SCALING UP PMTCT IMPACT ASSESSMENTS IN THE CONTEXT OF IMPROVING GLOBAL MATERNAL AND CHILD HEALTH AND SURVIVAL IN SUB-SAHARAN AFRICA

PROCEEDINGS FROM MEETING 23 JULY 2016 - SOUTH AFRICA

A FOCUSED, FOLLOW-UP CONSULTATION TO THE "B+ MONITORING & EVALUATION FRAMEWORK DISSEMINATION AND COUNTRY CONSULTATION" MEETING IN OCTOBER 2015

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- WHO : Dr Shaffiq Essajee
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- UNICEF : Dr Priscilla Idele, Dr Chewe Luo
- UNAIDS : Dr Mary Mahy
- UGANDA : Dr Linda Nabitaka
- IATT : Dr Nande Putta
- MALAWI : Mr Wingston Ng'ambi
- SOUTH AFRICA : Ms Mathilda Ntloana

ABBREVIATIONS AND ACRONYMS

ANC : Antenatal Care

ART : Triple antiretroviral treatment

ARV : Antiretroviral drugs

CCC : Comprehensive Care Centres

CDC : Center for Disease Control

DHS : District Health Surveys

DRC : Democratic Republic of Congo

EID : Early Infant Diagnosis

EMRs : Electronic Medical Records

EMTCT : Elimination of Mother to Child Transmission

HEI : HIV Exposed Infant

IATT : The Interagency Task Team

LTFU : Lost to Follow Up

MEWG : Monitoring and Evaluation Working Group

MICS : Multiple indicator cluster survey

MNCH : Maternal, neonatal and child health

MTCT : Mother to Child Transmission

PMTCT : Prevention of Mother to Child Transmission

TFR : Total Fertility Rate

UNAIDS : United Nations Programme on HIV and AIDS

UNFPA : United Nations Fund for Population Activities

UNICEF : United Nations International Children's Emergency Fund

WEMR : Web-Based Electronic Medical records

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BACKGROUND AND PRE-MEETING COMMUNICATION

Following the finalization and dissemination of the International Agency Task Team on HIV (IATT) PMTCT Option B+ Monitoring and evaluation (M&E) Framework by the IATT monitoring and evaluation working group (MEWG), a 15-country consultation was held in October 2015 in Kampala, Uganda. Country participation was determined as follows: the eight 2015 priority countries (Cameroon, Kenya, Mozambique, Nigeria, South Africa, Tanzania, Uganda and Zambia) that contributed 70% of new infections among the Global Plan countries in 2013, three countries (Malawi, Rwanda and Zimbabwe) representing best practices from the region and four countries (Botswana, Cote d'Ivoire, DRC and Namibia) who were in the process of reviewing their M&E systems for B+ roll out.

A Technical Synthesis as well as an Executive Summary of Technical Findings containing the 10 key agreements among the 15 participating countries and global partners was prepared and distributed to all attendees of the October 2015 meeting.

As a follow-up to the October 2015 meeting a small, focused consultation was held on the 23rd July 2016, in Durban, South Africa. The timing coincided with the end of the 2016 AIDS Conference. Eight countries were invited to this consultation, namely Kenya, Malawi, Rwanda, South Africa, Tanzania, Uganda, Zambia and Zimbabwe. These countries had committed to specific activities relating to B+ monitoring at the October 2015 meeting. In view of time constraints and cost, five countries attended the Durban meeting, viz. Kenya, Malawi, South Africa, Uganda and Zimbabwe.

As part of the pre-meeting communication, copies of the Technical Synthesis and Executive Summary from the October 2015 meeting were circulated, and each country was asked to put together a presentation on progress with B+ monitoring since October 2015.

THE OBJECTIVES OF THE 23RD JULY 2016 MEETING WERE:

1. To share experiences (methods, tools, lessons learnt) with national surveillance activities for PMTCT Option B+ monitoring.
2. To share experiences (methods, tools and lessons learnt) since October 2015 with cohort monitoring and using unique identifiers as methods to track the population-level impact of interventions aimed at preventing or eliminating mother to child transmission of HIV (PMTCT or EMTCT), and improving maternal and child survival.
3. To synthesize documentation on experiences with monitoring PMTCT impact, with specific focus on national surveillance, cohort monitoring and using unique identifiers (IDs).

These syntheses include:

3.1 Production of a technical series on experiences with monitoring PMTCT/EMTCT impact including implementing national impact surveys.

3.2 A synthesis of experiences with tools and methodologies for monitoring PMTCT impact.

INTENDED DELIVERABLES:

1. Meeting Report, including recommendations and way forward.
2. Technical series on practical experiences and considerations when implementing PMTCT/EMTCT interventions including national impact surveys.
3. A synthesis of country-based experiences with tools and methodologies when implementing routine cohort monitoring and unique identifiers (IDs) to monitor PMTCT impact.

To achieve these objectives and deliverables the meeting was divided into three sessions:

Session 1: Welcome, Introductions, Context and Aims of the meeting

Session 2: PMTCT impact: Different methods: modelling, surveys and cohorts

- Modelling
- Measuring impact using national surveys – country examples
- Routine cohort monitoring – country examples

Session 3: Synthesis, recommendations and next steps

SESSION 1: WELCOME, EXPECTATIONS AND AIMS OF THE MEETING

Dr. Pearl Holele from the South African National Department of Health, extended a warm welcome to all present, especially those who did not attend the 2016 AIDS conference. At her invitation, delegates introduced themselves and indicated his/her expectations and desires for the meeting.

SUMMARY OF EXPECTATIONS FROM MEETING ATTENDEES:

- To move the dialogue forward from the IATT October 2015 meeting and design practical steps for B+ monitoring.
- To learn from others about strengths, challenges and lessons learned from PMTCT M&E systems and methods.
- To learn and discuss specific methods and systems relating to B+ monitoring such as long-term cohort monitoring, mother-infant pair monitoring and the use of electronic records.

- To share best practices on how to use routine programmatic data to monitor B+.
- To see Option B+ as "Treat All" and assess implications for overall HIV M&E moving toward "Treat All".
- To think around how Option B+ contributes to the 90:90:90 dialogue especially the importance of constructing cascade for pregnant women.
- To determine how countries can be assisted to effectively design and implement systems for retention monitoring.
- To gather information about and comparison of data monitoring systems (paper based as well as electronic).
- To take the considerations and agreements of the October meeting further and develop practical steps for the implementation thereof.
- To draw comparisons between what/how we report and what/how we should be reporting, for instance, the importance of viral load (VL) monitoring and retention monitoring, recognition of denominator issues, etc.
- Overall there was an intention from most delegates to use this opportunity to share and learn from each other.

WELCOME AND OVERVIEW PROF AMEENA GOGA (SAMRC)

Prof Goga welcomed all participants and in her welcoming remarks, specifically asked the questions:

- Regarding Option B+ monitoring, in what direction are we moving?
- What do we need to find out about Option B+ monitoring?

She asked seven important questions around the current M&E agenda:

- What approaches can be used singularly or collectively for B+ monitoring?
- How do we locate B+ monitoring within a MCH context?
- What are the risks and outcomes of the HIV exposed uninfected child?
- What are the risks and outcomes of HIV positive women on life-long treatment?
- What effect does B+ have on the family?
- What is the risk and outcome of HIV negative women?
- How do we keep men and women negative?

OPENING REMARKS [DR CHEWE LUO (SAMRC)]

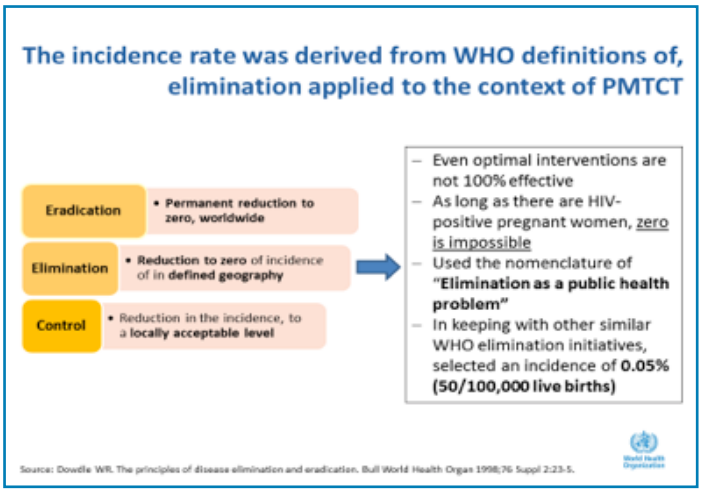
Dr Luo asked for limited conversation about the past and a focus on what needs to be done to move forward. She emphasised the importance of cohort monitoring and efforts around the postnatal period to make sure we track not only mothers but also babies to get the end point we want. Lastly, she noted issues around the assessment of programs and the need to discuss the impact of programs not only in terms of HIV infections averted, but also HIV-free survival.

ELIMINATION OF MTCT - STRATEGY, TARGETS AND TOOLS [DR SHAFFIQ ESSAJEE (WHO)]

Dr Essajee spoke about the strategies, targets and tools for eliminating mother to child transmission of HIV. (EMTCT) He made the following points:

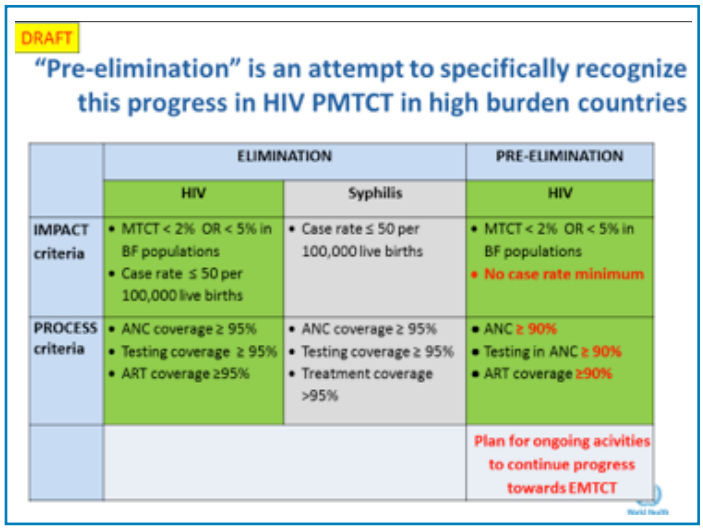
There is a difference between control, elimination and eradication. (Fig 1)

Figure 1: Differentiation between control, elimination and eradication.



