PILOTING VERY EARLY INFANT DIAGNOSIS OF HIV IN LESOTHO: ACCEPTABILITY AND FEASIBILITY AMONG MOTHERS, HEALTH WORKERS, AND LABORATORY PERSONNEL

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BACKGROUND
- Mortality associated with in-utero HIV infection rises rapidly within weeks after birth.
- Current guidelines recommend HIV testing at age 6 weeks, but very early infant diagnosis (VEID)—testing within 2 weeks of birth—followed by immediate initiation of antiretroviral therapy (ART) has potential to avert mortality associated with in-utero transmission.
- However, our understanding of acceptability and feasibility of VEID among mothers, health workers (HW), and laboratory staff is limited.

RESULTS
- Nearly all mothers were happy to know their child’s HIV status at birth.
- Mothers and HW did not indicate that birth testing affected subsequent acceptance of infant HIV testing or clinic attendance.
- HW did not view early ART initiation as a challenge.
- Women’s concerns were obtaining blood from newborns and receipt of limited counseling about HIV testing.
- HW and lab staff reported weak follow-up systems for mothers with home delivery, few diagnostic machines, reagent stock-outs, and increased workload associated with additional testing requirements.
- All groups reported turnaround time delays for all EID, and sometimes results were never received, which would be exacerbated by adding a test to the algorithm.
- 5/13 women participating in interviews at the six-week visit had not yet received their infant’s birth testing results (Table 1).

METHODS
- VEID was piloted in an observational prospective cohort of HIV-positive pregnant women and their infants in 13 Lesotho health facilities.
- Semi-structured interviews conducted with:
  - 20 HIV-positive women and 18 HIV counselors and study nurses (HW) in 8 study facilities in 3 districts
  - 1 laboratory staff member each in 5 district hospitals and 4 central laboratory staff involved in VEID
- Data collection took place March–July 2016.
- Interview themes included acceptability of birth and subsequent HIV testing and early treatment, perceived VEID challenges and HIV birth testing procedures and how well they were performed.
- Thematic analysis was conducted using MAXqda (V10).

CONCLUSION
- Respondents found VEID acceptable and feasible, as it gave them the opportunity to know their child’s HIV status at birth, and did not report that testing of their infant at birth would make them less likely to return for testing of their infant at six weeks.
- However, the study also highlighted challenges within the existing EID system that must be addressed for birth testing to be effective, including strategies to strengthen counseling on infant HIV testing, improve turnaround time, increase the number of facility-based deliveries, and improve client tracing procedures.

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TABLE 1  Birth and 6-week DNA-PCR tests performed among infants of interviewed women and reported receipt of result

<table>
<thead>
<tr>
<th>Reported received</th>
<th>6-week visit (n=13 M-I pairs)</th>
<th>14-week visit (n=7 M-I pairs)</th>
<th>Total (n=20 M-I pairs)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infant received birth HIV test*</td>
<td>13</td>
<td>6</td>
<td>19</td>
</tr>
<tr>
<td>Mother received birth HIV test result</td>
<td>8</td>
<td>6</td>
<td>14</td>
</tr>
<tr>
<td>Infant had blood drawn for birth HIV test</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Day of birth</td>
<td>5</td>
<td>2</td>
<td>7</td>
</tr>
<tr>
<td>On or around 7-day visit</td>
<td>8</td>
<td>4</td>
<td>12</td>
</tr>
<tr>
<td>Infant received 6-week HIV test</td>
<td>13</td>
<td>7</td>
<td>20</td>
</tr>
<tr>
<td>Mother received 6-week HIV test result</td>
<td>N/A</td>
<td>4</td>
<td>N/A</td>
</tr>
</tbody>
</table>

M-I = mother-infant
*One child did not receive a birth test because the testing window was missed following a home delivery.
All test results were HIV-negative.