Early Identification of Infected Children Including the Youngest in Need

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EGPAF International Family AIDS Initiatives

- Acknowledges all of the host countries for supporting this work,
- Thanks all of our staff in the US and in country,
- Thanks all the people we serve, and
- Permission for pictures was obtained and should not imply anything about HIV status
Tanzania
2 year Mortality (Zvitambo)
Marinda et al. Ped Inf Dis J 2007;26:519-26

NE - not exposed; NI - HIV-exposed uninfected; PN - postnatal, IP - intrapartum; IU - in utero

HIV status

<table>
<thead>
<tr>
<th>HIV status</th>
<th>NE</th>
<th>NI</th>
<th>PN</th>
<th>IP</th>
<th>IU</th>
</tr>
</thead>
<tbody>
<tr>
<td>NE</td>
<td>508</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NI</td>
<td></td>
<td>381</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PN</td>
<td>9510</td>
<td>3135</td>
<td>258</td>
<td></td>
<td></td>
</tr>
<tr>
<td>IP</td>
<td></td>
<td></td>
<td></td>
<td>381</td>
<td></td>
</tr>
<tr>
<td>IU</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>381</td>
</tr>
</tbody>
</table>
Probability of Death Within 12 Months

HPMCS Dunn et al/Lancet 2003; 362: 1605-11
EGPAF Country Programs
2000  8 sites in 6 countries
2008  >2500 sites in 17 countries

- Russia
- Georgia
- India
- Thailand
- Dominican Republic
- Uganda
- Kenya
- Tanzania
- Malawi
- Mozambique
- Zambie
- Cameroon
- D.R. Congo
- Angola
- South Africa
- Zambia
- Swaziland
Cumulative PMTCT Cascade All Countries 2000-2008

- Eligible: 5,299,504
- Counseled: 5,138,266
- Tested: 4,402,080
- Results: 4,145,118
- HIV+: 419,185
- Mom ARV: 330,410
- Infant ARV: 219,994
PMTCT Cascade African Countries 2007-2008
Uganda
HIV Prevalence, % Moms Receiving ARV, % Babies Receiving ARV

- HIV Moms% +
- Mom ARV
- Babe ARV
Number of HIV Infected Children <15 yrs Receiving Antiretroviral Treatment

UNICEF Estimates 2.1 million children living with HIV in 2007
Tanzania
## EGPAF’s Cumulative Care and ART Data

### EGPAF Care and Treatment Data: As of Dec 31, 2007

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of sites providing C&amp;T</th>
<th>Cum Care Total</th>
<th>Cum Ped Care (subset of total)</th>
<th>Cum ART Total</th>
<th>Cum Ped ART (subset of total)</th>
<th>% ever on ART who are children</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cote d'Ivoire</td>
<td>71</td>
<td>74331</td>
<td>3239</td>
<td>33427</td>
<td>1241</td>
<td>3.7%</td>
</tr>
<tr>
<td>Mozambique</td>
<td>20</td>
<td>24285</td>
<td>1395</td>
<td>7543</td>
<td>389</td>
<td>5.2%</td>
</tr>
<tr>
<td>South Africa</td>
<td>23</td>
<td>54458</td>
<td>5354</td>
<td>34632</td>
<td>3820</td>
<td>11.0%</td>
</tr>
<tr>
<td>Tanzania</td>
<td>38</td>
<td>42344</td>
<td>4467</td>
<td>19593</td>
<td>1828</td>
<td>9.3%</td>
</tr>
<tr>
<td>Zambia</td>
<td>53</td>
<td>128377</td>
<td>9018</td>
<td>80668</td>
<td>5522</td>
<td>6.8%</td>
</tr>
<tr>
<td>DRC</td>
<td>1</td>
<td>873</td>
<td>650</td>
<td>583</td>
<td>441</td>
<td>75.6%</td>
</tr>
<tr>
<td>Rwanda</td>
<td>19</td>
<td>n/a</td>
<td>n/a</td>
<td>1695</td>
<td>229</td>
<td>13.5%</td>
</tr>
<tr>
<td>Swaziland</td>
<td>2</td>
<td>n/a</td>
<td>n/a</td>
<td>2399</td>
<td>203</td>
<td>8.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>227</td>
<td>324668</td>
<td>24123</td>
<td>180540</td>
<td>13673</td>
<td>7.6%</td>
</tr>
</tbody>
</table>

Note: Data in this table reflects only data from current sites. Swaziland data is from end of Sept 2007.
Project HEART (EGPAF): Percentage Distribution of Children Currently on ART at the End of Dec 2007, by Age Group

- Cote d’Ivoire: 60.0%
- Mozambique: 56.9%
- South Africa: 61.4%
- Tanzania: 68.6%
- Zambia: 68.2%

- 5-14 years: 27.5%, 26.3%, 21.7%, 23.1%, 24.5%
- 2-4 years: 12.5%, 16.8%, 16.9%, 8.4%, 7.3%
- 0-1 year: 10.0%
Africa: Women Reported to Receive Prophylaxis for PMTCT
Counseling and testing of parent/guardian for child test