Criteria for elimination and pre-elimination have been identified (Fig 2)

Figure 2: Criteria for elimination and pre-elimination



- Pre-elimination" is an attempt to specifically recognize this progress towards EMTCT in high burden countries
- While it has the same mother to child HIV transmission (MTCT) rate as elimination, pre-elimination has no case rate minimum and has lower thresholds for process indicators (≥90% instead of 95%)

- Cuba was the first country to be validated for EMTCT of HIV & Syphilis, followed by Thailand, Belarus, Armenia & Moldova. Of specific importance to this meeting is the fact that none of these countries are from Sub-Saharan Africa, where 90% of the global MTCT burden is found.
- Validation was based on achievement of a set of core criteria published in 2014 as per the WHO criteria guidelines (http://www.who.int/hiv/pub/emtct-validation- guidance/en/).
- These criteria were developed following a technical consultation in 2012 which was supported by UNAIDS, UNFPA and UNICEF.
- The technical consultation defined "elimination" of MTCT as a reduction to 50 cases or less per 100 000 live births.
- The established threshold for EMTCT was derived from WHO definitions of elimination applied to the context of PMTCT:
  - Eradication: Permanent reduction to zero, worldwide.
  - Elimination: Reduction to zero of incidence in a defined geography. However, even optimal interventions are not 100% effective and as long as there are HIV+ women, "zero" is impossible. In this instance, the nomenclature of "Elimination as a public health problem" was used and in keeping with other similar WHO initiatives, an incidence of 0.05% (50 cases per 100 000 live births) was selected.

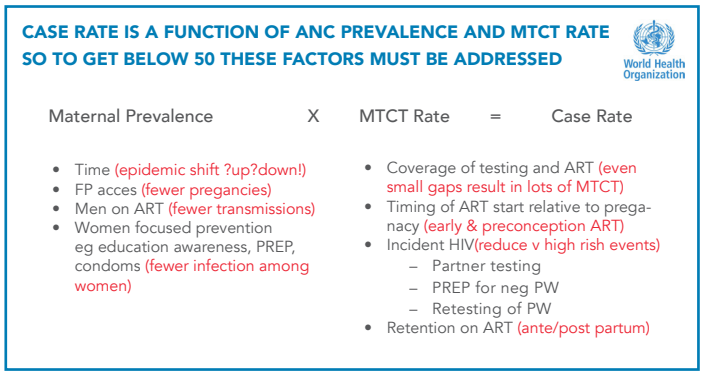
Beyond these indicators, there are four additional requirements to qualify for validation:

1. TIME: For this, process indicator targets need to be established for two years and impact indicator targets for one year.
2. GEOGRAPHY: All areas of the country have to demonstrate success, even low performing sub-national administrative units.
3. QUALITY: Country-wide there should be adequate national M&E and lab systems to capture the process and outcome indicators and accurately detect the majority of cases. The private sector should preferably be included in order to have true representative data.
4. EQUITY: Validation criteria must have been met in a manner consistent with basic human rights considerations.

According to WHO data, many Global Plan countries have "elimination ready" ARV coverage and end of breastfeeding MTCT rates of less than 5%, but the problem is that the case rate estimates (new infections in children per 100 000 births) are well above the elimination threshold (see Fig 3)

- The Case Rate = Maternal Prevalence x MTCT rate. Therefore a number of factors must be addressed to achieve the elimination threshold case rate.
- A Maternal Child Health program can serve as a platform not only for EMTCT, but for gains in addressing/eliminating other burdens such as Syphilis and Hepatitis B infections.

Figure 3: Case rates estimates



Implications of PMTCT Option B+ on M&E activities:

- Option B+ is at the forefront of learning and can provide an approach to M&E for the impending 'Test and Treat All' approach. What is done for Option B+ M&E and can become a model to adapt for the larger program.
- Retention is critical and therefore cohort monitoring using unique ID's needs to be implemented urgently.
- M&E for elimination needs to go beyond Global AIDS Response Progress Reporting. Follow up of mother-infant pairs, partner testing rates, age breakdown including for adolescent PMTCT, monitoring of incident infection and determination of final status is critical.

OVERVIEW OF DIALOGUE/OUTPUTS FROM IATT OCTOBER 2015 MEETING [DR NANDE PUTTA (IATT)]

Dr Putta referred to the 2 key documents resultant from the IATT October 2015 meeting:

- B+ Monitoring & Evaluation Framework Dissemination and Country Consultation – Technical Synthesis (available as pre-meeting materials for the July 23 2016 meeting)
- *B+ Monitoring & Evaluation Framework Dissemination and Country Consultation – Executive Summary of Technical Findings (available as pre-meeting materials for July 23 2016 meeting)*

These documents link closely to the current knowledge base on cohort monitoring, unique ID's and using routine program data for population level impact.

- There is a current undertaking of case studies from 5 countries (Uganda, Zambia, Tanzania, Kenya, Rwanda) regarding cohort monitoring, web-based monitoring and the ability of longitudinal as well as spatial tracking of women and its implications for for loss to follow up (LTFU) and long-term transfers out (LTTO).

- The goal is to work towards a technical series of peer review publications, in order to establish an increasing body of evidence in this area.

SESSION 2: DIFFERENT METHODS OF IMPACT EVALUATION: MODELLING, SURVEYS, AND COHORTS

METHODS FOR MEASURING PMTCT IMPACT [DR PRISCILLA IDELE (UNICEF)]

Two very useful guides are available from the WHO / UNICEF for countries' use:

- *A Short Guide on Methods: Measuring the impact of national PMTCT programs, July 2012 available online: http://www.who.int/hiv/pub/mtct/national_pmtct_guide/en/*
- *Consolidated strategic information guidelines for HIV in the health sector, May 2015 available online: http://who.int/hiv/pub/guidelines/strategic-information-guidelines/en/*

The importance of monitoring PMTCT impact was highlighted:

- To validate modelled estimates and help refine and interpret modelled data better
- To validate routine programme data, which is often of poor quality (double counting, incomplete etc.)
- To directly ascertain the outcomes of ARVs/ART on PMTCT using empirical data and derive more nationally representative data
- Collect other PMTCT coverage data and background information to assess correlates of MTCT
- To determine population in need of PMTC and other HIV-related services

Six main PMTCT impact measures are specified in the guide:

- New paediatric HIV infections
- MTCT at different time points, eg. 6 weeks, 12 months, 18 months, 24 months
- HIV-free survival
- Child survival and health status
- Maternal survival and health status
- Coverage of PMTCT interventions (HIV testing, types of regimens, breastfeeding duration, timing of first ANC, place of delivery, CD4 count, viral load, etc.)

The Short Guide on Methods covers five main methods for measuring PMTCT impact:

- Statistical Modelling
- Immunization Clinic Survey and Follow-Up
- Cohort follow-up
- Population-based surveys
- Routine EID and child HIV testing data

In the guide, each approach is assessed and described according to the same structure consisting of:

1. A brief description of the method
2. Questions it can answer
3. Suitable setting
4. Strengths and weaknesses
5. Steps and tips
6. Budgeting.

Table 1: Overview: Pros and Cons to monitor PMTCT Option B+ Impact

METHOD	PROS	CONS
Statistical modeling (e.g spectrum model)	• Relatively easy to implement	• Only as valid as the data and assumptions that go into the models • Quality of data often poor and inaccurate
Immunization clinic survey follow-up	• PMTCT intervention uptake linked to transmission outcomes • Entry point of HIV-exposed follow-up • Links mothers and babies to HIV services	• Bias from immunization- seeking behavior • Survival bias (no capture of mothers/ babies that died)
Cohort follow up	• Captures short and long-term outcomes • Measures various outcomes	• Attrition/LTFU necessitate assumptions • Difficult to trace without unique ID's • Resource intensive

METHOD	PROS	CONS
Population-based surveys	• Generalizable to full population • Collect other measures of program outputs/behaviors • Already exist in the form of DHS or MICS	• Needs large sample size • Requires HIV status of mother and infant • Expensive to implement
Routine EID and child HIV testing	• EID and child lab database usually exists	• Needs to be coupled with estimated number or % of children with no HIV test and their outcomes, to obtain a national estimate • EID data not nationally representative • Bias from health seeking behavior • Survival bias – does not include dead children • EID alone does not address final transmission

Three key additional considerations for measuring PMTCT impact were noted:

- PMTCT impact studies/measurements are sometimes not included in program planning; they should be planned with programme activities at the outset.
- Likewise, provision is not always made for impact studies in budgets proposed to the Global Fund or other funding sources and it therefore becomes sidelined or an afterthought. It is recommended that all proposals (Global Fund or other) include PMTCT impact evaluations.
- Data from models (such as Spectrum) that rely on estimates triangulated with real program data to validate and interpret results.

MODELLING OF PMTCT IMPACT [DR MARY MAHY (UNAIDS)]

Dr Mary Mahy discussed modelling of PMTCT impact, including the use and challenges posed by modelling.

