Universal ART for pregnant & postpartum women (Option B+): implications for women’s health

Landon Myer
1) **Background – Where are we?**

2) **The potential: What can universal ART do for women’s health?**

3) **The challenge: are we missing the boat?**
1. Background – Where are we?
Where are we?

Several years’ experience implementing policies of lifelong ART for all HIV+ pregnant & postpartum women (“Option B+”) in southern Africa

- Malawi 2011 → South Africa 2015

New global policies calling for universal ART for all HIV+ individuals (women, children & men)

- What are the lessons from Option B+ implementation that may foreshadow universal ART?
<table>
<thead>
<tr>
<th>Country</th>
<th>Total population (millions)</th>
<th>Adult general population HIV+ (%)</th>
<th>HIV+ pregnant women annually (n)</th>
<th>Maternal mortality ratio (per 100 000)</th>
<th>Infant mortality rate (per 1000)</th>
<th>Health expenditure per capita (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Swaziland</td>
<td>1.4</td>
<td>26%</td>
<td>11 000</td>
<td>389</td>
<td>45</td>
<td>256</td>
</tr>
<tr>
<td>Lesotho</td>
<td>1.9</td>
<td>22%</td>
<td>11 000</td>
<td>487</td>
<td>69</td>
<td>123</td>
</tr>
<tr>
<td>South Africa</td>
<td>54</td>
<td>16%</td>
<td>240 000</td>
<td>138</td>
<td>34</td>
<td>593</td>
</tr>
<tr>
<td>Zambia</td>
<td>15</td>
<td>12%</td>
<td>64 000</td>
<td>224</td>
<td>43</td>
<td>93</td>
</tr>
<tr>
<td>Namibia</td>
<td>2.2</td>
<td>16%</td>
<td>8 000</td>
<td>265</td>
<td>33</td>
<td>423</td>
</tr>
<tr>
<td>Botswana</td>
<td>2.1</td>
<td>25%</td>
<td>13 000</td>
<td>129</td>
<td>35</td>
<td>397</td>
</tr>
<tr>
<td>Zimbabwe</td>
<td>14</td>
<td>17%</td>
<td>75 000</td>
<td>443</td>
<td>47</td>
<td>*</td>
</tr>
<tr>
<td>Mozambique</td>
<td>25</td>
<td>11%</td>
<td>100 000</td>
<td>489</td>
<td>57</td>
<td>40</td>
</tr>
<tr>
<td>Malawi</td>
<td>18</td>
<td>10%</td>
<td>60 000</td>
<td>634</td>
<td>43</td>
<td>26</td>
</tr>
<tr>
<td>UK</td>
<td>64</td>
<td>&lt;0.3%</td>
<td>&lt;1700</td>
<td>9</td>
<td>4</td>
<td>3600</td>
</tr>
<tr>
<td>USA</td>
<td>320</td>
<td>&lt;0.3%</td>
<td>&lt;7000</td>
<td>14</td>
<td>6</td>
<td>9200</td>
</tr>
</tbody>
</table>

Sources: UNICEF; World Bank
PMTCT Guidelines have evolved....

<table>
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</tr>
</thead>
<tbody>
<tr>
<td>4 weeks AZT; AZT+ 3TC, or SD NVP</td>
<td>No recommendation</td>
<td>4 weeks AZT; AZT+ 3TC, or SD NVP</td>
<td>AZT from 28wks + SD NVP</td>
<td>AZT from 28wks + SD NVP + AZT/3TC for 7 days</td>
<td>Option A (AZT + infant NVP) or Option B (triple ARVs)</td>
<td>Option B or Option B+ ART for all PW/BF</td>
<td>Option B+ (ART for all)</td>
</tr>
</tbody>
</table>

Over time shift towards: more effective ARV regimens, extending coverage throughout MTCT risk period, and recognising ART for the mother’s health
.... and lifelong ART for all pregnant & postpartum women is standard policy
2. What can universal ART do for women’s health - views from “Option B+”
ART initiation simplifies & Delays to initiation decrease
Mother to child transmission drops

Proportion of all positive HIV PCR tests from different clinical settings and decreasing HIV positivity rate in the Western Cape province, South Africa, 2009 – 2015

Option B+ Begins in the Western Cape mid-2013

Maritz CROI 2016 #782
Long-term maternal health should improve across CD4+ cell counts.
Declines in maternal mortality

**Tanzania:** 8% reduction in maternal mortality for each additional month on ART before pregnancy

**Malawi & Mozambique:** increasing duration of pre-pregnancy ART use reduces postnatal mortality independent of CD4 & BMI

Li AOGS 2014

Liotta PLoS ONE 2013
Health systems costs & sexual transmission *should* be reduced

- Not much empirical data (understandably)
- Many modelling efforts; all assumption-laden

Ishikawa PLoS ONE 2014
Khanna PLoS ONE 2015
Van Deusen BMC ID 2015
Gopalappa AIDS 2014
Binghwayo PloS ONE 2013
Ciaranello CID 2013
Increasing population coverage of ART in women of reproductive age

In SA: up to 80% of HIV+ women of will enter antenatal care previously initiated on ART under Option B+ by 2020

Leigh Johnson, personal communication
3. What are the threats to optimizing women’s health under “Option B+”

Are we missing the boat?
Ways to ‘miss the boat’ #1:
Fail to keep women on ART engaged in HIV care over time
Increased disengagement from ART programmes after delivery

Women initiating ART in pregnancy more likely to be lost to follow-up vs non-pregnant women starting ART for their own health

.........Why?
What patient factors contribute to non-adherence & loss to follow-up?

“Risk factor” data heterogeneous, highly contextual
– Younger, recent HIV diagnosis, unintended pregnancy
– ART readiness? Partner involvement? Disclosure?
Qualitative evidence more insightful
– Policies may be universal, but patients are not
Ways to ‘miss the boat’ #2: Fail to integrate services for women’s health into HIV care / ART platform
Service integration

- SRH integration in ART services is fashionable
- **Easier said than done!!!!**
  - Vertically-oriented services are easy & natural
  - Few *models of integration*; fewer *realistic models*
    - “Boutique” programmes proliferate
    - What is scalable in constrained primary care settings?
  - Most work is oriented to single services
    - contraception, cervical cancer, safe conception, IPV, etc
- Health services and systems are diverse
  - One model of integration will *not* suit all programmes
How to integrate women’s health services into universal ART programmes

Surging interest in models of care for delivering universal ART during pregnancy & postpartum

– What features of services can address women’s needs & promote adherence/retention?
– How to deliver ART at scale & with efficiency in severely resource-limited health systems?
Summary: an unprecedented opportunity

• Option B+ in SA will lead to the vast majority of HIV+ women initiating lifelong ART

If we can keep them adherent & engaged in care...

.... a unique platform to promote women’s health services in an at-risk population
Don’t Miss The Boat

With thanks to....

Elaine Abrams
Leigh Johnson
Jean Maritz
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Tamsin Phillips