

# **Prevention of Mother-to-Child Transmission of HIV in Manica and Sofala Provinces**

**A Quantitative and Qualitative Project Evaluation**

Direcção Provincial de Saúde/ Manica and Sofala  
Health Alliance International  
UNICEF

Project sites:  
MANICA - H.C. Eduardo Mondlane, H.C. Nhamaonha, H.C. Premeiro de Maio.  
SOFALA - H.C. Ponte Gea, and H.C. Munhava.

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## Acronyms

|        |   |
|--------|---|
| CCR    | Consults for Children at Risk               |
| CP     | Country Program                             |
| DPS    | Provincial Directorate of Health            |
| DDS    | District Directorate of Health              |
| FHI    | Family Health International                 |
| GoM    | Government of Mozambique                    |
| HAI    | Health Alliance International               |
| MCH    | Mother and Child Health                     |
| MSF-L  | Medecins Sans Frontiers-Luxemburg           |
| MSF-S  | Medecins Sans Frontiers-Switzerland         |
| MTR    | Mid-term review                             |
| MTCT   | Mother to Child Transmission                |
| NGO    | Non-governmental organization               |
| NVP    | Nevirapine                                  |
| PEPFAR | Presidential Emergency Plan for AIDS Relief |
| PMTCT  | Prevention of Mother to Child Transmission  |
| PSI    | Population Services International           |
| SCF    | Save the Children Fund                      |
| SE     | Sant'Egidio                                 |
| VCT    | Voluntary Counselling and Testing           |
| WR     | World Relief                                |
| WV     | World Vision                                |

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# 1. Situational Analysis

## Background

Within Mozambique the HIV/AIDS pandemic is having an impact on all aspects of society. Though the entire nation is affected by the spread of HIV/AIDS, the central region is particularly affected, with the highest prevalence rates (17%) and longest history of the disease. Pregnant women are especially susceptible to the adverse outcomes related to HIV, and mother-to-child transmission remains the primary mechanism for childhood infection with HIV.

The Government of Mozambique (GoM) - UNICEF Country Programme of co-operation 2002-2006 focuses on HIV/AIDS prevention and impact reduction. The programme will strengthen capacities and commitments at all levels to empower communities to make informed choices and participate actively in the fight against HIV/AIDS, and increase access to basic services, including youth-friendly health services, PMTCT packages, information and skills.

The Mid-term Review (MTR) of the GoM-UNICEF Country Program (CP) of co-operation 2002-2006 is scheduled to take place in September 2004. The objective of the MTR is to assess progress of CP level performance in relation to CP priorities and objectives and recommend ways forward and adjustments as necessary. The overall goal of the MTR will be to describe the extent to which the programs have contributed to the three priority areas (HIV/AIDS, Girls' Education, and IECD) in terms of both process and outcome. In-depth assessments of selected thematic areas are necessary to document lessons learned and improve GoM/UNICEF actions.

Since 2000, UNICEF has been supporting the MoH in the implementation of the PMTCT project at national and local levels. At local level, implementation is coordinated by Health Alliance International (HAI), Provincial Directorate of Health (DPS) and District Directorate of Health (DDS) in two capitals cities; Beira (Sofala Province) and Chimoio (Manica Province).

The health facilities chosen for inclusion in this project were selected in coordination with DPS and DDS counterparts, based on the high quantity of antenatal consultation, availability of counseling and testing space, proximity to existing reproductive health services, and -in Chimoio- based on the results of a UNICEF-sponsored PMTCT Acceptance Study carried out in early 2002.

In March 2002, Beira began offering voluntary counseling and testing (VCT) services for women seeking antenatal care at the Ponte Gêa health center, followed by the Eduardo Mondlane Health Center in Chimoio in April, 2002. Neither site has a maternity; the centers refer pregnant women to birthing facilities at Central Hospital in Beira and Provincial Hospital in Chimoio, respectively, where anti-retroviral

prophylaxis are provided for HIV positive pregnant women. In early 2003, two more PMTCT sites were opened in Chimoio (Primeiro de Maio and Nhamaonha Health Centers), and one more PMTCT site was opened in Beira (Munhava Health Center).

