Protecting Our Family
An Assessment of Screening of HIV/AIDS in Pregnant Women in Apam and Axim Ghana

By Alia Sommerville, D.O., MSc.

Introduction

- Globally HIV/AIDS has left its mark on every continent, with its highest prevalence being in sub-Saharan Africa
  - 10% of the world's population
  - In 2008, 67% of infected HIV/AIDS individuals resided in this area
- In Ghana, mother-to-child transmission (MTCT) is the second highest mode of transmission of HIV/AIDS
  - 90% of all HIV/AIDS cases in children under the age of 15 years in the country
- Without intervention, up to 40% of HIV-positive mothers will transmit the virus to their babies.

Comparatively developed countries MTCT rates are less than 2%
Thought to be achieved by:
- Testing of all pregnant women, ART, safe delivery practices, and counseling and support for infant breast feeding

National Strategic Framework

- There have been 3 projects each with a goal time frame of 5 years to increase HIV/AIDS testing, available resources and treatment.
  - National Strategic Framework (NSF) I a program in affect from 2001-2005
  - NFS II from 2006-2010
  - Prevention of Mother to Child Transmission (PMTCT) Scale Up Program 2011-2015
- Most current

Interventions of NSF

- The major interventions in this plan include:
  1. Review, update and wide dissemination of policies, guidelines and other standards
  2. Strengthening programme management, resource mobilization and coordination at national, regional and district levels
  3. Strengthen the human resource capacity for provision of the integrated package of PMTCT services
  4. Improvement in service delivery of integrated package of PMTCT services at all level, including community involvement
  5. Infrastructure and equipment capacity for provision of integrated package of PMTCT services
  6. Improvement in the procurement and supply chain management system for HIV related services including PMTCT
  7. Strengthening the management information system, including operational research

Priority of Testing as per The Region

- Pregnant Women (First Priority)
- Blood Safety
- Other/Outpatient

2013 WHO Guidelines

- All forms of HIV testing and counseling should be voluntary and adhere to the five C's:
  - Consent
  - Confidentiality
  - Counseling
  - Correct test results
  - Connections to care, treatment and prevention services
- Recommendations
  - Provider-initiated testing and counseling recommended
  - Re-testing is recommended in the third trimester, or during labor or shortly after delivery
Maternal HIV Testing

- Identification of infected pregnant women is critical to control of perinatal transmission
  - The use of routine or "opt-out" HIV rapid testing strategy has proven highly effective
  - Informs all pregnant women that they will be tested for HIV unless they specifically decline
  - Result in >95% same day HIV testing
- "opt-in" approach
  - Individual pregnant women were counseled about HIV testing and then had to consent in writing if they wished to be tested
  - Only two thirds of pregnant women receiving testing in most antenatal settings

Goal

- Reduce morbidity and mortality of mothers and children due to vertical transmission of HIV/AIDS
  - Increase the number of women tested for HIV/AIDS during pregnancy
  - Improve screening methods of early detection
    - Ensure safe delivery
    - Early treatment of mother and child and before beginning to breast feed
  - Increasing Pre and Post Test Counseling
    - Help women stay negative decrease overall transmission of virus

Methods

- 2 Part Study
  - A retrospective review of the number of pregnant women tested for HIV/AIDS from 2009-2013 in Axim in comparison to the District as well as Apam in comparison to GOMAO West District
  - Survey performed in the antenatal clinic (ANC) at St Luke’s Hospital in Apam and Axim Hospital in Axim

Apam Demographics

<table>
<thead>
<tr>
<th>Category</th>
<th>20</th>
<th>24</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>15-44</td>
<td></td>
</tr>
<tr>
<td>Gestational Age</td>
<td>6-7mo</td>
<td></td>
</tr>
<tr>
<td>Gestalt</td>
<td>1-6</td>
<td></td>
</tr>
<tr>
<td>Parity</td>
<td>0-5</td>
<td></td>
</tr>
<tr>
<td>Distance from hospital</td>
<td>0-300</td>
<td></td>
</tr>
<tr>
<td>Mode of Transportation</td>
<td>Walk, Bus, Taxi</td>
<td></td>
</tr>
</tbody>
</table>

