Patient factors to target for eMTCT

CN Mnyani

25 September 2014
eMTCT is not just about the availability of ARVs

Patient-related (behavioural) factors are also critical
The WHO four prongs of PMTCT

1. Prevention of unintended pregnancies
2. Prevention of 1st prevention of HIV infection
3. Prevention of HIV transmission from mother to baby
4. Provision of care and support for HIV-infected women, their children and families
Primary prevention of HIV infection
Some sobering data...

Survey results

- 38 431 participants interviewed
- 28 997 (67.5%) tested for HIV
- Tested for ART exposure in samples that were HIV+
- Overall, HIV prevalence 12.2%

Figure II: HIV prevalence by sex and age, South Africa 2012

Figure 11: HIV prevalence trends among antenatal women by age group, South Africa, 2010 to 2012. (Source: NDoH, 2013)
Survey results

• Among adults aged 15–49 years, number of new infections was 1.7 times higher in females than in males

• The HIV-incidence rate among female youth aged 15–24 was over four times higher than the incidence rate found in males in this age group (2.5% vs. 0.6%)

• 24.1% of all new HIV infections occurred in young females aged 15–24 years

Figure IV: Sexually active respondents aged 15 years and older who had more than one sex partner in last 12 months, South Africa 2002, 2005, 2008, 2012

Survey results

• 33.7% of all female adolescents aged 15-19 years reported having had a partner more than five years their senior

• Overall, only 26.8% of participants had accurate knowledge about sexual transmission and prevention of HIV infection!
  (TV was identified as the most influential source)

Our messages about HIV prevention are clearly failing...

Prevention of unplanned pregnancies
Prevention of unplanned pregnancies

- Family planning, and consequently prevention of unintended pregnancies, has long been the most underutilised PMTCT intervention, with only modest progress to date

- High unmet need for contraception among HIV-infected women

- Even in those who have access to reproductive health services, rates of unplanned pregnancies remain high

Reproductive Decision-Making and Periconception Practices Among HIV-Positive Men and Women Attending HIV Services in Durban, South Africa

Lynn T. Matthews · Tamaryn Crankshaw · Janet Giddy · Angela Kaida · Jennifer A. Smit · Norma C. Ware · David R. Bangsberg
Methods

Qualitative research with in-depth interviews to explore:

• Reproductive decision-making

• Horizontal transmission risk understanding and practices

• Periconception risk understanding and practices

Results

• Some participant characteristics

<table>
<thead>
<tr>
<th>Table 1  Study population characteristics</th>
<th>Women (n = 30)</th>
<th>Men (n = 20)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Characteristics</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mean age ± SD (years)</td>
<td>30 ± 4</td>
<td>34 ± 6</td>
</tr>
<tr>
<td>Completed matric or above†</td>
<td>22 (73%)</td>
<td>12 (60%)</td>
</tr>
<tr>
<td>Employed</td>
<td>19 (63%)</td>
<td>15 (75%)</td>
</tr>
<tr>
<td>Mean years since HIV diagnosis ± SD</td>
<td>3 ± 2</td>
<td>3 ± 5</td>
</tr>
<tr>
<td>Currently on ART/ARVs</td>
<td>21 (70%)</td>
<td>17 (85%)</td>
</tr>
</tbody>
</table>

Results

• Personal and culturally-embedded reasons for having children

  □ Remained intact even when HIV+ individuals had partners of negative or unknown HIV-status

• Independent of fertility goals, many study participants were confused by the nature of serodiscordance, leading to riskier behaviour

Results

- Responses revealed that pregnancy intention occurs on a spectrum with a minority of pregnancies explicitly intended.

The spectrum:

- **Unplanned, but desired pregnancies** – had hoped for pregnancy at some point in the future, did not use contraception, and engaged in unprotected sex.

Results

- **Unplanned pregnancies, but reported happiness** about them – unclear if this reflected resigned acceptance or fertility desire

- **Unintended, unwanted pregnancies** – for some, partner response to the news of pregnancy influenced the woman’s response

Results

• Many had not disclosed HIV status

• Among planned pregnancies with a serodiscordant partner, majority did not know how to minimize sexual transmission risk while allowing for conception

  Some described knowingly risking horizontal HIV transmission in order to conceive

Early adolescent pregnancy increases risk of incident HIV infection in the Eastern Cape, South Africa: a longitudinal study

Nicola J Christofides, Rachel K Jewkes, Kristin L Dunkle, Mzikazi Nduna, Nwabisa Jama Shai, and Claire Sterk

Corresponding author: Nicola J Christofides, Wits School of Public Health, 27 St Andrews Road, Parktown, South Africa. Tel: +27117172566. (nicola.chris@gmail.com)
Methods

• In the overall study, 1416 women (15-26yrs)

• Were volunteer participants in a cluster-randomized, controlled trial through Stepping Stones – an HIV prevention intervention programme

• 1099 women included in this analysis – 88% of 1256 HIV-negative women in the trial