## PMTCT in Mozambique

According to MoH data, there were 18 health units providing PMTCT services in year 2003. In most cases, services were implemented and/or supported by international non-governmental organizations, including Health Alliance International, Medecins Sans Frontiers, and Sant'Egidio.

**Number of PMTCT Service Sites per Province and NGO Support Providers**

| NGO Support | Number of PMTCT service sites per province |      |           |        |        |      |          |         |        |              |
|-------------|--|------|-----------|--------|--------|------|----------|---------|--------|--------------|
|             | Maputo                                     | Gaza | Inhambane | Sofala | Manica | Tete | Zambezia | Nampula | Niassa | Cabo Delgado |
| HAI         |  |      |           | 5      | 5      |      |          |         |        |              |
| MSF-L       | 2  |      |           |        |        | 3    |          |         |        |              |
| MSF-S       | 1  |      |           |        |        |      |          |         | 1      |              |
| SE          | 1  |      |           |        |        |      |          |         |        |              |

Provinces with no PMTCT services in 2003 include Cabo Delgado, Nampula, Zambezia, Inhambane, and Gaza. Based on available data from 13 of the 18 units (the five Sant'Egidio sites use a different prophylaxis protocol), a total of 16,157 pregnant women underwent HIV testing in year 2003, of which 18 percent (2,954 women) tested positive. Most, however, did not use the provided treatment to reduce the mother-to-child transmission of HIV: only 28.9 percent (853 women) received Nevirapine. The Manica/Sofala sites comprise 83 percent (707 women) of the national effort to provide NVP to pregnant women.

A considerable scaling up of PMTCT services is planned by the MoH for 2004, including new services installed in 62 health units throughout the 11 provinces. Year 2004 implementation support will be provided through the PEPFAR initiative by Population Services International (PSI), Save the Children Fund (SCF), World Vision (WV), Family Health International (FHI), and World Relief (WR).

## 2. Evaluation Design

### Purpose

To evaluate the effectiveness of the PMTCT project in two cities (Chimoio and Beira) in light of the Mid-Term Review. The results of the present evaluation will serve as a foundation for project expansion.

## Objectives

- To assess the quality of key activities of the PMTCT services provided; especially voluntary counselling and testing.
- To measure the influence of the PMTCT project on the barriers related to stigma and women's power in decision-making.
- To identify successes, strengths, and strategies that can be replicated, as well as constraints that impede attainment of project objectives.

The evaluation sought to answer certain questions using both qualitative and quantitative techniques. Evaluation questions included, but were not limited to:

- How does the project score on established monitoring indicators?
- What are the perceptions of local leader/NGOs about the functioning of the PMTCT project?
- How do mechanisms of coordination work between DPS, DDS, and HAI?
- What are the causes of project drop out at various stages (testing, maternity, support group, day hospital)?
- How is the quality of counseling services?
- Do IEC materials exist? Of what quality and quantity?
- Are users satisfied with services?
- What constraints hamper project expansion?
- What key lessons can be learned from the Manica/Sofala experience?

## Methodology

Field work was conducted during Mozambique's spring season. Seven days were spent in Chimoio city of Manica Province (22-29 March) and seven days in Beira city of Sofala Province (3-10 May). The timing was disparate due to incompatible availability of field personnel.

In each province, provincial managers, project associates, and project coordinators were interviewed (see list, Annex 1). Relevant NGOs and CBOs were visited and directors/staff were interviewed (see list, Annex 2). Where maternities are not on-site, referral maternities were visited (Eduardo Mondlane H.C. in Chimoio refers to Chimoio Provincial Hospital and Ponte Gea H.C. in Beira refers to Beira Central Hospital). The two Day Hospitals were toured and staff was interviewed; and in Beira the Sant'Egidio laboratory was visited. A Voluntary Counseling and Testing (VCT) site for the general population was visited in Dondo, Sofala Province.