Some benefits of using models are:

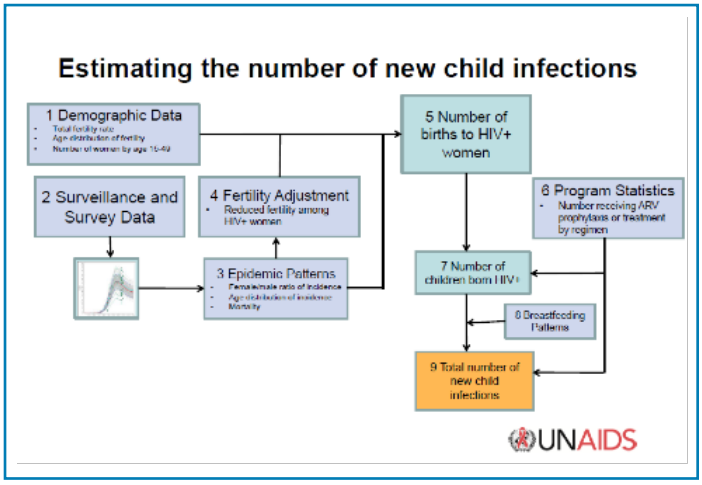
- To estimate unmeasurable variables (e.g. HIV incidence in children).
- To measure future or past scenarios (e.g. what would be the implications of better partner testing, earlier diagnoses, reduction in unwanted pregnancies among HIV+ women).
- To fill in missing data (e.g. the question about the number of HIV+ pregnant women in a particular country cannot be answered by only relying on program data as it is usually incomplete).

Negative implications of models are that:

- They are only as good as the input data and assumptions
- They don't capture real time data as estimates are usually updated on a yearly basis
- They do not link services to children

The different components used for estimating the number of new child infections include (but are not limited to) demographic data, surveillance and survey data, epidemic patterns, fertility adjustment, program statistics and breastfeeding patterns (Fig 4).

Figure 4: Estimating the number of new child infections



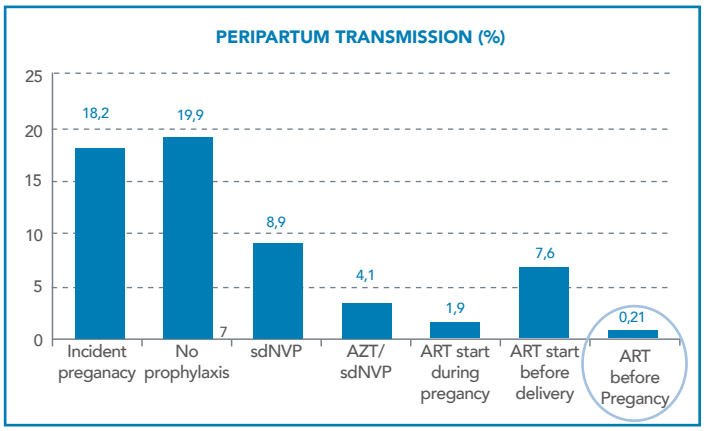
UNAIDS estimates:

- Are developed by country 'estimate' teams, reviewed by UNAIDS and partners.
- Use programme data on ARV coverage and regimens.
- Assumes that breastfeeding amongst HIV infected women is the same as the general population, except for Botswana and South Africa where breastfeeding estimates differ by HIV status.

PMTCT Option B+ will result in lower transmission rates when HIV positive women on ART pre-conceptually, become pregnant (Fig 5).

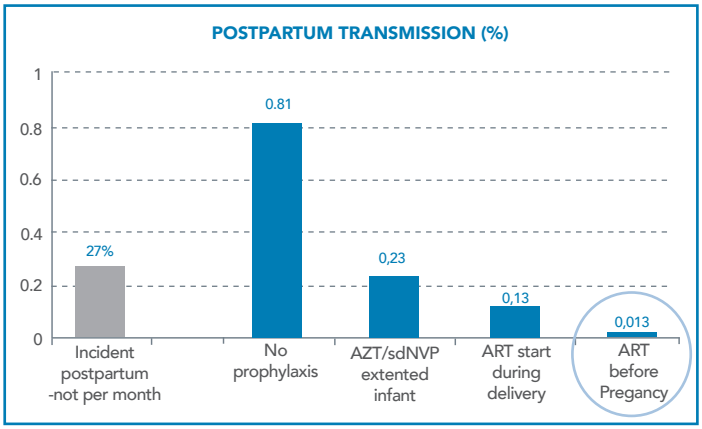
Estimates suggest that pre-conceptual ART could reduce peripartum MTCT to 0.21%.

Figure 5: Peripartum transmission



Estimates also suggest that postnatal MTCT per month will reduce to 0.013% with pre-conceptual ART, assuming that ART continues during breastfeeding (Fig 6).

Figure 6: Postpartum transmission



Thus the impact of PMTCT Option B+ wil only be seen over time.

Some of the challenges faced with modelling are:

- A lack of direct measures of the number of children newly infected.
- Even when direct measures are obtained, it needs to be ensured that they are population based and not just program based to ensure that we are not missing women.
- Postnatal follow up of children after stopping breastfeeding is a challenge.
- Because breastfeeding patterns of HIV+ women is unknown in a number of countries, it makes it difficult to know when to stop monitoring for MTCT.

Dr Mahy referred to survey data from South Africa, Malawi and Zimbabwe that demonstrated the relationship between estimate and survey data and the decline in MTCT over time (Fig 7,8,9)

Figure 7: South Africa - MTCT rates

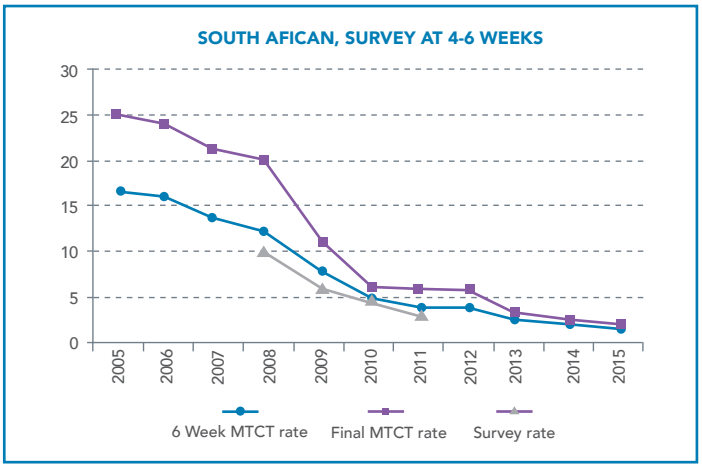


Figure 8: Malawi - MTCT rates

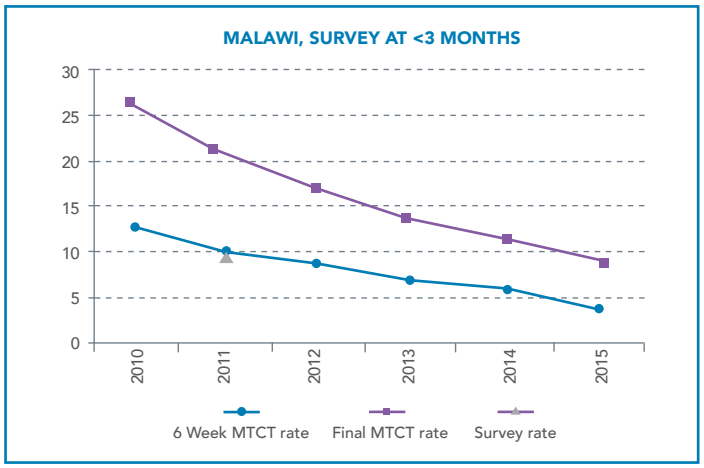
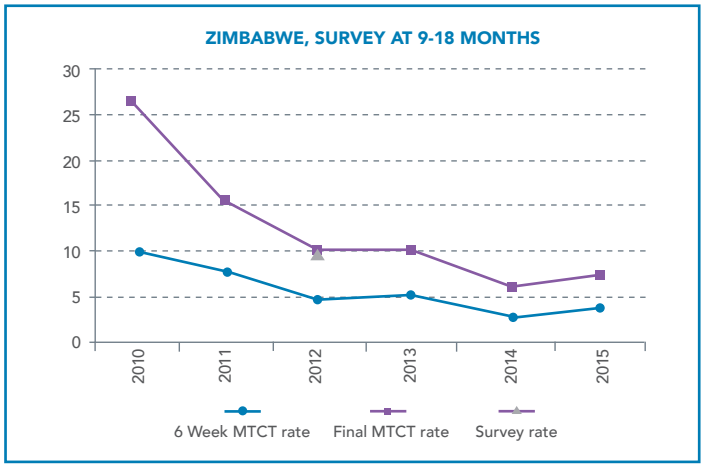


Figure 9: Zimbabwe - MTCT rates



The conclusions from the comparative data were:

- The patterns are fairly similar
- We need to ensure the full population is reached
- Direct measure is needed

Resources for additional information:

- Progress Report on the Global Plan available at unaids.org
- Country specific results available from aidsinfo.unaids.org

QUESTIONS/DISCUSSIONS FOLLOWING THE PRESENTATIONS BY DR ESSAJEE, DR MAHY AND DR IDELE

MONITORING VIRAL SUPPRESSION IN WOMEN ON ART:

Several key points arose during this discussion:

- This is a key piece to move towards
- The real challenge is getting women consistently tested before they start conceiving so that they are on ART when they become pregnant.
- Although countries are starting to report that a significant number of women come to ANC are on ART, it is critical to know the proportion of those women who are virally suppressed. Is there a difference in adherence and outcome amongst women who are on ART and virally suppressed and those on ART but not suppressed?
- It is also important to understand the regimen that the woman was on, how long they have been on treatment and whether they were on treatment when they conceived.

