Increasing Numbers of Young Pregnant Women with HIV Infection in the Nelson Mandela Metropolitan District, South Africa

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Background

- South Africa has the most number of people living with HIV.
- Although overall HIV prevalence in South Africa has stabilised, the prevalence is increasing in some geographic areas and amongst certain population groups.
- HIV incidence is more difficult to measure than prevalence; however, trends in prevalence amongst young people aged 15-24 is considered a proxy measure for incidence, as this age group is less affected by mortality and HIV infections are likely to be recent.
- Anecdotal reports of increasing numbers of young HIV-infected pregnant women in areas of the Eastern Cape province have been noted.
- This study investigated trend over time in the age distribution of HIV-positive pregnant women presenting at three antenatal facilities in order to estimate age-specific HIV prevalence trends.
Methods

- A cohort study was performed at three sentinel surveillance facilities in the Nelson Mandela Metropolitan District (sub-district B).
- All HIV-positive pregnant women presenting at the antenatal facilities (January 2009 - June 2012) were included & followed-up through the post-natal period.
- Routine, individual-level antenatal and postnatal clinical data were collected and recorded electronically.
- The age distribution of all HIV-positive pregnant women according to year of presentation were analysed.
- Trend over time was assessed using the Cochrane-Armitage test.
- Ethical clearance was received from the University of Cape Town Research Ethics Committee.
Results

• 1455 pregnant women were included.
• Median age: 26.8 years (IQR: 22.9-36.6 years).
• Median baseline CD4 cell count: 351 cells/µL (IQR: 235-509).
• Median gestational age at booking: 21 weeks (IQR: 16-26).
• 65% women were unaware of HIV status at booking.
• 12% women on lifelong ART at booking.
• 7.5%, 15.3%, 51.2% and 26% women presented in 2009, 2010, 2011 and 2012, respectively.
Age distribution of antenatal HIV positive women for 2009/2010 and 2011/2012
Almost 50% increase between 2009-2012, from 27.9% (95% CI: 19.8-37.2) to 41.1% (95% CI: 36.0-46.2).
Proportions women aged 18-21 years by year of booking

More than two-fold increase between 2009-2012, from 8.1% (95% CI: 3.8%-14.8%) to 18.1% (95% CI: 14.3%-22.4%).
Proportion adolescents aged <18 years by year of booking.

P-trend=0.084

Almost 70% increase from 3.6% (95% CI: 0.1%-7.1%) to 6.1% (95% CI: 3.7-8.6%)
## Age-related associations

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>&lt;18</th>
<th>18-21</th>
<th>22-24</th>
<th>&gt;24</th>
<th>P-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>HIV status at booking unknown (%)</td>
<td>93</td>
<td>81</td>
<td>69</td>
<td>57</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>On ART at booking (%)</td>
<td>2</td>
<td>3</td>
<td>5</td>
<td>18</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Chooses formula feeding (%)</td>
<td>8</td>
<td>16</td>
<td>31</td>
<td>38</td>
<td>&lt;0.0001</td>
</tr>
<tr>
<td>Infant 6 week HIV PCR positive (%) (n=450)</td>
<td>-</td>
<td>4.1</td>
<td>7.1</td>
<td>1.9</td>
<td>0.05</td>
</tr>
</tbody>
</table>
Conclusions

• Increasing proportions of younger women with HIV, who are pregnant, are presenting at facilities in sub-district B of NMBM.

• Although HIV incidence or prevalence cannot be directly measured from this data, these trends suggest increasing HIV incidence amongst younger women, increasing youth pregnancy, or a combination of both.

• Younger women were also less likely to know HIV status or be on ART at booking and had higher vertical HIV transmission rates.

• Factors driving these findings should be investigated, and intensified HIV prevention and family planning efforts should be directed toward youth and younger women in this area.
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