One full day of observation was spent at each of the project health centers (Eduardo Mondlane, Primeiro de Maio and Nhamaonha in Manica Province and Ponte Gêa and Munhava in Sofala Province); and simulations were conducted as mothers seeking testing services and as HIV positive mothers entering maternities.

One quantitative and two qualitative instruments were used to gather additional information:

a) Quantitative Instrument

Fifty-seven (57) exit interviews designed to measure satisfaction with services were conducted with mothers leaving testing and counseling services. At each of the five sites, *all* exiting mothers were interviewed during one full day of operations

**Exit Interviews Conducted**

| Date of Exit Interviews | Province | Health Center    | Number of Mothers Interviewed |
|-------------------------|----------|------------------|-------------------------------|
| 24 March                | Manica   | Eduardo Mondlane | 13                            |
| 25 March                | Manica   | Nhamaonha        | 18                            |
| 26 March                | Manica   | Primeiro de Maio | 7                             |
| 5 May                   | Sofala   | Ponte Gea        | 11                            |
| 7 May                   | Sofala   | Munhava          | 8                             |
| Total                   |          |                  | 57                            |

Instrument attached in Annex 3. Results were stratified by province.

b) Qualitative Instruments

Focus group discussions

At each of the project health centers, a focus group discussion was held with members of Positive Mothers Clubs. The goal was to provoke discussion amongst HIV+ mothers and mothers-to-be concerning complex topics; including:

- Infant feeding

*(are mothers following the infant feeding recommendations/if not, what are the difficulties relating to compliance?)*

- Empowerment (Involvement of Husband + Family Planning)

*(are mothers able to make their own choices concerning testing, treatment, and protection from HIV/if not, why not? How can husbands be used to support a woman’s ability to make positive choices?)*

- Stigma + Confidentiality

*(Does fear of discrimination keep mothers from seeking/continuing with services/if so, how does stigma manifest itself in the health services and in communities?)*

The full discussion guide can be seen in Annex 4. Clubs are theoretically segregated by expectant mothers versus mothers with children but in actuality clubs generally include a mix both. Note there is an inherent bias in focus group results because all focus group participants have proven the ability to attend a positive mothers club.

### Focus Group Discussions Held

| Date of Discussion | Province | Health Center    | Number of Participants | Approximate Age Range of Participants | Characteristics of Participants  |
|--------------------|----------|------------------|------------------------|---------------------------------------|----------------------------------|
| 24 March           | Manica   | Eduardo Mondlane | 35                     | 16-49                                 | Mainly pregnant                  |
| 25 March           | Manica   | Nhamaonha        | 12                     | 17-40                                 | Mainly with babies               |
| 26 March           | Manica   | Primeiro de Maio | 40                     | 17-55                                 | Mixed (pregnant and with babies) |
| 5 May              | Sofala   | Ponte Gea        | 60                     | 15-55 years                           | Mainly with babies               |
| 7 May              | Sofala   | Munhava          | 30                     | 18-40 years                           | Mainly with babies               |

### Semi-Structured Interviews

In-depth semi-structured interviews were conducted with two health personnel at each project health center, usually one HIV testing counselor and one MCH nurse. Interview topics included training received, adherence to established protocols, knowledge of MTCT, thoughts on women's empowerment and infant feeding, and general comment on project implementation. Full instrument is attached in Annex 5.

