PMTCT (getting to zero - 2015) Stepping up the pace and challenges of achieving eMTCT in low resource settings

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Background

The Global Plan Towards the Elimination of New HIV Infections Among Children by 2015 and Keeping Their Mothers Alive focuses on reaching pregnant women living with HIV and their children – from the time of pregnancy until the mother stops breastfeeding.
Main targets:

- Reducing the number of new HIV infections among children by 90 per cent
- Reducing the number of AIDS-related maternal deaths by 50 per cent
- This plan covers all low- and middle-income countries, but focuses on 22 countries with the highest estimates of HIV-positive pregnant women.
22 Key Countries

Percentage Coverage of PMTCT Services 2009

COUNTRIES:
- Countries 2 - 24%
- Countries 25 - 49%
- Countries 50 - 74%
- Countries >75%
This regional average masks huge disparities

- Botswana, Namibia, South Africa and Swaziland, for example, already achieved coverage rates of more than 85 per cent,

- In Angola, Burundi and Ethiopia less than 20 per cent of HIV-positive pregnant women were enrolled in PMTCT programmes by 2009.

- Few countries have adopted option B+
And further disparities

- Within countries, and for individual patients
- Recent cases of missed PMTCT:
  - N.A, a 2 mo old baby admitted with disseminated TB and extensive staphyloccal dermatitis; mother is a 23 year old newly diagnosed with PTB/HIV not in care. N.A passed away at day 4 of admission.
  - P.N, a 9 month old baby struggling on the malnutrition ward, CD4 count 4! Mom, who is 18 yr old declined HAART until DNA results were obtained.
What does stepping up the pace mean?
The Four-Pronged Approach to PMTCT Strategy

- Primary Prevention of HIV Infection among Women of Reproductive Age
- Prevention of Unintended Pregnancies among Women Living with HIV
- Prevention of HIV Transmission from Women Living with HIV to Their Children
- Provision of Care, Treatment, and Support to Mothers Living with HIV, Their Children and Families

The PMTCT Continuum of Services

- Antenatal Services
- Intrapartum (Labor and Delivery) Services
- Postpartum/Postnatal Services

Community Services
Option B + Scale up

- Uganda adopted the Option B+ for the elimination of mother to child transmission of HIV (EMTCT) in 2013.
- The Champion for this EMTCT campaign is the 1st Lady of Uganda, demonstrating political support.
- The MOH leads efforts in training, mentoring and implementation.
Entry Points for ART Initiation in 7 districts supported by PREFA in Uganda

- **Known Pos 1st ANC**
  - ART Initiation: 3552
  - Positive Mothers: 4548

- **PNC**
  - ART Initiation: 526
  - Positive Mothers: 421

- **Maternity**
  - ART Initiation: 408
  - Positive Mothers: 437

- **New ANC**
  - ART Initiation: 4561
  - Positive Mothers: 4642
DNA PCR Test Results

**Jul ‘13 – June ‘14**
- 300, 5%
- Exposed infants tested for HIV Negative by PCR
- 6256, 95%
- Exposed infants testing HIV Positive by PCR

**Oct ‘12 – Jun ‘13**
- 290, 9%
- DNA PCR results returned from the lab HIV Negative
- 2876, 91%
- DNA PCR results returned from the lab that are HIV Positive
Elimination of Mother to Child Transmission of HIV: Performance of Different Models of Care when Initiating Lifelong ART for Pregnant Women in Malawi (Option B+)

Monique van Lettow, Richard Bedell, Isabell Mayuni, Gabriel Mateyu, Megan Landes, Adrienne Chan Vanessa van Schoor, Teferi Beyene, Anthony Harries, Stephen Chu, Andrew Mganga, Joep J van Oosterhout
Malawi

- new PMTCT strategy in 2011
  *Option B+

- Implemented in other countries

- No formal evidence base and concerns about losses to follow up
Option B+ in Malawi - Learning by Doing