Methods

Assessments:

• Baseline, 12 and 24 months

• Tested for HIV and HSV2

• Interviewed to ascertain socio-demographic and partner characteristics and sexual risk behaviour

Results

• The adjusted IRR for HIV infection was 3.02 (95% CI 1.50-6.09) for a pregnancy occurring at age 15 or younger

Early adolescent pregnancies associated with high risk behaviour:

• Higher partner numbers

• Greater age difference with partners

Results

• Temporal aspect of this finding – **pregnancies occurring years before the incident HIV infection**

  Ruling out the possibility that HIV infection occurred simultaneously or preceded the early pregnancies

  …prevention of teenage pregnancies is also about HIV prevention

Unplanned pregnancies

• In a case-control study of HIV-infected women with infected and uninfected infants, unplanned pregnancies were associated with an increased odds of MTCT

  \[ \text{AOR} = 2.7; \text{ 95\% CI} = 1.2 \text{ to } 6.3; \ p = 0.022 \]
HIV diagnosis during pregnancy

- **Unknown HIV status prior to conception** and risk of MTCT
  - AOR = 6.6; 95% CI = 2.4 – 18.4; $p < 0.001$

- **Accessing antenatal care >20 wks gestation** and risk of MTCT
  - AOR = 4.3; 95% CI = 2.0 – 9.3; $p < 0.001$

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Patient factors to target for elimination of mother-to-child transmission of HIV

Coceka N Mnyani,1,2, Adonia Simango2, Joshua Murphy2, Matthew Chersich3,4,5 and James A McIntyre2,6
Timing of Maternal HIV Testing and Uptake of Prevention of Mother-to-Child Transmission Interventions Among Women and Their Infected Infants in Johannesburg, South Africa

Karl-Günter Technau, MBBCh, MSc,* Emma Kalk, MBBCh, PhD,† Ashraf Coovadia, MBBCh, FCPaed,* Vivian Black, MBBCh, MSc,‡ Sam Pickerill, MSc,* Claude A. Mellins, PhD,§ Elaine J. Abrams, MD,|| Renate Strehlau, MBBCh, MSc,* and Louise Kuhn, PhD¶

(J Acquir Immune Defic Syndr 2014;65:e170–e178)

• Investigated the profile of newly diagnosed vertically infected children and their mothers to identify shortfalls in the PMTCT programme
Timing of maternal ART

Selected results:

• In 81 cases (29%), late maternal diagnosis precluded any PMTCT access

• With Dx during or before pregnancy, recommended PMTCT guidelines were followed in 86 (61%) pairs

One of the conclusions:

• Timely maternal Dx enables PMTCT uptake, but implementation and follow-up gaps require attention to improve infant outcomes

(J Acquir Immune Defic Syndr 2014;65:e170–e178)
Option B+ in practice
Understanding factors, outcomes and reasons for loss to follow-up among women in Option B+ PMTCT programme in Lilongwe, Malawi

Hannock Tweya¹,²,³, Salem Guga²,⁴, Mina Hosseinipour⁵, Colin Speight², Wingston Ng‘ambi², Mphatso Bokosi², Janet Chikonda⁶, Annie Chauma⁶, Patricia Khomani⁷, Malocho Phoso⁸, Tiwonge Mtande⁵ and Sam Phiri²
Methods

• Assessed factors, outcomes and reasons for LTFU of pregnant and breastfeeding women initiated on ART

• Clinic using a real-time, point-of-care Electronic Medical Record system

• Identified patients who had missed appointment by at least 3 weeks – traced by phone or home visits

(H. Tweya et al. Tropical Medicine and International Health)
Results

- 2458 (84%) were pregnant and 472 (16%) were breastfeeding at ART initiation.

- 577 (20%) missed a clinic appointment by at least 3 weeks.

- 272 (47%) only collected ARVs at the time of initiation and did not return.
Results

- Successfully traced 228 (40%) – 219 alive; 9 had died

Reasons for LTFU in the 219 women found alive:

<table>
<thead>
<tr>
<th>Reason for LTFU</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stopped Rx</td>
<td>118</td>
<td>54</td>
</tr>
<tr>
<td>Self-transferred</td>
<td>67</td>
<td>30</td>
</tr>
<tr>
<td>Drugs from other source</td>
<td>13</td>
<td>6</td>
</tr>
<tr>
<td>Rx interruptions</td>
<td>9</td>
<td>4</td>
</tr>
<tr>
<td>Not started Rx despite collection</td>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>Refused interview</td>
<td>5</td>
<td>2</td>
</tr>
</tbody>
</table>

(H. Tweya et al. Tropical Medicine and International Health)
## Results

**Table 3** Reasons for discontinuing antiretroviral therapy (ART) women starting ART for PMTCT at Bwaila Hospital in Lilongwe, Malawi