## 3. Original Project Proposal

### Prevention of Mother-to-Child Transmission in Manica and Sofala Provinces

#### a) Project Objectives as Described in Original Project Proposal

1. Reduce mother-to-child HIV transmission in selected health centers in Beira and Chimoio
2. Increase pregnant women's utilization of voluntary counseling and testing services
3. Increase institutionalized births of HIV+ women
4. Reinforce referral and monitoring links between the PMTCT project and the HIV/AIDS support services in both provinces

#### b) Expected Outputs and Results as Described in Original Project Proposal

- Four health facilities will be testing pregnant women for HIV, providing appropriate counseling, and referring HIV positive clients to seek further services.
- Four maternities will be equipped for administering Nevirapine to HIV positive pregnant women according to national norms.
- Referral links between testing and counseling in antenatal care and both clinical and psychosocial support services will be strengthened and tracked for adequacy and appropriateness.
- Improved postpartum care for HIV+ women and their babies, including counseling, clinical and nutritional support.

c) Project Targets as Described in Original Project Proposal

| Health Center  | # 1 <sup>st</sup> PNC<br>(annually) | # Accept Test<br>(70%) | # HIV+<br>(30%) | # Receive<br>NVP (90%) |
|----------------|-------------------------------------|------------------------|-----------------|------------------------|
| <i>Chimoio</i> |                                     |                        |                 |                        |
| Ed Mondlane    | 4,228                               | 2,960                  | 888             | 800                    |
| 1 de Maio      | 2,829                               | 1,980                  | 594             | 535                    |
| Nhamaonha      | 3,321                               | 2,325                  | 697             | 627                    |
| <i>Beira</i>   |                                     |                        |                 |                        |
| Ponte Gea      | 3,211                               | 2,248                  | 674             | 607                    |
| Munhava        | 2,807                               | 1,965                  | 589             | 530                    |
| <i>Total</i>   | 16,396                              | 11,478                 | 3,443           | 3,098                  |

## 4. Quantitative Results

### Indicators of Success

*As reported in project reports*

Mothers are drawn into the prevention of vertical transmission (PVT) program during their first prenatal consult, which is the point of entry to health services for many mothers. The HIV testing and counseling service is presented as an integral part of standard prenatal care, along with checking blood pressures, noting weights, and prescribing vitamins. The integration both in time and place is key in empowering mothers to take an HIV test without authorization from husbands or other family members. Mothers are informed that the test is voluntary, but in most cases they have to make a clear statement in order not to take the test (an 'opt-out' approach to service). Most mothers simply follow service protocol that funnels her through the prenatal consult, syphilis testing, a group information session, and then into the HIV testing and counseling room (protocol can vary slightly from facility to facility).

*"My husband would never accept to take the test, but I chose to and I'll tell other mothers to choose to test also because every mother should be able to protect the health of her baby."*

One mother's statement in Sofala Province

Project annual reports show an average of 67 percent of mothers across the five project sites attending prenatal consults choose to test for HIV at the point of service for their prenatal consults (range 35-93%). H.C. Eduardo Mondlane shows the lowest uptake because testing services were closed for rehabilitation for three months during 2003. H.C. Primeiro de Maio and H.C. Nhamaonha report that almost three-quarters of mothers choose to test (69% and 70% respectively). The two Sofala project sites, Ponte Gea and Munhava, show the highest uptake (80% and 93% respectively).