- No guidelines for integrating Option B+ into the routine service
- Different approaches had to be considered for:
  - Location, timing ART
  - Adherence counseling
  - Follow-up after delivery or breastfeeding

Would this affect uptake, adherence, retention?
Chibwandira et al; MMWR 2013

- 750% increase ART pregnant & BF women
Nation wide HF level data:

- 6-month retention 83%
- Great variation between health facilities: 100 – 42%

Limited insight into factors determining uptake and retention
4 Models of Care identified

A: Facilities where women are initiated and followed on ART at ANC clinic until giving birth \((n=75)\)

B: Facilities where women receive only the first dose of ART at ANC clinic, then follow up at ART clinic \((n=38)\)

C: Facilities where women are referred from ANC to the ART clinic for ART initiation and follow-up \((n=18)\)

D: Facilities serving as ART referral sites \((n=9)\) (not providing ANC)
Discussion

18-32% of pregnant women not tested for HIV at ANC

**HIV testing uptake associated with**
- Client : HIV testing staff ratio
- Test kit stock outs
- Model of Care

7-20% of women defaulted Option B+ by 6 months

**Retention associated with**
- District location
- Patient volume
- Model of Care

Worse program indicators in Model B

*Facilities where women receive only first dose of ART at ANC*
CONTRIBUTION OF LAY HEALTH PROVIDERS IN SCALING UP OPTION B+ INTERVENTIONS

Mentor Mothers’ Contribution through Psychosocial Support Groups in East Central Uganda

2014 AIDS Conference
Melbourne, Australia
**WHAT AND WHERE**

**DISTRICTS SERVED**

- mothers2mothers (m2m) supports peer education and psychosocial support interventions to prevent MTCT in 6 countries (Uganda, Kenya, Malawi, Lesotho, Swaziland and South Africa)

- In Uganda m2m is implementing the Mentor Mother model as part of a consortium led by JSI and funded by USAID, amongst others

- The Mentor Mother model is currently being implemented in 45 health facilities, in 9 districts under the ‘Strengthening TB and HIV&AIDS Responses in East Central Uganda’ Project (STAR-EC Project)

- The HIV prevalence in East Central Uganda, is 5.8% compared to the National prevalence of 7.3%

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[Logos: The Republic of Uganda, STAR-EC, USAID]
THE MENTOR MOTHER MODEL

- Recruits lay mothers living with HIV with recent PMTCT experience willing to support their peers at local health facilities
- Trains mothers in basic HIV knowledge
- Employs Mentor Mothers at health facilities to provide:
  - Health education
  - Pre-screen clients for malnutrition, TB, cervical cancer, and GBV
  - Psychosocial support through support groups
  - Support intra-facility and facility-community linkages
  - Actively follow up ‘mother-baby’ pairs who have missed key appointments
- Mentor Mothers facilitate task shifting of non-clinical work from health workers
BARRIERS TO B+ ROLL OUT

- Poor linkage of eligible clients to Pre-ART and ART
- Fear of side effects of ARVs among pregnant and breast feeding mothers
- Misconceptions related to ART initiation i.e. death
- Non-disclosure among young women, and women in new marriages

Therefore to mitigate the barriers and strengthen linkages, Mentor Mothers were facilitated to proactively link their peers to health workers for ART initiation in April 2013.
CONTRIBUTION OF MENTOR MOTHERS

- In collaboration with selected community linkage facilitators, Mentor Mothers mobilized PMTCT mothers to attend psychosocial support groups

- Provided education on Option B+ with support from health workers

- Prepared eligible women individually, and linked them to health workers for ART initiation

- Encouraged sharing of testimonies during the group meetings

- Conducted active client follow up of group members missing appointments in subsequent months
RESULTS

PROPORTION OF PREGNANT & LACTATING WOMEN IN THE PSYCHOSOCIAL SUPPORT GROUPS, LINKED AND STARTED ON OPTION B+

Currently, linkage of PMTCT Clients to chronic care is 92% and to ART 93%
RESULTS

OTHER PMTCT SERVICES ACCESSSED BY GROUP MEMBERS DURING THE QUARTER

77% (N:830) of clients who needed a baseline CD4 test, were tested.