MOVING TOWARDS ELIMINATION

There was a detailed discussion about the EMTCT validation criteria and the difference between elimination, pre-elimination and eradication:

- Comparing polio elimination to MTCT elimination is a mismatch as polio virus reservoirs can be considered for eradication compared with HIV reservoirs, so they probably should not be held to the same standard.
- Five countries (Cuba, Thailand, Belarus, Armenia and Moldova) are currently validated for EMTCT.
- There were concerns about the feasibility of meeting EMTCT criteria in a sub-Saharan African setting. The example of Thailand was cited where prevalence was 10% in Northern Thailand 10 years ago, and in 2016 Thailand was certified as having met EMTCT criteria, so success is possible. The case of Thailand is illustrated in Box 1:
- There were discussions about use of the term "eradication". With regards to polio eradication, it was noted that the high prevalence countries did not take the lead, but joined later. The success on the continent and in the sub-region is unbelievable.

BOX 1: THAILAND AS AN EXAMPLE:

- **Thailand's success is an example of when science and medicine are underpinned by political commitment in strong maternal and child health care and national AIDS prevention measures**
- **According to Thailand's Ministry of Public Health, 98% of all pregnant women living with HIV have access to antiretroviral therapy; MTCT is now reduced to <2%; The number of children that became infected with HIV dropped from 1000 in 2000 to 85 in 2015, a decline of >90%**

Regarding elimination/pre-elimination, and specifically looking at high-burden countries (Global Plan countries) are there milestones that could be set to motivate countries towards meeting these criteria? The response suggested that while we cannot do much about the elimination benchmark that exists, other intermediate benchmarks can certainly be set. However, in this process there is a need for the right semantics and to find and use the right words to motivate and keep moving forward and decrease apathy and deflation. The aim is to monitor and track and establish progress against global criteria.

QUESTIONS AND GENERAL DISCUSSION AROUND MODELLING

- **Question:** How do we compare the model with the program data to see how we are doing?
  Response: South Africa, will continue to use Spectrum, but will adapt the models to include the assumptions that are specific to South Africa so that both models are producing the same estimates.

The model shows that transmission goes down when the woman is on ART.

- **Question:** What are the assumptions on the back end of the model?
  Response: The assumptions are based on studies (references can be provided).

- **Question:** When should we start evaluating the impact of Option B+?
  Response: The impact of B+ needs to measured immediately. While we won't see the drop immediately (depending on fertility in the location) it is important to measure constantly in order to see the drops later.

COUNTRY EXPERIENCES OF MEASURING PMTCT IMPACT USING SURVEYS

Two countries, South Africa and Zimbabwe, presented their experiences with conducting national impact surveys

1.SOUTH AFRICA SAMRC [MS NOBUNTU NOVEVE AND MS YAGES SINGH]

The overall aim of the South African surveys was to periodically conduct facility-based surveys to monitor the effectiveness of the SA National PMTCT program at 6 weeks and in 2012-2014 until 18 months postpartum.

To achieve this, the following methods were used:

- Cross-sectional facility-based surveys (nationally and provincially) targeting babies 4-8 weeks old
- Multistage probability proportional to size sampling methodology
- 580 randomly selected facilities with a target sample size of 12 200

Enrolment independent of maternal HIV or PMTCT status

The main results of weighted infant HIV exposure and MTCT were:

- National infant HIV-exposure prevalence (weighted):
  - 2012/13: 33.1% (31.8 – 34.4)
  - 2011/12: 32.2% (30.7 – 33.6)
  - 2010: 32.2% (30.7 – 33.3)
- National early MTCT aged 4-8 weeks (weighted):
  - 2012/13: 2.6% (2.0 – 3.2)
  - 2011: 2.7% (2.1 – 3.2)
  - 2010: 3.5% (2.9 – 4.1)

An operational/implementation series is being drafted to provide operational guidance for countries aiming to conduct national surveillance of routine health programs.

The following achievements were made in some areas:

HIV testing:

- 95% coverage of maternal HIV testing
- 22% HIV negative mothers repeat tested after 31 weeks' pregnancy
- 2.6% undiagnosed HIV infection amongst negative mothers

PMTCT drug coverage:

- 12.7% increase in maternal ART access between 2010 and 2012
- <90% antiretroviral coverage

Early MTCT 4-8 weeks:

- 2.6% (2-3.2)
- 2% (1.5-2.6) with any PMTCT intervention vs 9.2% (5.6-12.7) without interventions
- Babies saved from early HIV: 107 000 in 1 year – assuming 32.2% HEI, 1 214 485 live births and 30% early MTCT pre PMTCT
- 91% reduction from pre-PMTCT era and 26% reduction from 2010

Limitations:

- Excluded infants who died before 4-8 weeks or attended private or mobile health facilities

In the future, SA will increase sampling to include the private sector.Seven short papers are currently being drafted to provide operational guidance for countries seeking to conduct national impact surveys:

- Preparatory phase considerations when embarking on National PMTCT impact evaluations.
- Methodological issues for national PMTCT evaluations: Developing the protocol.
- Obtaining regional and district buy-in and ethics approval for the evaluation.
- Recruitment, selection, and training of data collectors for SAPMTCT impact evaluation.
- The feasibility of using mobile technology for health surveillance.
- Field work, quality control, data management cleaning and analysis.
- Planning field-based and scientific data dissemination.

2.ZIMBABWE [DR SOLOMON MUKUNGUNUGWA]

- Spectrum modelling occurs annually
- PMTCT effectiveness surveys conducted in 2013-2014 and 2015-16: A program based survey was conducted, with follow up of mother infant pairs from facility to community. Mothers and babies were followed up to 18 months to determine outcome. Infant blood was drawn to determine HIV infection. Verbal autopsies were conducted for deaths.
- Zimbabwe's PMTCT policy transitioned from 4 weeks of AZT or 4 weeks of AZT+3TC or single dose nevirapine in 2001 to Option A or B in 2010 and Option B or B+ in July 2013.
- The 6 week MTCT rate in the 2013-14 survey was 3.4% and the final transmission rate at 18 months was 6,7%. The Spectrum estimate at 18 months was 12.1%. The primary analysis has been conducted and publications are expected in 2016/17.
- The 2015-16 survey was conducted when B+ was at full scale and offered in all MNCH sites. Preliminary MTCT at 6 weeks is 1.7%
- Between 2009 – 2015, MTCT in Zimbabwe decreased by almost 25% (Spectrum).
- Lessons learned:
  - Elimination is possible and feasible
  - Surveys provide opportunities for program improvement

- Children die before 6 weeks and not officially documented
- Higher transmission rates occur during breastfeeding (Is it time to modify breastfeeding behavior?)
- An electronic capturing pilot currently underway in one district

COHORT MONITORING

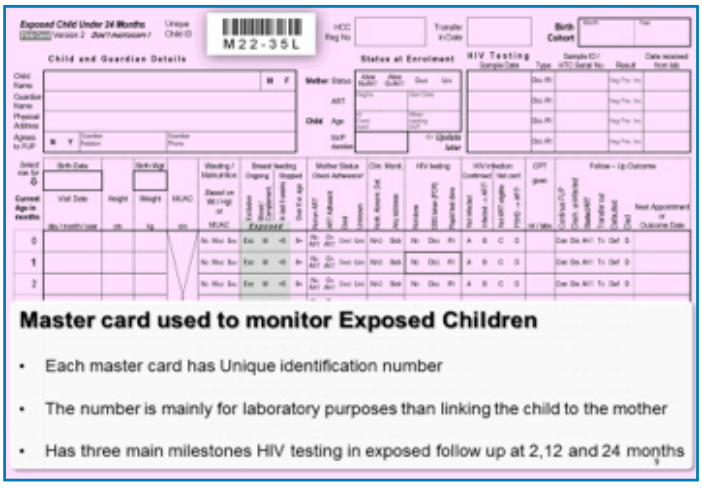
The bullets below summarise the main points made by each country.

1. MALAWI [MR M ELIYA]

- In Malawi, ANC HIV prevalence is 8.8%, and according to UNAIDS estimates, PMTCT coverage is 80% and MTCT rates are 4.3% at 2 months and 8.7% at 24 months. 20% of infants access HIV testing at 2 months. Since 2009 the number of paediatric HIV infections has reduced by 71%.
- Malawi is not using a unique identifier.
- Cohort monitoring tools include: ANC register, HIV-exposed infant master cards.
- No new methods were introduced after the October 2015 meeting.
- **Current limitations are:**
  - No link between mother and child
  - Cannot report PMTCT outcome before 6 months
- The ANC register gathers routine data longitudinally about each pregnancy. This register is aggregated into a monthly ANC reporting form.
- The maternity register is similar to the ANC register but records only a single visit.

A pink Master Card is used to monitor HIV exposed children. (Fig 10)

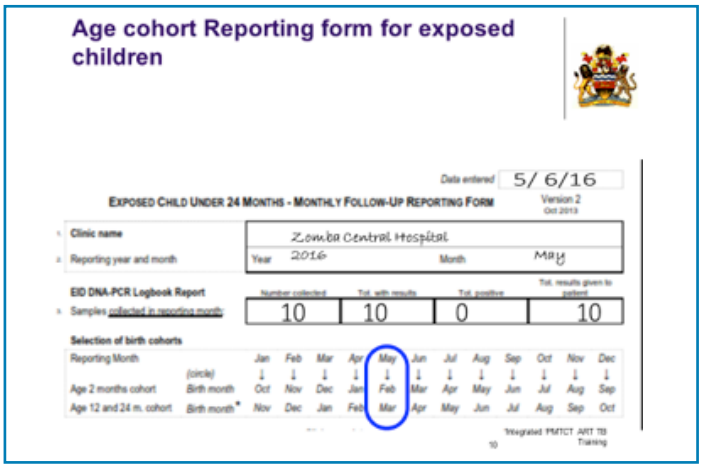
Figure 10: Malawi - Pink Master Card



This Master Card is a patient-held card.