## Uptake of PMTCT Services in Manica and Sofala Provinces

|                           | population of fertile age (popn x 4.5%) | 1st CPN (#)  | tested (%) | tested (#)   | HIV+ (%)  | HIV+ (#)    | HIV+ admit maternity (%) <sup>1</sup> | HIV+ admit maternity (#) | mothers took nivrapiene (%) | mothers took nivrapiene (#) | babies took nivrapiene (%) <sup>4</sup> | babies took nivrapiene (#) <sup>5</sup> |
|---------------------------|---|--------------|------------|--------------|-----------|-------------|---------------------------------------|--------------------------|-----------------------------|-----------------------------|---|---|
| <b>Sofala</b>             |   |              |            |              |           |             |                                       |                          |                             |                             |   |   |
| Ponte Gea <sup>1</sup>    | 6269                                    | 3422         | 80         | 2724         | 28        | 758         | 24                                    | 199                      | 90                          | 180                         | 100                                     | 225                                     |
| Munhava (M)               | 5800                                    | 2499         | 93         | 2331         | 20        | 476         | 37                                    | 191                      | 84                          | 160                         | 100                                     | 205                                     |
| <b>TOTAL-Sofala</b>       |   | <b>5921</b>  | <b>85</b>  | <b>5055</b>  | <b>24</b> | <b>1234</b> | <b>31</b>                             | <b>390</b>               | <b>87</b>                   | <b>340</b>                  | <b>100</b>                              | <b>430</b>                              |
| <b>Manica</b>             |   |              |            |              |           |             |                                       |                          |                             |                             |   |   |
| Ed. Mondlane <sup>2</sup> | 3306                                    | 3043         | 47         | 1429         | 22        | 308         | 42                                    | 277                      | 78                          | 217                         | 100                                     | 274                                     |
| 1 Maio (M)                | 2625                                    | 2943         | 69         | 2017         | 14        | 281         | 33                                    | 97                       | 87                          | 84                          | 100                                     | 92                                      |
| Nhamaonha (M)             | 5343                                    | 3700         | 70         | 2601         | 13        | 347         | 24                                    | 76                       | 87                          | 66                          | 100                                     | 73                                      |
| <b>TOTAL-Manica</b>       |   | <b>9686</b>  | <b>57</b>  | <b>6047</b>  | <b>15</b> | <b>936</b>  | <b>33</b>                             | <b>450</b>               | <b>82</b>                   | <b>367</b>                  | <b>100</b>                              | <b>439</b>                              |
| <b>GRAND TOTAL</b>        | <b>23343</b>                            | <b>15607</b> | <b>71</b>  | <b>11102</b> | <b>20</b> | <b>2170</b> | <b>38</b>                             | <b>840</b>               | <b>85</b>                   | <b>707</b>                  | <b>100</b>                              | <b>869</b>                              |

<sup>1</sup>maternity at H.C. Beira

<sup>2</sup>maternity at H.P. Chimoio, for 9 months activities

<sup>3</sup>reports number of mothers in the maternity divided by number of mothers who tested HIV+ 4 months earlier

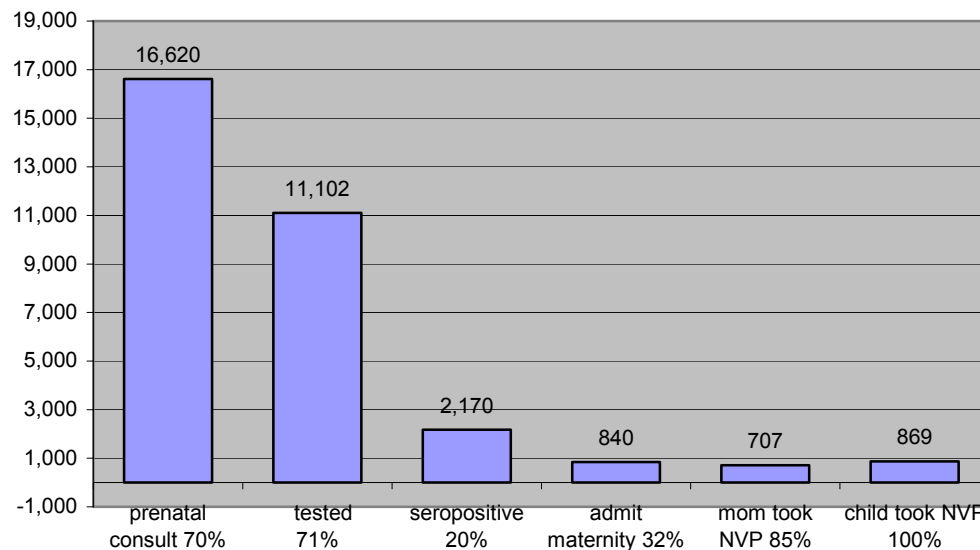
<sup>4</sup>percentage of the babies born from the mothers admitted in the maternity ward

<sup>5</sup>includes babies who where birthed at home, at the maternity and twins

<sup>4</sup>includes babies who where birthed at home + twins

Just less than one-third of seropositive mothers enter the maternity where they have access to NVP; and about 85 percent of those mothers who gave birth in the maternity actually took a NVP tablet. Data shows that 100 percent of children born to seropositive mothers were administered NVP syrup, but the data might be slightly misleading as the number includes twins and mothers who birthed at home and then brought the child in for prophylaxis. The following chart presents uptake of PMTCT services in the five project sites combined.