<table>
<thead>
<tr>
<th>Reasons for ART discontinuation</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n</td>
</tr>
<tr>
<td>Total women</td>
<td>118</td>
</tr>
<tr>
<td>Non-respondents</td>
<td>7</td>
</tr>
<tr>
<td><strong>Respondents</strong></td>
<td>111</td>
</tr>
<tr>
<td>Forgotten to take ARVs</td>
<td>5</td>
</tr>
<tr>
<td>Suspected side effects of ARVs</td>
<td>11</td>
</tr>
<tr>
<td>Very weak/sick</td>
<td>11</td>
</tr>
<tr>
<td>Religious belief</td>
<td>5</td>
</tr>
<tr>
<td><strong>Travelled away</strong></td>
<td>42</td>
</tr>
<tr>
<td>Non-disclosure of HIV status to the spouse</td>
<td>9</td>
</tr>
<tr>
<td><strong>Transport costs</strong></td>
<td>17</td>
</tr>
<tr>
<td>Limited information about ARVs</td>
<td>11</td>
</tr>
<tr>
<td>Other reasons</td>
<td>49</td>
</tr>
</tbody>
</table>

*Percentages are out of those who responded to each question. Some women gave more than one reason for Discontinuing ART.*

(H. Tweya et al. Tropical Medicine and International Health)
Results

- Of those successfully traced, 107 were counselled and advised to return to the ART clinic

- 95 (89%) said they would return and restart ART

- However, only 27 of these (23%) returned to care!

LTFU was associated with:
- Younger age and being pregnant at ART initiation
- Earlier year of Option B+ implementation

(H. Tweya et al. Tropical Medicine and International Health)
“What They Wanted Was to Give Birth; Nothing Else”: Barriers to Retention in Option B+ HIV Care Among Postpartum Women in South Africa

Kate Clouse, PhD, MPH,* Sheree Schwartz, PhD, MPH,*† Annelies Van Rie, MD, PhD,* Jean Bassett, MBBCh,‡ Nompumelelo Yende,‡ and Audrey Pettifor, PhD, MPH*

J Acquir Immune Defic Syndr • Volume 67, Number 1, September 1, 2014

(Clouse, K, et al. JAIDS 2014; 67(1))
## Results

**TABLE 2. Barriers to Retention in Care Identified by SSI Participants (N = 50)**

<table>
<thead>
<tr>
<th>Reasons why respondent may cease care, reported during antenatal care (n = 50)</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nothing</td>
<td>38</td>
<td>76.0</td>
</tr>
<tr>
<td>Lack of money</td>
<td>9</td>
<td>18.0</td>
</tr>
<tr>
<td>Work conflict</td>
<td>3</td>
<td>6.0</td>
</tr>
<tr>
<td>Staff treatment at clinic</td>
<td>3</td>
<td>6.0</td>
</tr>
</tbody>
</table>

(Clouse, K, et al. JAIDS 2014; 67(1))
## Results

### TABLE 2. Barriers to Retention in Care Identified by SSI Participants (N = 50)

<table>
<thead>
<tr>
<th>Reason</th>
<th>n</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reasons why other women may cease care, reported during postpartum care (n = 48)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mother cares about the baby’s health but not her own</td>
<td>14</td>
<td>29.2</td>
</tr>
<tr>
<td>Mother is “ignorant” or “irresponsible”</td>
<td>8</td>
<td>16.7</td>
</tr>
<tr>
<td>Staff treatment at clinic</td>
<td>6</td>
<td>12.5</td>
</tr>
<tr>
<td>Mother’s denial of her HIV status</td>
<td>5</td>
<td>10.4</td>
</tr>
<tr>
<td>Mother has not disclosed her HIV status to others</td>
<td>5</td>
<td>10.4</td>
</tr>
<tr>
<td>Lack of money</td>
<td>4</td>
<td>8.3</td>
</tr>
<tr>
<td>Long queues or limited hours at clinic</td>
<td>4</td>
<td>8.3</td>
</tr>
<tr>
<td>Mother relocates</td>
<td>3</td>
<td>6.3</td>
</tr>
<tr>
<td>Mother thinks she is cured</td>
<td>3</td>
<td>6.3</td>
</tr>
<tr>
<td>Do not know</td>
<td>4</td>
<td>8.3</td>
</tr>
</tbody>
</table>

(Clouse, K, et al. JAIDS 2014; 67(1))
Results

During the focus group discussion, 3 main themes emerged on why women may be LTFU:

- Conflict with work commitments
- Negative treatment from health-care workers
- Lack of disclosure related to stigma

(Clouse, K, et al. JAIDS 2014; 67(1))
Conclusions

• Still high HIV prevalence and incidence in SA

• Interventions to counter potential behavioural risk compensation (i.e. an increase in risky behaviour) in the era of a successful ART roll-out programme are urgently required (Shisana, O, et al., 2014)

• Need to review our prevention communication strategies
Conclusions

• Ill-informed reproductive decision-making, with high rates of unplanned pregnancies

• Need to ensure retention in care, especially with B+

• Safe infant feeding practices

...it all comes down to education and counselling
Thank you...