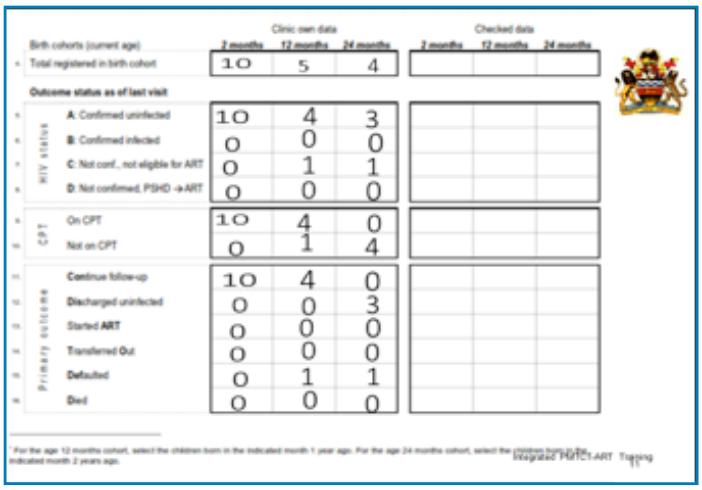
At facility level, HIV exposed infants are monitored using an age-cohort reporting form. (Fig 11)

Figure 11: Malawi - Age Cohort Report form



The monthly follow-up reporting form reports numbers by birth cohort month. (Fig 12)

Figure 12: Malawi - Follow-up reporting form



- Revised reporting forms to aid cohort monitoring.
- Option B+ impact indicators reported routinely. (Table 2)
  - Proportion of HIV exposed children tested within 2 months (targeting 85%)
  - Proportion of HIV exposed children discharged uninfected within 24 months (targeting 85%)

Table 2: Data sources - Strengths and Weaknesses of each indicator

Name of Indicator	National targets	Tools to use	Numerator	Denominator	Calculation	Strengths	Weaknesses
% HIV exposed Infants tested within 2 months of age	85%	HIV exposed follow up monthly reporting form	Total HEI with confirmed negative or positive(A+B)	Total HEI registered in the 2 months cohort	Total HEI with confirmed negative or positive(A+B)/ Total HEI registered in the 2 months cohort*100	Measures HIV transmission rates from birth	Delay in getting the results from the laboratory
% HIV exposed Infants discharged uninfected at 24 months of age	85%	HIV exposed follow up monthly reporting form	Total HEI discharged uninfected	Total HEI registered minus transfer outs in the 24 months cohort	Total HEI discharged uninfected/ Total HEI registered minus transfer outs in the 24 months cohort *100	Measures the final status of exposed children after PMTCT follow up period	Lost to follow up of children before they reach 24 months

MALAWI CHALLENGES

- Delay in results from laboratory to link lab results
- LTFU of children before 24 months
- Retention from 6 to 36 months – 76% to 65% - implications for Treat All
- Aggregate data are collected quarterly from facilities. The Ministry of Health verifies data every 3 months.
- Data is used at national level for quantification and procurement, by implementing partners and by donors. Data is also used to identify facilities and districts with poor performance and in need of supervisory visits and mentoring.

Several strengths and weaknesses of the data were identified:
Strengths: data is verified on-site before transportation to national level and linked to DHIS2

Weaknesses: no monthly performance data from facilities; facilities have verified data to use after 3 months and lower level capacity is not built during the data management/ interpretation process.

Lessons learnt from monitoring PMTCT Option B+:

- Need to simplify/develop proxy indicators to keep track of progress at lower levels e.g. need to monitor the unmet need for family planning
- Difficult to measure certain high-level indicators because of denominators e.g:
  - Proportion of children in need of ART per district
  - Need to monitor PMTCT more in MNCH platform without losing broader HIV and AIDS
  - Option B+ programming should incorporate child health and family centered issues

Several suggestions were highlighted for tracking the impact of PMTCT option B+ on maternal and child health and survival:

- Option B+ should be tracked in an MNCH environment
- It is critical to link the mother and the child to measure PMTCT outcome
- It is critical to track mother-infant-pair that have discontinued care

2. SOUTH AFRICA [MS MATHILDA NTLOANA]

- No cohort monitoring yet, but moving toward it
- SA's achievements in response to the global plan
  - 95% ART coverage among pregnant HIV+ women (vs 80% in 2009)
  - 95% EID coverage
  - 1.5% at 6 weeks (8.2% in 2008), final MTCT rate of 2% at 18 months
  - Approximately 84% reduction in new paediatric infections since 2009
  - 450 000 new paediatric infections averted since 2009
  - 74% coverage of ART in children aged 0-14 years (53% in 2012)

- **Policy change from 2015 to date:**
  - Option B+ from January 2015
  - Birth PCR testing of all HIV exposed infants from June 2015
  - 10 week PCR testing, move from testing infants at around 6 weeks
  - The 90-90-90 strategy with District Improvement Plans (DIPs) from 2015

- Data use is based on a decentralized monitoring and evaluation system using an innovative color-coded "robot dashboard" monitoring system
- Quarterly provincial reviews and annual stock taking exercises are conducted
- Data from several sources are triangulated (DHIS, lab, impact studies, surveys). This:
  - Informs policy
  - Monitors progress towards achieving program goals, plan interventions, allocate resources
  - Enables assessment of ANC coverage and PCR testing trends over time and stratified by districts
- Country-level challenges: missed Interventions, missed diagnostic opportunities, linkages for treatment & care, engagement with community (IDLE)
- **Current strategies include:**
  - Routine high impact activities for all districts, with scale and quality
  - Targeted and intensified interventions in hot spot districts
- **Way forward (Last Mile Plan):**
  - 5-year targets towards elimination with 3 indicators:
    - » 0.6% MTCT at 0-<7 days (baseline % in 2015 = 1.1%)
    - » 1% MTCT at 18 months (baseline % = 2.02%)
    - » 2500 annual new paediatric HIV infections by 2021 (baseline number = 5 100)
  - Targeted equity focused/integrated strategic approach in districts with high MTCT burden
  - High impact interventions based on available evidence with more focus on community engagement
  - M&E - moving towards cohort monitoring, unique identifiers

3. KENYA [DR ROSE WAFULA]

- **Data sources:**
  - Routine programmatic data
  - Cross sectional DHIS, IED db, Viral Load db
  - Paper based longitudinal analysis - HEI
  - Electronic Medical record (EMR) national data warehouse
  - Surveys
  - Surveillances
  - Modelling
  - Cohort monitoring (unique IDs under discussion)
  - HEI – unique IDs child welfare numbers
  - ANC/CCC number for mothers (still exploring)
- **Lessons learned**
  - Cascade analysis important to visualize results and call for action
  - Private sector inclusion is also important
  - Cascades identified gaps (ANC attendance pointing to absence of private-sector data) and missed opportunities in skilled delivery and infant prophylaxis
  - Cascades were used to inform "Bring Back the Women" campaign
  - Cascades can be used to monitor special populations e.g. <24 years
  - Trend analysis of key elements of the PMTCT cascades is stronger than point analysis
  - Measures that link MCH outcomes (maternal and under 5 mortality rates), TB/HIV outcomes are informative
  - Adoption of technology for easier data collection to save energy to focus on use of data for decision-making
- **Areas needing more attention**
  - Longitudinal follow-up of mother infant pair including retention in postnatal regardless of HIV status (tools have been reviewed and are almost finalized)
    - » Need to get private sector data into routine national platform
    - » M&E impact plan in current EMTCT country framework under development
    - » Unique ID and EMR systems

3. UGANDA [DR LINDA NABITAKA]

- The 2015 Global progress report states that 90% of pregnant women receive antiretroviral medicines for PMTCT; there was a 69% decrease in the number of new infections amongst children between 2009 and 2014 and MTCT decreased to 8% at final end point.
- 44% of HIV exposed infants receive ARVs; 64% receive a first HIV PCR test; 52% are initiated on cotrimoxazole and 28% receive a rapid test at 18 months
- Uganda has been monitoring maternal cohorts as part of ART cohort monitoring
- The EMTCT cohort is made up of HIV+ women newly initiating ART during same month in either pregnancy or durig breastfeeding
- All sites implementing Option B+ report on Maternal cohorts
- PMTCT patients are:
  - Integrated within ART M&E tools and processes AND
  - PMTCT patient data is tracked and disaggregated using paper-based ART cohort register (i.e. there is a pregnancy or breastfeeding field in the ART register) (Fig.13) and in a few sites web-based electronic medical records (WEMR) are used. Tools for monitoring (see Fig. 14) include: maternal registers, longitudinal follow-up status by month up to 72 months.

