Integration of HIV-Exposed Infant Services in Rural Rwanda

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Background

• In Rwanda, over 7000 infants are born to HIV-positive mothers each year
• At high risk for infection with HIV, early morbidity and mortality, and lifetime disability from chronic illness\(^1,2\)

Challenges for HIV-affected Mother-Infant Pairs (2010)

• On average, mothers reported:\(^3\):
  – 2-3 visits per month to health centers
  – 3-4 hours transport time per visit
  – 5-6 hours total for HC visit
  – $5-7 transport fee (round-trip)
  – $0.50-2 meals per day
  – $1.60-5 lost wages per day
  – Total: Average $8.30 per HC visit for mother and baby (range $3.30-23)

3. One-Stop Clinic Consultancy Report, Rwanda Biomedical Center, 2012.
Rationale for Service Integration for Mother-Infant Pairs

• Improve access to care by reducing barriers (costs, transport, loss of productivity, child care)
• Combine low-attendance activities with high-attendance activities to improve service utilization
• Improve efficiency of limited resources in health system
Integration of services for HIV-exposed Infants: “Combined Clinic”

Additional supports provided:
- Continuous facility and nurse mentorship by nurse expert
- Electronic medical records for infant and mother
- Nutritional supplementation
- Community health worker linkage and follow-up
<table>
<thead>
<tr>
<th>Infant/Child Activity</th>
<th>Category</th>
<th>Time</th>
<th>Mother Activity</th>
<th>Category</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Post-partum care</td>
<td>MNCH</td>
<td>0-6wk</td>
<td>Post-partum care</td>
<td>MNCH</td>
<td>0-6wk</td>
</tr>
<tr>
<td>Entry/Referral to one-stop clinic</td>
<td>HIV</td>
<td>0-6wk</td>
<td>Return to ID care via one-stop clinic</td>
<td>HIV</td>
<td>0-6wk</td>
</tr>
<tr>
<td>Continuation of NVP prophylaxis until 6 weeks</td>
<td>PMTCT</td>
<td>0-6wk</td>
<td>Initiation or continuation of ART</td>
<td>PMTCT/HIV</td>
<td>0-6wk</td>
</tr>
<tr>
<td>6 week DBS testing with rapid response and link to care if positive</td>
<td>PMTCT</td>
<td>6wk</td>
<td>Initial or continuation of CD4 testing</td>
<td>HIV</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Initiation of co-trimoxazole prophylaxis</td>
<td>PMTCT</td>
<td>6wk-18mo</td>
<td>Initial or continuation of ancillary laboratory testing or radiography</td>
<td>HIV</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Routine infant care (growth monitoring, vaccination review, albendazole, vitamin A)</td>
<td>MNCH</td>
<td>6wk-18mo</td>
<td>Screening and treatment of IST/OIs per Adult HIV recommendations</td>
<td>HIV</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Nutrition support and counseling for infant needs (including AFASS option)</td>
<td>MNCH</td>
<td>0-18mo</td>
<td>Breastfeeding support and counseling</td>
<td>MNCH</td>
<td>0-18mo</td>
</tr>
<tr>
<td>9 month sero testing with rapid response and link to care</td>
<td>PMTCT</td>
<td>9 mo</td>
<td>Nutrition counseling and support for breastfeeding mother</td>
<td>MNCH</td>
<td>0-18mo</td>
</tr>
<tr>
<td>18 month sero testing with rapid response and link to care</td>
<td>PMTCT</td>
<td>18 mo</td>
<td>Safe food and water preparation for child</td>
<td>MNCH</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Tb screening and link to care</td>
<td>MNCH</td>
<td>0-18mo</td>
<td>Recognition and management of neonatal and early childhood illness</td>
<td>MNCH</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Malnutrition screening and link to care</td>
<td>MNCH</td>
<td>0-18mo</td>
<td>Family planning or referral to family planning option in faith-based clinics</td>
<td>FP</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Malaria prevention for infant</td>
<td>MNCH</td>
<td>0-18mo</td>
<td>Active case finding and follow up of HIV+ women with infant &lt;18 mo</td>
<td>MNCH/PMTCT/HIV</td>
<td>N/A</td>
</tr>
<tr>
<td>Recognition and treatment of acute childhood illness per IMCI (LRTI, diarrhea/dehydration, febrile illness)</td>
<td>MNCH</td>
<td>0-18mo</td>
<td>Routine testing of serodiscordant mothers</td>
<td>PMTCT</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Active case finding from immunization and growth monitoring, CHW case finding, screening family members of HIV-positive individuals, and PITC</td>
<td>HIV</td>
<td>0-18mo</td>
<td>Psychosocial support for PLWH</td>
<td>HIV</td>
<td>0-18mo</td>
</tr>
<tr>
<td>Referral and management of HIV+ child to pediatric ID clinic</td>
<td>HIV</td>
<td>0-18mo</td>
<td>Return to routine ID care for seropositive mothers</td>
<td>HIV</td>
<td>18 mo</td>
</tr>
</tbody>
</table>
Key Entry Points for Combined Clinic

- ANC/VCT
- PITC
- HIV Care and Treatment

Provider-initiated testing and counseling at HC and DH

Combined Clinic for HIV-exposed Infants

Active community-based case-finding by trained CHWs

Screening and testing all family members of known HIV-positive patients

Identification during routine immunization and growth monitoring
Outcomes from Integration

• From Nov 2010 – Oct 2012:
  – Achieved integration in 37 rural HFs
  – 973 mother-infant pairs enrolled
  – 1.6% of enrolled infants HIV positive as of Oct 2012 (cross-sectional)
  – High rate of satisfaction from providers and patients

• MOH policies adopted for:
  – Integration of PMTCT, HIV, MNCH, & FP services
  – Care of mother-infant pair during single visit

• Not yet evaluated: retention in care, child survival, maternal outcomes, costs, patient satisfaction
MTCT in Rwanda

MTCT rate at 6 weeks and at 18 months for HIV-exposed Infants

Source: TracNet, Rwanda Biomedical Center
Key Implementation Challenges

• Integrated Trainings and Protocols
• Integrated Tools (Registers, Patient Charts)
• Physical orientation of integration (higher vs. lower volume HFIs)
Murakoze!

Acknowledgements
• Rwanda Biomedical Center
• District Hospital leadership and ID clinicians
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