93% (N:464) of infants due for a PCR test, were linked and received PCR test.

94% (N:259) of mothers who had not disclosed their HIV status to spouses, disclosed.
FACTORS CONTRIBUTING TO THE SUCCESSFUL ROLL OUT OF OPTION B+ PSYCHOSOCIAL SUPPORT GROUP MEMBERS

The training of Mentor Mothers prior to the roll out of option B+

The use of a peer approach. A number of Mentor Mothers were initiated on Option B+ together with their peers hence they shared from experience

Team work among Mentor Mothers health workers and other linkage facilitators

Availability of drugs supported by STAR-EC and Ministry of Health
“Mentor Mothers providing peer-led psychosocial support and linkages through support groups are important channels in the acceleration and adoption of new PMTCT interventions in resource constrained settings”
Operational challenge: Linkages from prevention of mother-to-child transmission services to care and treatment services in Zambia


- Ministry of Health Zambia - Japan International Cooperation Agency SHIMA project, Lusaka, Zambia

shimaproject@gmail.com
Background

- Great success in scale-up of the PMTCT program in Zambia
  - PMTCT ARV coverage: 97\% (UNAIDS, 2012)
Probability of enrolment in HIV care/treatment

Kaplan-Meier failure estimate

<table>
<thead>
<tr>
<th>Time from HIV diagnosis</th>
<th>Probability</th>
<th>95% CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>at 6 months</td>
<td>0.32</td>
<td>0.26 - 0.40</td>
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<tr>
<td>at 12 months</td>
<td>0.42</td>
<td>0.35 - 0.50</td>
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<tr>
<td>at 18 months</td>
<td>0.44</td>
<td>0.37 - 0.52</td>
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</tbody>
</table>

Probability of enrolment in HIV care/treatment

Time from HIV diagnosis to enrolment in HIV care/treatment

Kaplan-Meier failure estimate
### Predictors for enrolment in HIV care/treatment

<table>
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<tr>
<th>Predictors</th>
<th>Hazard ratio</th>
<th>95% CI</th>
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<tbody>
<tr>
<td><strong>Age</strong></td>
<td></td>
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</tr>
<tr>
<td>≤20</td>
<td>0.26</td>
<td>0.09-0.71†</td>
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<tr>
<td>21-30</td>
<td>1.00</td>
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<tr>
<td>≥31</td>
<td>0.79</td>
<td>0.44-1.42</td>
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<tr>
<td><strong>Education</strong></td>
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<tr>
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<td>1.00</td>
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<tr>
<td>1-7</td>
<td>0.80</td>
<td>0.32-2.00</td>
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<tr>
<td>≥8</td>
<td>1.59</td>
<td>0.62-4.08</td>
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<tr>
<td><strong>Marital status</strong></td>
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<tr>
<td>Married/Cohabit</td>
<td>1.00</td>
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<tr>
<td>Not married</td>
<td>0.65</td>
<td>0.29-1.44</td>
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<tr>
<td><strong>Parity</strong></td>
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<tr>
<td>Primigravida</td>
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<td>1-3</td>
<td>0.93</td>
<td>0.41-2.12</td>
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<tr>
<td>≥4</td>
<td>1.21</td>
<td>0.43-3.46</td>
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Risk factors for not enrolled in HIV care/treatment

- Younger maternal age
- Attending rural health centers not providing HIV care/treatment
Summary

- EMTCT is critical for child and maternal survival,
- There are big disparities between and within countries
- Lessons from successful programs like the m2m
- Young mothers are a key risk for failure
- EMTCT