Figure 13: ART register

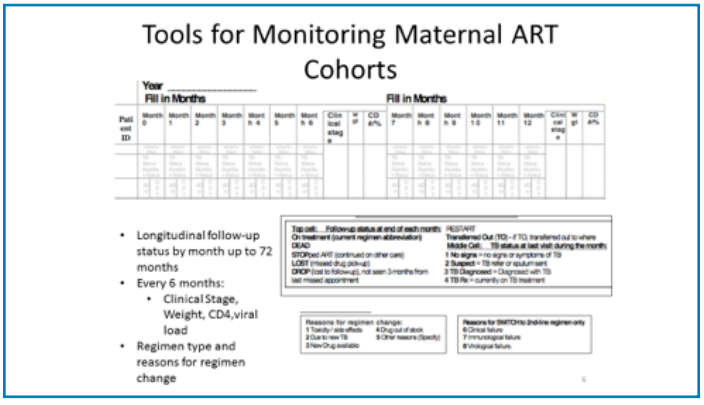
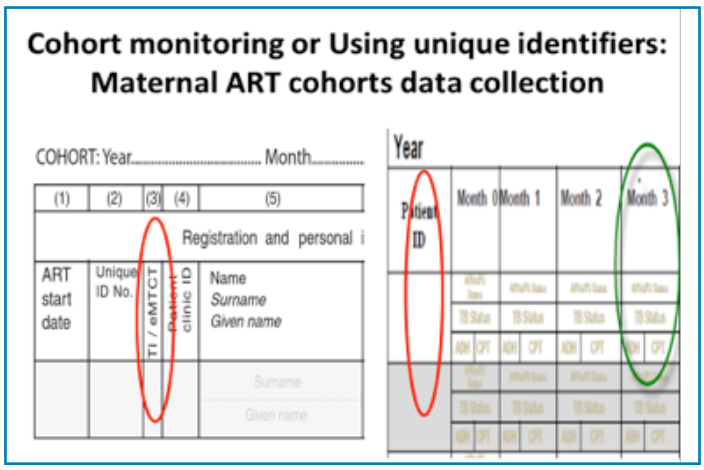
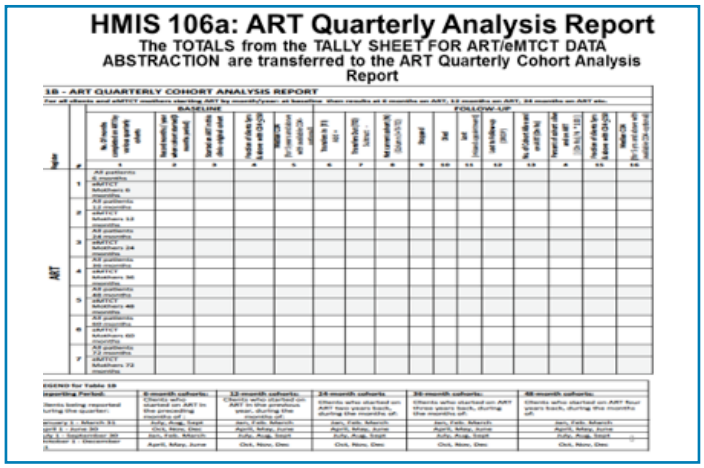


Figure 14: Cohort monitoring



A quarterly report is generated from the registers (Fig 15)

Figure 15: Quarterly ART analysis report

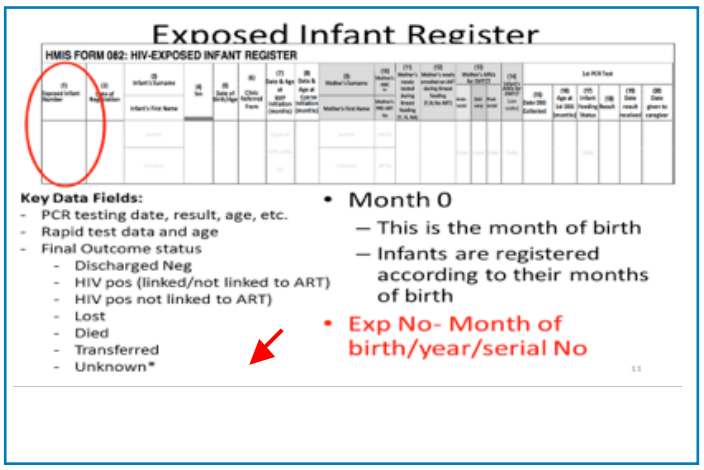


- Two groups have been identified for maternal indicator monitoring: (i) Those already on ART who become pregnant and continue ART and (ii) those HIV+ pregnant women newly initiating ART during pregnancy and breastfeeding.
- **Current indicators are:**
  - % EMTCT clients known to be alive and on treatment at 1, 2, 3, 6, 12, 24, 36 and 72 months after initiation of ART. Excludes dead, Loss to follow-up, Transfers out, Lost and stopped care.

In addition to maternal registers, infant cohort registers have also been developed to facilitate birth cohort monitoring

- This register uses patient numbers for both mother and baby to identify patients (no specific unique identifiers) – patient numbers given in such a way so as to identify individual clients (mothers versus babies) as unique individuals
- The HIV Exposed Infant register has thus been changed to allow entry as birth cohorts (Fig.16)

Figure 16.1: HIV Exposed Infant Register



Rows of the register are continued below, and illustrated schematically in the Table 3 that follows:

Figure 16.2: HIV Exposed Infant Register

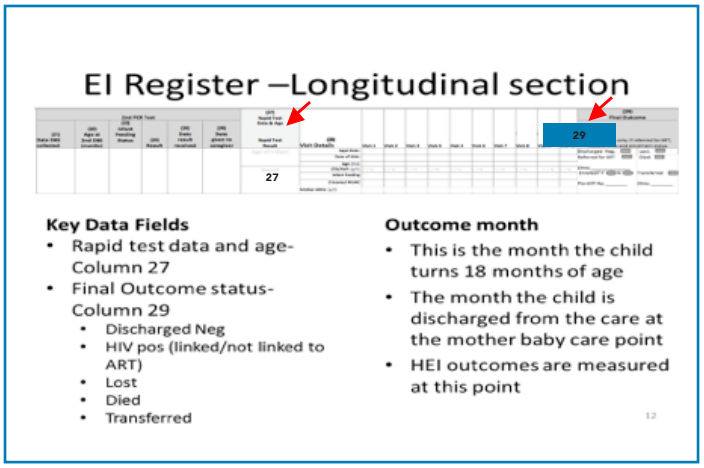


Table 3: Schematic presentation of longitudinal register

Exposed infant number (1)			Date of registration (2)	Infant surname (3)	Sex (4)		Date of birth/ Age (5)	Clinic referred from (6)	Date/age at NVP initiation months (7)	Date/age of cotrim initiation months (8)	Mothers surname (9)	Mother ANC No. (10)	Mother newly tested during BF (11) (Y/N/ NA)		Mother's newly enrolled on ART during BF (Y/N/ No ART)	Mother's ARV for EMTCT			Infant ARV for EMTCT (use codes)		1st PCR test				
				Infant's first name							Mother name	Mother pre-ART no				Ante	Delivery		PN		Date	Age	Feeding	Result	Given	Date results given
THIS TOOL CONTINUES LONGITUDINALLY BUT THE CONTINUATION ROWS ARE PASTED BELOW BECAUSE OF SPACE LIMITATIONS																									
			2nd PCR test						Rapid test date and age (27)	Visit details (28)	Visit 1	2	3		4	5	6	7	8	9	10	Final Outcome				
Date (21)			Age (mo) (22)	Feeding (23)	Result (24)		Result Given (25)	Date results given (26)												Check 1 box only				
ck										Appt date										Discharged neg				
										Date of visit										Ref for ART				
										Age (mo)										Lost				
										CTX/NVP (Y/N)										Died				
									Result	Infant feeding										Clinic				
										Z-scores/ MUAC										Enrolled Y/N				
										Mother ARVs (yes/no)										T/f Pre ART no. Clinic:				

UGANDA CHALLENGES:

- Intensive training needed
- Need for a period to re-enter old data into the new format
- Printing data collection tools
- Reporting form newly developed and disseminated (not all sites reporting yet)
- Separate registers, but patient charts of mothers and infants are kept together

A few outcomes were presented (Text Box 2)

Text Box 2: Uganda - Measuring B+ impact outcomes

Measuring B+ impact

Outcomes of exposed infants Born May-Jun 2014

Total number of infants in the cohort	6,075	%
Discharged HIV Negative	3,229	53.2
Positive total	233	3.8
Transferred out	423	7.0
LTFU	1,565	25.8
Died	135	2.2
In care not tested	476	7.8
No documented outcomes	14	0.2
Positive linked to ART	177	76
Positive not linked	30	16.9
Positive with no clear outcome	26	11.2

- **Data use:**
  - Health facilities & districts use tool to analyze cohort data monthly for 12 and 24 month cohorts
  - This is used to follow up on those lost or positives not on treatment
  - Monthly M&E meetings to review retention and outcomes for all PMTCT indicators using a dashboard
  - Quarterly performance review at regional level – work with districts performing poorly

- **Strengths:**
  - Integrated data, all in one system
  - Real-time reviews by stakeholders
  - Indicators clearly understood and easy to collect
  - Training and mentorships regularly done

- **Weaknesses:**
  - Many data collection tools leading to poor data capture at times
  - Low reporting rates
  - Some sites do not yet have revised data tools
  - Not all facilities understand reporting requirements yet

Lessons learned regarding monitoring:

- B+: Involvement of stakeholders is critical
  - Real-time data review important
  - Using dashboards makes data review easier
  - Funds for follow-up of lost clients should be planned for
  - Community is an integral part of retention, monitoring and taking action
  - Planned PMTCT impact evaluation will be critical to verifying results

- **Links to publications or reports:**
  - www.cphldashboardnew.or.ug
  - http://dashboard.mets.or.ug.
  - Being peer reviewed for publication: Confronting Challenges in Monitoring & Evaluation: Innovation in the Context of the Global Plan Towards Eliminating New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive

QUESTIONS AND DISCUSSION FOR ALL COUNTRIES:

Q: Do countries capture re-testing for HIV and partner testing in the registers?

General discussion: This is important. BUT there is not a specific time to provide a denominator for this. Suggestions:

1. Revise the timeline to include a definite time for re-testing (e.g. 6 weeks post-delivery). This allows a denominator.
2. Also have other time periods before postnatal re-testing.
3. Develop an algorithm for re-testing.
4. Re-testing in-labor is a standard in some countries and this provides a clear denominator.

Q: In places with high facility delivery, what were the tactics that got them there?

Response from Malawi: This has been achieved through an element of community mobilization and through the use of traditional leaders to promote facility delivery (potentially punitive measures – taxes/payments in kind to traditional leader if no ANC/facility delivery).