**Uptake of PMTCT Services in Manica and Sofala Provinces**



Some indicators that were identified in the original project proposal, including percentages of women who attend positive mothers groups, women who use home care services, women who use replacement milk, and women who access ARVs at their own cost, have not been reported by the project to date. Other important indicators *not reported* include:

- Mothers exclusively breast feeding until 4 months
- Month at which mother stops breast feeding
- Mothers using condoms regularly during pregnancy
- Mothers using a method of family planning
- Partners testing at external VCT sites

Key Indicators Identified in MoH's PMTCT Manual (dated 10 June 2003)

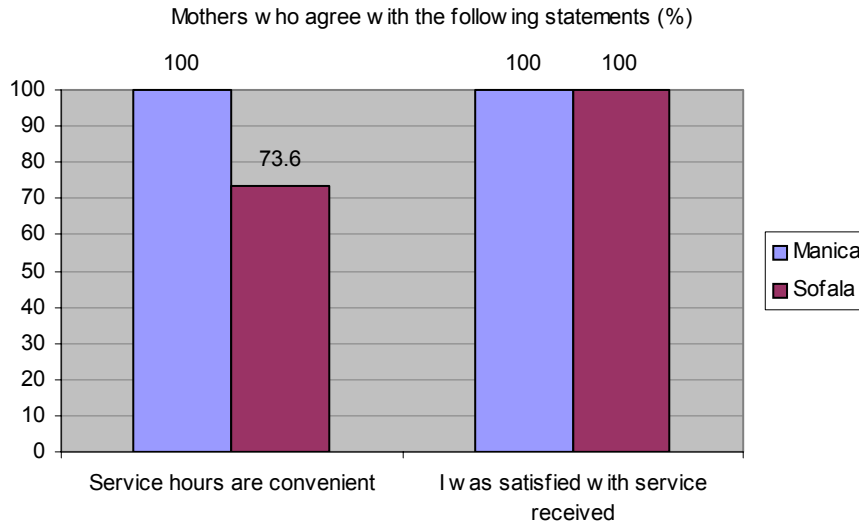
- % coverage prenatal consults
- % pregnant women tested
- % pregnant women seropositive
- % of births by seropositive women
- % of women who receive NVP
- % of children who receive NVP
- % of babies born of seropositive mothers who are exclusively breast feeding
- % of babies born of seropositive mothers who are exclusively artificial feeding
- % of babies born of seropositive mothers who test positive for HIV