Axim Survey

- 116 patients in Axim
- Same questions asked in Apam
- Additional Questions:
  - What month were you tested?
  - Were you given a result?
  - Are you aware that HIV/AIDS can affect your health as well the health of your baby? If yes what affect does it have?
### Axim Demographics

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range</th>
<th>Mean</th>
<th>Mode</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>14‐41</td>
<td>26</td>
<td>25</td>
</tr>
<tr>
<td>Gestational Age</td>
<td>2‐9mo</td>
<td>6.3mo</td>
<td>8mo</td>
</tr>
<tr>
<td>Gravidity</td>
<td>1‐10</td>
<td>2.9</td>
<td>2</td>
</tr>
<tr>
<td>Parity</td>
<td>0‐9</td>
<td>1/2</td>
<td>1</td>
</tr>
<tr>
<td>Distance from Hospital</td>
<td>&lt;15 min to 3 hours</td>
<td>26 min</td>
<td></td>
</tr>
<tr>
<td>Mode of Transportation</td>
<td>Walk, Bus, Taxi</td>
<td>Taxi</td>
<td></td>
</tr>
</tbody>
</table>

### Gestational Age Breakdown

<table>
<thead>
<tr>
<th>Gestational Age</th>
<th>St. Luke's Hospital</th>
<th>Axim Hospital</th>
</tr>
</thead>
<tbody>
<tr>
<td>1st Trimester</td>
<td>6.2%</td>
<td>6.2%</td>
</tr>
<tr>
<td>2nd Trimester</td>
<td>29%</td>
<td>29%</td>
</tr>
<tr>
<td>3rd Trimester</td>
<td>47%</td>
<td>47%</td>
</tr>
</tbody>
</table>

### Results
- Data Analyzed from 2009‐2013 for ANC Registrants, and PMTCT
- 60 ANC Registrants Surveyed at Apam
- 116 ANC Registrants Surveyed at Axim

### Pregnancy Testing HIV Apam vs District

#### St. Lukes Hospital

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>3319</td>
<td>3002</td>
<td>2545</td>
<td>2474</td>
<td>2601</td>
</tr>
<tr>
<td>Tested</td>
<td>1246</td>
<td>2626</td>
<td>2146</td>
<td>1179</td>
<td>1272</td>
</tr>
<tr>
<td>Untested 2073</td>
<td>376</td>
<td>399</td>
<td>1295</td>
<td>623%</td>
<td>61%</td>
</tr>
<tr>
<td>Positive 18</td>
<td>36</td>
<td>20</td>
<td>20</td>
<td>17</td>
<td></td>
</tr>
</tbody>
</table>

#### Gomoa West District

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>5017</td>
<td>4905</td>
<td>3647</td>
<td>4995</td>
<td>5350</td>
</tr>
<tr>
<td>Tested</td>
<td>2412</td>
<td>3962</td>
<td>2955</td>
<td>3243</td>
<td>2679</td>
</tr>
<tr>
<td>Untested 2605</td>
<td>943</td>
<td>692</td>
<td>1792</td>
<td>49%</td>
<td>49%</td>
</tr>
<tr>
<td>Positive 20</td>
<td>62</td>
<td>66</td>
<td>39</td>
<td>26</td>
<td></td>
</tr>
</tbody>
</table>
Apam Survey Results

- 28/60 (46%) pts were not tested for HIV
- Of the 28 pts not tested, 26 pts (92%) of pts said they would if recommended by a Doctor Or Nurse
- 58/60 (96%) pts stated if tested would be willing to stay to know their result
- 100% of women reported willing to go for counseling/treatment if tested positive

What Apam Does Well

- When test kits are available, every pregnant woman receives testing
- Those pregnant women being tested for HIV/AIDS receive pre and post counseling
  - Patients tested were aware of results, and could recall testing months
  - Privacy of testing and release of results

Apam Deviations from National Guidelines

- Nationally the instruction for hospitals/clinics is priority for testing of pregnant women
  - Priority used: Blood Safety, Clinical Suspicion, and then Pregnant Woman
  - ANC HIV test kits are exhausted patients are not referred to the main laboratory for testing unless clinical suspicion of HIV/AIDS
  - In absence of test kits all pregnant women are not being referred for testing