Space for recording cotrimoxazole prophylaxis to infant

Integrated with EPI schedule

Infant test result
If positive, includes instruction to refer/complete information on “treatment card”
At Risk Factors

- Birth Weight less than 2kg
- Fifth child or more
- Multiple births
- MTCT
- Birth intervals less than 2 years
- Single parent
- Death of any child under 5 in family
- Severe jaundice

Mahomva A, Miller A et al
Uganda
HIV Exposed Infants: Number Reported At Regular Well Child Visits

* Number of HIV Exposed Infants
Tanzania—HIV Exposed Babies Identified in Well Baby Clinic

*Number of HIV Exposed Infants
Zimbabwe HIV Exposed Infants Identified In Well Baby Clinic

![Graph showing the number of HIV-exposed infants identified in Zimbabwe over the years 2005 to 2007. The graph indicates a significant increase in the number of identified infants in 2007, from 9,214 in 2005 to 13,603 in 2007. The categories and years include 1st EPI, CTX 6 wk, 3rd EPI, CTX 6 mo, and measles.]
# Mortality Rates

**Children with HIV Early Antiretroviral Therapy (CHER) Study**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Arm 2 &amp; 3 (n = 252)</th>
<th>Arm 1 (n = 125)</th>
<th>Total (n = 377)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Died (%)</td>
<td>10 (4%)</td>
<td>20 (16%)</td>
<td>30 (8%)</td>
</tr>
<tr>
<td>Person Years of follow-up</td>
<td>167</td>
<td>79</td>
<td>246</td>
</tr>
<tr>
<td>Rate per 100 PY (95% CI)</td>
<td>6.0 (2.9; 10)</td>
<td>25.3 (15.5; 39.0)</td>
<td>12.2 (8.2; 17.4)</td>
</tr>
<tr>
<td>Hazard Ratio</td>
<td></td>
<td></td>
<td>0.24 (0.11; 0.51)</td>
</tr>
<tr>
<td>P - value</td>
<td></td>
<td></td>
<td>0.0002</td>
</tr>
</tbody>
</table>

Cotton et al
Risk of death

Death rate per 100 person-years (Arm 2&3 vs. 1)

- 3 months 10 vs. 41
- 3 to 6 months 4 vs. 23
- 6 to 12 months 3 vs. 9

Children with HIV Early Antiretroviral Therapy (CHER) Study: Cotton et al
Summary & Conclusions

• Starting ART before 12 weeks of age reduces early mortality by 75%

• Findings were used to construct new guidelines advising ART in early infancy whenever virological test of infection is obtained (WHO 2008)

• These results support the need for enhanced PMTCT programmes, early infant diagnosis and effective transition to care.
WHO Guidelines—Meeting Apr 2008

- HIV exposed infants should have virological test at 4-6 weeks or earliest opportunity

- All infants under 12 months of age with confirmed HIV infection should be started on ART

- When virological testing not available infants under 12 months with clinical diagnosed presumptive HIV should start ARV

- Infants with history of exposure to nevirapine should receive protease inhibitor based ART, or if not available nevirapine based therapy
Pediatric ART Eligibility Diagnostic Algorithm

- Rapid Antibody Test
- Clinical Diagnosis
- CD4 Testing (as available)

N. Grundmann, P Iliff et al
Strategies to Better Treat Infants

- Mom’s status on infant hand held record
- Provider Initiated Counseling and testing of all sick children
- Possible provision of Care & treatment in MCH
- All virologically + infants less than 12 months treated per WHO
- Algorithm utilizing clinical illness to make presumptive diagnosis
Congo
## Clinical Diagnosis of HIV Status

<table>
<thead>
<tr>
<th>Sign or symptom</th>
<th>WHO</th>
<th>KZN</th>
<th>Zim</th>
<th>Illif</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pneumonia (3)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Cough AND fast breathing</td>
</tr>
<tr>
<td>Persistent diarrhoea (3)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Diarrhoea</td>
<td></td>
<td>X</td>
<td></td>
<td>X</td>
<td>Diarrhoea</td>
</tr>
<tr>
<td>Ear discharge (2)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Ear discharge ever</td>
</tr>
<tr>
<td>VLW</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Weight-for-age &lt;3rd centile</td>
</tr>
<tr>
<td>Poor weight gain (3)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>Zero or negative weight change over &gt;=3 months</td>
</tr>
<tr>
<td>Gen lymphadenop (1)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>LNs &gt;=0.5cm in &gt;=2 of 3 sites (neck, axill, inguinal)</td>
</tr>
<tr>
<td>Oral thrush (3)</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td></td>
</tr>
<tr>
<td>Parotid swelling (2)</td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Child, sibling or parent with TB</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td>Child on TB Rx or in contact</td>
</tr>
<tr>
<td>Weight &lt;= 0 Z score</td>
<td></td>
<td></td>
<td></td>
<td>X</td>
<td>Infant’s weight &lt;= median weight-for-age</td>
</tr>
</tbody>
</table>