## Satisfaction with Services

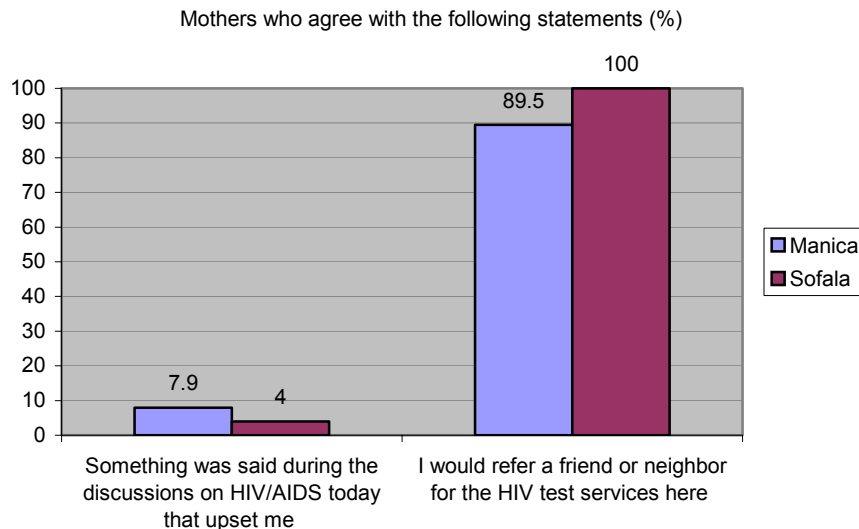
Exit interviews at point of service

### General Satisfaction with Services

In general, one hundred percent of mothers cited satisfaction with services. In Sofala, however, where some mothers were forced to wait *eight hours* for service completion at H.C. Ponte Gea due to a sick counselor, mothers complained that hours were too long.

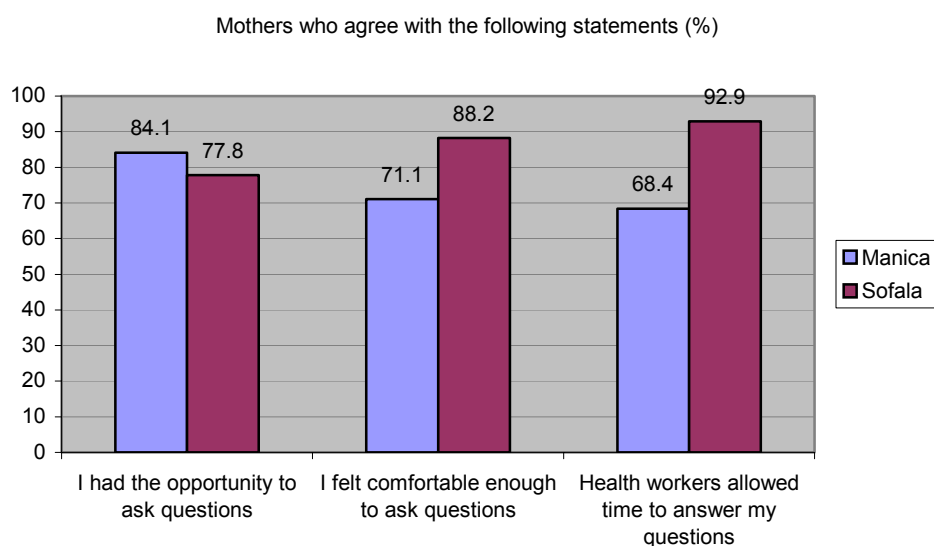


Very few mothers report being disturbed by the type of HIV information they received (less than 8% in Manica and 4% in Sofala), and almost all mothers said they would refer a friend or neighbor for services (90% and 100% in Manica and Sofala provinces respectively).