Additional Concerns

- Acquiring Test Kits Every month
- System of retroactive testing for mothers who are not tested to due to regional or national shortage
- Standardized Pre and Post Counseling information disseminated by HIV counselor

Pregnancy Testing HIV/AIDS Axim

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>1170</td>
<td>1119</td>
<td>1226</td>
<td>1464</td>
<td>1351</td>
</tr>
<tr>
<td>Tested</td>
<td>1358</td>
<td>979</td>
<td>1454</td>
<td>1235</td>
<td>1219</td>
</tr>
<tr>
<td>Untested</td>
<td>-118</td>
<td>160 (1.53)</td>
<td>228</td>
<td>230 (19.71)</td>
<td>32 (2.57)</td>
</tr>
<tr>
<td>Positive</td>
<td>12</td>
<td>17</td>
<td>25</td>
<td>29</td>
<td>10</td>
</tr>
</tbody>
</table>

Axim Hospital
Pregnancy Testing
HIV/AIDS for District

<table>
<thead>
<tr>
<th>Year</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
</tr>
</thead>
<tbody>
<tr>
<td>ANC</td>
<td>2412</td>
<td>2483</td>
<td>1750</td>
<td>1980</td>
<td>1309</td>
</tr>
<tr>
<td>Tested</td>
<td>616</td>
<td>1112</td>
<td>1907</td>
<td>1713</td>
<td>1270</td>
</tr>
<tr>
<td>Untested</td>
<td>1596</td>
<td>1371</td>
<td>1907</td>
<td>1713</td>
<td>1270</td>
</tr>
<tr>
<td>Positive</td>
<td>14</td>
<td>86</td>
<td>27</td>
<td>32</td>
<td>19</td>
</tr>
</tbody>
</table>

Nzema District

Axim Hospital

- 65 of the 116 ANC Registrants (56%) of women stated they had received HIV/AIDS Testing this pregnancy
- 42 of the 116 ANC Registrants (36.2%) of women stated they had not received HIV/AIDS Testing this pregnancy
- Of the 42 patients that had been tested 4 were actively being tested and unaware of what test they were receiving (9%)
- 24 of the 65 ANC Patients that answered “Yes” to Receiving Testing Were not told the result (20.8%)
- Mode for Patient knowledge testing 3 months
- Average month tested about 4 months

What Axim Does Well

- Every pregnant women is being tested
  - Testing twice during pregnancy
- System in place to obtain ensure necessary stock for test kits
- Privacy in Patient Testing and Results (recent improvement)

AXIM Deviation of National Guidelines

- All patients are not receiving pre and post counseling
  - Patients unaware being tested
  - Patients unaware of results

Additional Concerns

- Pre-counseling is given by one Nurse.
- Counseling Session is once a day first thing in the morning
- No system ensuring the patient understands and acknowledges pre and post counseling
Apam Recommendations

• Following Appropriate Priority Testing Protocol
  ▪ Pregnant Woman first
  ▪ Referral system in place for when out of test kits
  ▪ List of patients to be tested
    ▪ In event of national shortage
• Pre Counseling Outline of Topics Covered
• Post Counseling Topics Covered
• Making Patient aware of result

Axim Recommendations

• Continue with Opt-out approach of testing
  ▪ Create a document with specific pre-counseling information needed to be disseminated to patients
  ▪ Ensures standardization of information given
  ▪ Multiple sessions versus 1 morning information session
  ▪ Increase the amount of HIV/AIDS counselors
  ▪ Have healthcare work administering tests provide information on the HIV tests prior to testing
  ▪ State the purpose of the test
  ▪ Ask pt if they have any questions
  ▪ Have a place in the record that is for the patient to sign or mark indicating they understand and acknowledge result

Limitations

• Would have verified every patients status
  ▪ Books often don’t accompany the patient during interview
  ▪ Larger sample size
    ▪ Time constraints due to stay and interpreter availability
  ▪ Would have asked the exact same questions at each sight to be able to do a cross comparison

Resources

• 2013 World Health Organization Guidelines. The Use of Antiretroviral Drugs for Treating and Preventing HIV Infection. June 2013
• National Guidelines for Prevention of Mother to Child Transmission of HIV AIDS. 2008

Thank You!

QUESTIONS?