nathaniel Rune

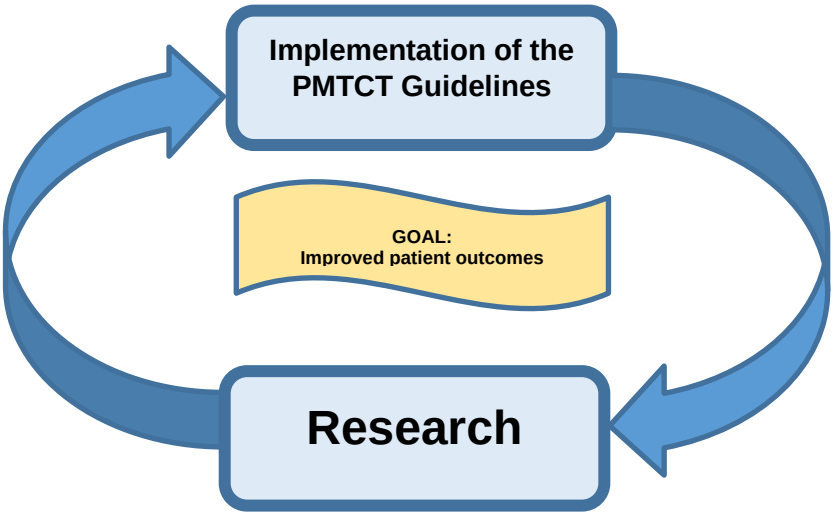
Title: Breastfeeding practices and implications for PMTCT and Option B+
Study objective: To determine the trend and determinants of exclusive breast feeding (EBF) among HIV infected pregnant women.
Methods: The data comes from a hospital-based cohort study, established in 2002 in two PMTCT facilities in Moshi. Women were enrolled in the 3rd trimester of pregnancy; in 2005, only HIV-positive women were recruited, but women from 2002 with subsequent pregnancies were also included. The 2002 cohort included 1,453 women, and the 2005

cohort included 307 women. Analysis looked at trends of EBF over the first six months of the child's life. Determinants of breastfeeding were examined using multilevel analysis.
Findings: The proportion of children who had EBF decreased as the child aged. EBF was more common among HIV-infected women. It was noted that the policy guidelines for breastfeeding has changed over time, and it will be important to examine adherence to the changing policies.

Session 4:
Breakout Discussion

The breakout discussion provided participants with an opportunity to reflect on the content presented in the symposium and to think about the role of research in improving the implementation of the PMTCT guidelines. Participants were asked to use the graphic below to reflect on three areas:

1) implementation of the PMTCT guidelines
2) research on PMTCT services
3) feedback and translation of research into implementation



Below is the summary of the discussion across the four breakout groups.

1. Implementation of PMTCT Guidelines

Challenges in implementation of PMTCT guidelines

1. **Knowledge of guidelines**
    a. Changes in guidelines over time; sends mixed message and difficult to stay current
    b. Updated guidelines need to communicated with simple / clear language in order to guide translation at the clinic level
    c. Limited feedback from MoH to clinics about how they are doing with implementation of guidelines

2. **Availability of resources to support proper implementation**

a. Supplies (e.g., stock outs of medication; diagnostic tools; treatment of opportunistic infections)
b. Personnel (e.g., not enough staff, turnover)
c. Infrastructure (e.g., location of clinics, space and privacy)

3. Provider level challenges

a. Lack of motivation (low salary, lack of professional development, not feeling acknowledged / appreciated)
b. Provider burn-out
c. High workload (time per patient is not sufficient)
d. Training, knowledge, skills related to PMTCT (the person trained may not be the one providing the care)

4. Responsibilities for administration, paperwork, M&E

a. Takes away time from quality care; may take precedence over patient time
b. Lag between training on systems and implementation
c. Providers may not be invested in the value of data
d. Data may be poor quality; electronic system may help, especially linking data across sites
e. No feedback/reports based on the data; electronic systems with generated reports may help

5. Patient barriers to follow PMTCT guidelines

a. Initial presentation at RCH clinic
    i. Late ANC booking, and therefore rush to initiate in PMTCT
b. Readiness to start ART
    i. Not all women are at the same point in acceptance of HIV status and acceptance of lifetime ART
    ii. Guidelines don't provide any flexibility around differentiating care, e.g., giving some women an opportunity to delay for a few days/weeks to become more ready
c. Stigma
    i. Self stigma
    ii. Lack of disclosure to partners and others
    iii. Perception that providers may not keep status confidential
    iv. How stigma is presented by providers (i.e., may make women fearful of disclosing)
d. Poverty and low nutritional status of women