Q: What are countries doing to monitor viral load suppression so that we can look at associations between viral load suppression and MTCT? (Need to stress the importance of ART adherence to support viral suppression.)

Response from Zimbabwe: We will be doing viral load testing at booking for ANC and in the 3rd trimester (4 weeks prior to delivery) to look at risk to the infant. We will target those who deliver unbooked and untested.

Q: For countries who do nationally-representative PMTCT effectiveness surveys, are you including the private sector?

Response from South Africa: We are looking into including the private sector for the next round.

Q: Are we looking at women who seroconverted during the MCH continuum (besides those who were HIV+ at first ANC booking)?

Response from Zimbabwe: The last PMTCT survey only looked at HIV+ women while the current survey includes HIV- women and will be able to detect those entered as HIV- and HIV+ women.

QUESTIONS FOR MALAWI

Q: Is the MTCT rate based on 24 months or cessation of breastfeeding?
A: Advise that testing is done 6 weeks after cessation of breastfeeding

[In response to the question raised in the Malawi presentation about the potential need for new breastfeeding recommendations]: Discussion that breastfeeding messaging in HIV positive women should emphasise the importance of adherence. There is new guidance suggesting continued breastfeeding for HIV positive women. When you look at incidence/MTCT during the breastfeeding period, non-adherence could be a contributor to persisting MTCT. Need to continue testing and adherence support during the breastfeeding period.

Q: Why are you using the check box for "previously HIV-"? Could this cause confusion to make a care giver think "this woman has been tested and does not need re-testing"?
A: This is to indicate that it was a known HIV- going to a known HIV+ or remaining a known HIV-.

QUESTIONS FOR SOUTH AFRICA

Q: Is it a limitation that this survey did not include the private sector?
A: Yes, in the next round of surveys we are looking into how to include the private sector.

Q: South Africa has made two shifts – testing infants at birth and shifting from testing at 6 weeks to 10 weeks. These are both going up. Are you actually testing more babies at birth? Who are the babies you're testing at 6 weeks? What is the optimal time point for finding the kids and for how we evaluate those programs? It seems that you are finding lots of infants at birth but the yield at 10 weeks is lower.
A: [Response held for offline discussion]

Q: For introducing PCR at birth – considering the circumstances around birth - does this make it a good or bad circumstance for testing? What about the mothers who give birth outside of the facility? Have you compared the before and after of the 6 to 10 week shift?
A: [Response held for offline discussion]

QUESTIONS FOR ZIMBABWE

Q: Have you thought of using point of care technologies versus PCR?
A: We are looking at whether this is feasible. Data currently comes from diagnostic laboratories.

Q: Have you compared your results to routine data?
A: Results seem to follow program data closely.

Q: Based on your sampling method, how representative is the data to provincial and district levels?
A: 150 randomly selected sites from all levels of MNCH sites – should be representative of the service delivery points.

Q: Do you have information on age disaggregates?
A: This is forthcoming during the next survey but we did not have this in the past.

QUESTIONS FOR KENYA

Q: What were the strategies and processes for reaching the women who were LTFU in the "Bring Back the Women" campaign?
A: Kenya used DHS data that is also used at the national level. The District/MoH told facilities "this is your number of women who have been lost", so there was accountability to that number at a very local level. Worked this back at the facility level (from national level) which made it easier for the facilities to contribute by implementing a standard procedure to find women. This resulted in bringing back 20,000 women (from 5,000 facilities). We used a process of data checking (back from the DHS to the facility level of defaulters). Kept it local and contextual and used peer mechanisms to bring back the women. This campaign highlighted reasons that women were LTFU and barriers to access. Brought representatives from county-level to collect and write up the stories of why women were defaulting as well as women who had been LTFU. Made the ministers and others accountable at the local level.

Q: How can we make this routine in the system? Are you planning on publishing this?
A: Working on those aspects.

QUESTIONS FOR UGANDA

Q: In contexts of high total fertility rate (TFR), are we able to capture recurrent pregnancies? (Is each pregnancy captured separately, or is the woman considered "pregnant for life"?)

Response from Uganda: There is space to capture up to 4 pregnancies within their register. Each unique pregnancy is captured while on ART.

Q: How are actual deaths captured (separate from transfer out or LTFU)?

Response from Uganda: Telephonic follow-up may indicate.

Q: Do/can we audit cases of MTCT as we do when we audit causes of maternal deaths as we move toward EMTCT?

Response from Uganda: This has been done for a district that had high infection. We did a full audit of why infants were getting infected at a higher rate and found most transmission events are in the new HIV+s not the known HIV+s

SESSION 3: LEARNING FROM COUNTRY EXAMPLES; COUNTRY MODELS FOR MONITORING

Table 4: Country experiences - Lessons learned

COHORT MONITORING			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
Unique ID's	How do we do this?	Global level guidance coming soon. Should be computer generated and not try to be "coded". Tablets are much cheaper than computers – could be charged at night for use in the day. Start where it's feasible – use what is available and scale up. Kenya do have some elements that can already be used for cohort monitoring. Power and internet access is key, but solar power may enable wider adoption. Need advocacy for this as being something that needs to be implemented nationally so that policy makers and decision makers prioritize this and allocate funding. Uganda working with Karolinska to develop unique ID's for the tracking of HIV clients from one to another	Group working on this in Geneva and should move to create a lessons learned document. Mary to report back? May not be possible to get something before Dec 2016 Uganda has a Health Information Division which is deploying this. Uganda to provide feedback to the group on where and how this has happened Slow pace of adoption. Malawi to report back on the reasons behind this at a follow-up meeting
	Addressing confidentiality	Challenge delinking names for confidentiality – may be an issue with use of national ID.	
	Need good country examples	Should be for the whole country and possibly even for whole health system eg. SA currently deploying patient registration system that will generate unique ID. Kenya has realized that the HIV program must support the whole MoH to move towards a health system unique ID.	Countries should systematically document challenges and successes.

Table 4 (continued): Country experiences - Lessons learned

COHORT MONITORING			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
Unique ID's	Importance of national ID number.	Vital registration and the national ID number might make it possible (although lack of national ID should not bar access).	
Mother baby pair follow up in cohort monitoring to address LTFU	Where does cohort monitoring start and end? This determines the denominator of how we measure LTFU.	Cohort approach needs to be clear about **start and end point**, e.g. start at ANC or at delivery? Stop at end of BF or end of transition out of PMTCT/ MCH service to ART.	
	Accuracy of measurement included for eg. death transfers etc.		
	Often mother is around but baby has been lost!	Linkage of records for mother to child is key to this as mothers may be in another program but not actually LTFU.Unique ID would help with this. Electronic systems would also facilitate this and put everyone out of a job! Can enable longitudinal registers and linkage to made easy. Simple approach to help tracking might be right on the pt held ANC and road to health cards WHERE IN THE REGISTERS e.g. book 3, page 12 that mother or that child is recorded.	Identify a single mother infant register. Should be possible. Need some smart design on this. Countries need to raise this again with MCH or info systems folks to develop longitudinal registers. Global level (WHO, UNICEF) need to have advocacy to push this as there's much resistance from MCH programs (although this varies from facility to facility). Share tools. Zimbabwe to share their experience of a tablet based one health service EMR.
	When is final status determined? 18m or 24m?	Obviously determined by the duration of BF so should be defined as such	
	Cohort monitoring needs to look at early LTFU as well as at 3m or 6m. We know that LTFU in m2 or m3 is an important issue	Cohort monitoring approaches should be flexible for this e.g. month by month	

Table 4 (continued): Country experiences - Lessons learned

COHORT MONITORING			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
PMTCT vs MCH program overall	Sometimes we focus only on HIV+ mothers or babies.	Need to look at the whole MCH service.	
	HIV- women might not come back so often but we do need to track interventions to prevent women from getting infected.	Cohort monitoring system could look at HIV- mothers in a different way than HIV+ women? Identify key critical indicators for cohort tracking of negative and positive women. EMRs e.g. in Zimbabwe can do this for us as the system can be smart enough to drive correct reporting and fill in the right registers, so the needs of specific populations can be programmed into the system.	Zimbabwe will share this EMR and some lessons learned
No change to indicate change of pregnancy			LOOK at and REVISE the "blue card" to examine EMTCT specific needs
IMPACT SURVEYS			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
Funding for National surveys are expensive	Limited number of funders who agree to fund this e.g. CDC. High price tag e.g. 1-1.5m in Zimbabwe, R1.8m in SA.		Negotiate with potential funders e.g. CIFF who might be very interested in children, so could develop multiple countries using the same methodology so that results are comparable. Convince DHS funders to "divert" funds from large DHS surveys towards PMTCT impact assessment instead of "wasting" a lot of $$ on DHS surveys that will have very low yield.

IMPACT SURVEYS			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
	.		Convince funders to be able to better make the case that we can do more with less if we can better understand the data – i.e. getting to cost efficiencies. Do impact assessment more broadly for maternal child health outcomes so that they are more appealing and can identify other faults in the health system, now that we are not seeing as much MTCT. LQS is cheaper of course but yes/no only! So potentially useful to follow up from there.
	In some settings need to go through tender mechanisms especially if it's MOH or a research agency.		
Human Resources	Who does it? SA for e.g. doesn't allow normal nurses to do this. Certain levels of staff allowed to draw blood	Use nurses in service to reduce costs and make it operationalable. Integrate into existing systems e.g. the ANC surveys.	
	Size of the survey! (tends to get larger and larger with each year.)	Keep it simple! Maximum ½ to 1 page	
	How you collect info.	Electronic methods make it more expensive.	

