Linking Infant Diagnosis to Treatment

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February 9, 2006
Context

- >88% of women in Kenya make at least one antenatal visit
- 60% of MCH facilities in Kenya now have PMTCT services
- 80% of infants attend clinic at 6 weeks
- HIV treatment programs are scaling-up but <3% of people on treatment and children
Introduction

• Rapid progression of HIV disease in infants and high early mortality of infected infants
• HIV diagnosis should be made at the earliest opportunity
• Clinical criteria fail to identify the majority of children who need ART before the age of 18 months

Overall survival by infection status

Cumulative % dead

<table>
<thead>
<tr>
<th></th>
<th>12 m</th>
<th>24 m</th>
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<tbody>
<tr>
<td>HIV-uninfected</td>
<td>4.9</td>
<td>7.6</td>
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<tr>
<td>HIV-infected</td>
<td>35.2</td>
<td>52.5</td>
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Entry points

• PMTCT programs
  – Identifying the HIV exposed child
  – Systematic follow-up (CTX prophylaxis, nutrition support)
  – Establish HIV infection status

• Clinical services
  – Out patient department
  – Paediatric in-patient wards
Areas for Action

1. Algorithms for diagnosis
2. Infrastructure and Technology
3. Training
4. Procurement and Supplies
5. Referral & linkages with HIV care and treatment programs
Algorithms: Antibody test

• Liberal use of antibody testing to identify the HIV exposed children in our service

• More targeted use of DNA PCR to identify HIV infected children
  – Early enough to initiate treatment and avert deaths
  – Maximum yield
Algorithms: Antibody test

- Antibody testing in the well child
  - Infants of unknown HIV exposure status at 6-weeks or at first contact
  - All HIV exposed infants at 12 & 18 months
Algorithms: Antibody test

- Antibody testing in all sick children admitted to hospital
- Antibody testing of out-patient children with following indicator conditions
  - Failure to thrive
  - Pneumonia
  - Developmental delay
  - Recurrent visits/admissions
Algorithms: DNA PCR

- DNA PCR testing in PMTCT programs at 6 week for the well non breastfeeding infants
- DNA PCR testing in PMTCT programs at 14 week for the well breastfeeding infant
  - Allows identification of children infected early who are more likely to progress rapidly
  - Linked to a visit already made by >70% of women in Kenya
- If HIV+ link to care and treatment per guidelines
- If HIV- use antibody to diagnose 9, 12, 18 months
Infrastructure

- DNA PCR available in research laboratories
- Establish a network of regional laboratories
- Logistics of transferring samples
- Quality assurance
Training

- Development and training of providers on algorithms
- Sample collection
- Communication about results
- Laboratory personnel
PMTCT Program experience: Kenyatta National Hospital

- 90% of all mothers attending ANC return for 6-week visit
- DBS samples taken at 6-week visit
- Turn around time too long 4-6 weeks
- Rejection rate of samples too high
  - ? Sample collection criteria too stringent
Diagnostic HIV testing

- Routine antibody screening of all patients admitted to paediatric wards
  - HIV test acceptance ~90%
- HIV infection exposure in 50% of patients majority aged < 2 years
- HIV infection confirmed in 67% of exposed infants
- Need to expand to the out-patient department
Operational issues

• Linking antenatal record and infant record
  – New card developed and being piloted
• Human resources
• Integration of services – PMTCT/MCH and HIV care and treatment
No matter what your level of resources, there is always something that can be done for HIV-affected children.

African Network for Care of Children Affected by HIV/AIDS