6. Availability and quality of counseling

a. Time/personnel for counseling is challenging, especially at the important point of a new diagnosis
b. Patients may see any health care provider at appointments; therefore, may not get someone who is trained in PMTCT counseling, and may not get the same provider for continuity of care/counseling
c. Need for "expert patients" who can provide more personalized peer counselling

7. Difficulty tracing women, and reaching women who may be lost to care

a. Migration, movement to other clinics; may not be documented

b. Fear about home-based outreach, due to fear of HIV disclosure in community. Leads some women to hide/run away from home visits, and/or give false contact details

8. **Impact of PMTCT services on the broader health system**
    a. Needs to be further integration with the broader health care system, e.g., immunizations, bednets, programs for childhood nutrition, etc.
    b. Need more focus on impact on mental health in general, especially among adolescents

9. **Sustainability of PMTCT services**
    a. Donor dependency

Needs to improve implementation

1. **More input into guidelines**
    a. Clinic-level implementers (ie, health care providers) should provide input into guidelines, considering the real situation of facilities

2. **Data needs to improve implementation**
    a. Feedback of routine data collection systems and on-going research [see below]

2. Research on PMTCT Services

How we develop better research questions to inform implementation

1. **Input from stakeholders to identify research questions/areas**
    a. Seek input from all providers involved in care (not just doctors in charge)
    b. Seek client input: community sensitization meetings, suggestion box, questionnaires
    c. Use existing systems in the clinic: attend regular meetings, QI team
    d. Establish advisory board that can be consulted throughout the process

2. **Other areas to review to identify research questions**
    a. Gaps in literature
    b. Existing data (e.g., routine M&E data from the clinics)

Challenges for conducting research on PMTCT

1. **Challenges of research quantity/quality**
    a. Limited funding
    b. Research may not have enough money for the most high-quality research
    c. Research many not align to the needs of clinical services

2. **Challenges of doing research**
    a. Approval process can be time-consuming, lots of bureaucracy
    b. Difficulty tracking women over time to see outcomes

3. **Challenges created by research**

a. In the clinic, research activities may detract from patient care
b. Confusion: what are guidelines vs. what is research protocol?
c. Lack of coordination with clinical care

Opportunities for new research areas

1. **Observational research**
    a. Provider-level perspectives (most research is on the patient-level)
    b. Self-stigma (identify appropriate interventions)
    c. Unique needs of HIV+ pregnant adolescents (identify appropriate interventions)
    d. Male involvement in PMTCTT
        i. How can this be best encouraged?
        ii. How can male partners be accommodated in PMTCT
        iii. How will universal test & treat affect opportunities for male involvement

2. **Systems-level / implementation research**
    a. Implementation realities of counseling (vs. guidelines)
    b. Research projects need to be done with cost effectiveness in mind; proposed changes or interventions should be designed considering the long term financial implications and sustainability
    c. Other models for who can test and prescribe; especially role of community based health workers and how they can extend services to hard-to-reach populations.
    d. Improvements in record keeping (e.g., electronic medical system) that can track women across clinics and over time (e.g., use of national ID)
    e. Understand trends in stock-outs (where, when, what) and issues in supply chain (e.g., delays in receiving from medical supplies, expiry date of drugs); identify opportunities to improve
    f. Identify challenges in uptake of early infant diagnosis; identify ways to improve care
    g. Identify lessons from CTC that can be used in PMTCT care (e.g., use of home-based care community health workers)

3. **Intervention research**
    a. Interventions to improve retention in care
        i. service delivery models that can address migration (e.g., longer medicine supplies, eliminating referral letters during pregnancy)
        ii. use of technologies to promote / sustain linkage (e.g., use of text messaging, electronic medical records)
        iii. integrate PMTCT with other outreach services, e.g., home based care
    b. Service-level interventions to improve retention
        i. multi-month supply of medicines
        ii. optimum return time
        iii. other models of care to delivery PMTCT services
        iv. Optimization / intervention research

3. Feedback & Translation of Research into Implementation

Opportunities to share research to improve implementation

1. **Who needs to receive research findings**
    a. Community / clients
    b. Clinics

c. Policy makers

2. Ways to share research

a. PMTCT Digest: a 1-page quarterly report of PMTCT research
b. Brief synthesis of research findings, e.g., 1-page summary of findings to return to clinic leadership
c. Feedback at the community level
d. Media
e. Advisory board (especially if engaged at the beginning of the study)
f. Symposia / workshops that involve multiple stakeholders
g. Build capacity of KCMC Knowledge Transfer Office to help disseminate findings

Challenges in the dissemination / translation of research

a. Research funding cycle: often when results are ready to share, the funding cycle is complete, so no funds for dissemination activities
b. Quality of studies may not be deemed sufficient to inform changes in policy or implementation

Godfrey Kisigo, MD participates in the breakout sessions