IMPACT SURVEYS			
Key Issues	**Specific Challenge**	**Possible Solutions**	**Next steps**
Sample size	As MTCT rates fall, need to get larger and larger samples to get to the right answers	Linking to cohort monitoring? How? Set up with case based surveillance systems?	
Finding the right time/ setting/circumstance to do an impact survey	Frequency: possibly every 5 years as it needs a lot of buy in and effort and even more cost.	Should be used as a way only to calibrate/validate other systems of cohort monitoring, etc	
	Situation: finding the right opportunity to do this	Link to rollout or evaluation of case based surveillance.	
Finding the children? What is the sampling frame? Facility or clinics or community?	Facility is easier, some DHS surveys have HIV testing and child testing incorporated into it but community is large, expensive and may be low yield making it hard to generalize.	Where there is high coverage of immunization it might be OK to do facility based. Look at children of patients at ART clinics (although this is biased by who is accessing and also who is alive and not, and potentially missing orphans).	
	Public facilities only, what about private sector (which may even be enriched for positive women if there is stigma). Varies a lot by country but e.g. in Nigeria very high rates of private sector use … this would also be an issue for cohort.	Government needs to get private sector to report data, but for example, if they are getting government ARV's they should be asked to report.	
Accurate presentation of results e.g. final vs 6 week transmission rates.	Causes endless confusion with reporting especially by senior staff who want to make political statements.	END of BF is more important for true impact.	
Data cleaning and analysis	Need the right tools, people and capacity.	Try to set this up in advance to be prepared	

NEXT STEPS & CLOSING

- Meeting notes will be captured in a report which will be circulated for inputs.
- The SA National Department of Health would like delegates to access the EMTCT-Last Mile website.
- There will be a B+ Implementation meeting at Victoria Falls, Zimbabwe from 23-26 August 2016.
- The focus for B+ monitoring should be on integration in the broader sense.

APPENDIX 1: MEETING AGENDA

SAMRC Partnership with:

MRC | health | IATT | unicef | World Health Organization | UNAIDS | PEPFAR

SCALING UP PMTCT IMPACT ASSESSMENTS IN THE CONTEXT OF IMPROVING GLOBAL MATERNAL AND CHILD HEALTH AND SURVIVAL IN SUB-SAHARAN AFRICA

A focused, follow-up consultation to the "B+ Monitoring & Evaluation Framework Dissemination and Country Consultation" meeting in October 2015

DATE: 23rd July 2016

TIME: 08h00-17h00

VENUE: Durban, South Africa

Proposed meeting Objectives:

1. To share experiences (methods, tools, lessons learnt) with national surveillance activities for PMTCT Option B+ monitoring
2. To share experiences (methods, tools and lessons learnt) since October 2015 with cohort monitoring and using unique identifiers as methods to track the population-level impact of PMTCT interventions on eliminating mother to child transmission of HIV, and improving maternal and child survival
3. To synthesise documentation on practical experiences with monitoring PMTCT impact, with specific focus on national impact surveillance, cohort monitoring and using unique identifiers These include:
    - **3.1** A technical series on experiences with implementing national impact surveys
    - **3.2** A synthesis of experiences with tools and methodologies for monitoring PMTCT impact

Intended Deliverables

1. Report- synthesis and recommendations in the way forward
2. Technical series on practical experiences and considerations when implementing national impact surveys
3. A synthesis of country-based experiences with tools and methodologies when implementing routine cohort monitoring and unique identifiers to monitor PMTCT impact
4. Peer reviewed publications based on the above

PROPOSED AGENDA

TIME	AGENDA ITEM	PRESENTER	FACILITATOR
Session 1: Welcome and Context, Aims of the meeting			
07h30-08h30	Registration	Deon/Jazelle/Lucille /Fiki/Rose	SAMRC
08h30-08h45	Welcome from SA National Department of Health and SAMRC Meeting Objectives	South African NDOH: Dr Pearl Holele SAMRC: Ameena Goga	Dr Pearl Holele
	Introductions and Expectations	ALL	
08h45-09h15	Welcome and Overview: Cover history, what guides exist for PMTCT impact assessments, Summarise the Oct 2015 meeting to contextualise this meeting, and Touches briefly on elimination and the validation criteria/certification process. The purpose of this meeting is to hone in on the PMTCT impact piece.	WHO / IATT/ /UNICEF co-welcome: Dr Chewe Luo (/UNICEF), Dr Shaffiq Essajee (WHO), Dr Priscilla (IATT)	Dr Mary Mogashoa and Dr Pearl Holele
Session 2: PMTCT impact: Different methods: modelling, surveys and cohorts			
09h15-09h45	Modelling PMTCT impact	Dr Mary Mahy	Dr Chewe Luo
09h50-10h10	Overview of other methodologies to monitor PMTCT impact – surveys and use of programme data	Dr Priscilla Idele	
10h10-10h30 Group Photo and Tea			
10h30-10h50	Key operational considerations for the different methodologies		
10h50-11h40	Measuring PMTCT impact using surveys – country examples	SA, Malawi, Zimbabwe	Dr Priscilla Idele
11h40-12h30	Cohort monitoring	Country examples - Tanzania, Uganda, SA, Kenya, Malawi - followed by Q&A Country examples	
12h30-13h15 Lunch			
Session 3: Group discussions: Learning from country examples; country models for monitoring			
13h15-14h15	Group discussions: What to do and when to do it? Key issues for each of the methodologies; recommendations for using each methodology – 4-5 people per group – 5 groups		**Facilitators:** Dr Nande Putta, Dr Priscilla Idele, Dr Chewe Luo, Dr Shaffiq Essajee, Dr Mary Mahy
14h15-15h15	Feedback from group discussion – 10 minutes per group		Dr Nande Putta
15h15-15h30	Coffee		
Session 4: Putting it all together			
15h30-16h30	Synthesis and Recommendations / Next steps for Countries and Global partners	ALL and Rapporteurs	IATT Dr Priscilla Idele
17h00 Reception and dinner			

APPENDIX 2: LISTING OF PARICIPANTS

N0.	NAME	SURNAME	ORGINIZATION	COUNTRY
1	Jean Claude	Mutabazi	Universite de Montreal-Canada	Canada
2	Shaffiq	Essajee	WHO	Geneva
3	Rose	Wafula	PMTCT program manager at National Aids and STI Control Program Kenya	Kenya
4	Patrick	Oyaro Owiti	RCTP-FACES	Kenya
5	Wingston	Ng'ambi	Lighthouse Trust	Malawi
6	Jotham	Nyasulu	HIV and AIDS Department, Ministry of Health	Malawi
7	Ms Ellen	Thom	WHO	Malawi
8	Michael	Phiri	HIV and AIDS Department, Ministry of Health	Malawi
9	Emmanuel	Saka	UNICEF	Malawi
10	Michael	Eliya	PMTCT-HIV and AIDS Department, Ministry of Health	Malawi
11	Cardyn	Douglas	UNICEF	New York
12	Priscilla	Idele	UNICEF	New York
13	Riona	Govender	National Department of Health	South Africa
14	Laurie	Gulaid	UNICEF	South Africa
15	Pearl S	Holele	National Department of Health	South Africa
16	Tivani	Mashamba-Thompson	University of KwaZulu-Natal	South Africa
17	Kondwani	Ng'oma	UNICEF South Africa	South Africa
18	Mathilda	Ntloana	National Department of Health	South Africa
19	Benn	Sartorius	University of KwaZulu-Natal	South Africa
20	Witness	Chirinda	South African Medical Research Council	South Africa
21	Ameena	Goga	South African Medical Research Council	South Africa
22	Vundli	Ramokolo	South African Medical Research Council	South Africa
23	Nobubelo	Ngandu	South African Medical Research Council	South Africa
24	Nobuntu	Noveve	South African Medical Research Council	South Africa
25	Trisha	Ramraj	South African Medical Research Council	South Africa
26	Vuyolwethu	Magasana	South African Medical Research Council	South Africa
27	Yagespari	Singh	South African Medical Research Council	South Africa
28	Duduzile	Nsibande	South African Medical Research Council	South Africa
29	Jazelle	Kiewitz	South African Medical Research Council	South Africa
30	Natasha	Titus	South African Medical Research Council	South Africa
31	Rose Mathokwa	Choeu	South African Medical Research Council	South Africa
32	Ntombifikile	Mbatha	South African Medical Research Council	South Africa
33	Lucille	Heyns	South African Medical Research Council	South Africa
34	Deon	Salamo	South African Medical Research Council	South Africa
35	Busi	Msimang	WHO	South Africa
36	Anna	Larsen	CDC	South Africa
37	Mireille	Cheyip	CDC	South Africa
38	Mary	Mogashoa	CDC	South Africa
39	Andre	Viljoen	South African Medical Research Council	South Africa
40	Mukpme	Nyamhagatta	Ministry of Health, Tanzania	Tanzania
41	Zikulah	Namukwaya	MU-JHU CARE LTD	Uganda
42	Harriet	Nangobi	Kawolo Hospital	Uganda

43	Josephine	Bulya	Ministry of Health	Uganda
44	Shaban	Mugerwa	Ministry of Health	Uganda
45	Linda	Nabitaka	Ministry of Health	Uganda
46	Mary	Mahy	UNAIDS	UN
47	Sanjana	Bhardwaj	UNICEF	UN
48	Chewe	Luo	UNICEF	UN
49	Priscilla	Idele	UNICEF	UN
50	Nande	Putta	IATT Global M&E Advisor, HIV Section, UNICEF House	Zambia
51	Brian	Chirombo	WHO	Zimbabwe
52	Solomon	Mukungunugwa	Deputy Director, PMTCT & PAEDS ART Ministry of Health	Zimbabwe
53	Ngwarai	Sithole	Senior M&E officer	Zimbabwe
54	Robert	Gongora	Health facility representative from Mutawatawa	Zimbabwe

APPENDIX 3: LINK TO COUNTRY PRESENTATIONS

https://drive.google.com/drive/folders/0BwJD8d_C9arRSGpsaDExMl95SEU