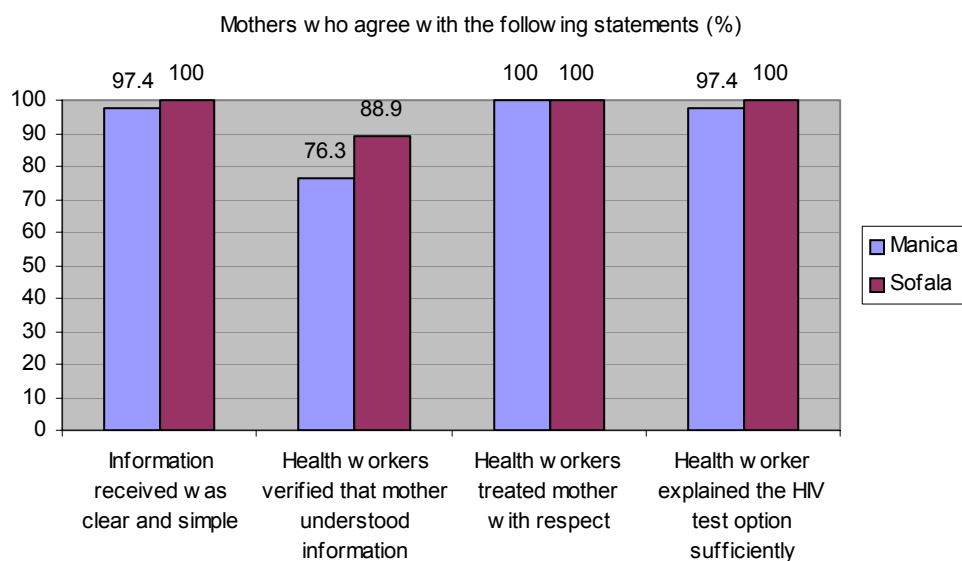
## Opportunities to Ask Questions

Mothers are not always encouraged by health workers to express questions, doubts, and concerns. In Manica, more than 25 percent of mothers did not feel comfortable enough to ask their questions and 32 percent of mothers felt health workers didn't allow time to answer their questions adequately. In Sofala, almost one quarter of mothers felt they were not given the opportunity to ask questions. As discussed below, limited health staff and a high patient load causes little time with each client. Oddly, more Sofala mothers reported feeling comfortable asking questions and that health workers allowed time to answer their questions. The incongruent responses (Sofala women reported having less opportunity to ask questions, yet also reported feeling more comfortable about asking questions) are likely due to limited accuracy of 'yes' and 'no' responses to questions related to feelings; and subjective interpretation of the terms '*opportunity*' and '*comfortable*'.



## Health Worker Treatment of Mothers

Mothers generally feel the information they receive is clear and simple, they are treated with respect, and the options for HIV testing are explained sufficiently. It is interesting to note, however, that all discussions and educational talks observed were conducted in Portuguese language while a significant proportion of mothers have difficulty understanding Portuguese. Data relating to language varies depending on source. HAI reports that 89% of Beira women speak Portuguese based on results of a syphilis study conducted during 2003. Census (1997) reports that 62%/70% of urban women in Manica and Sofala respectively know how to speak Portuguese.



## Information, Education, and Communications Efforts

*Exit interviews at point of service, and discussion with project staff*

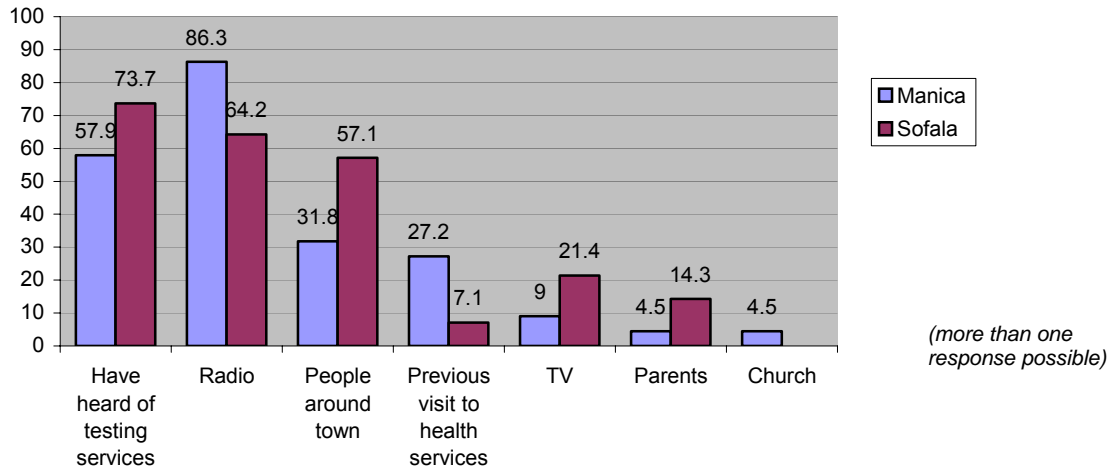
Standardized key messages are absolutely necessary in maintaining quality of services across time and space. Core themes have been identified by the project, and are supported by MoH central level guidelines, but are not always used regularly. For mass communications, group talks, counseling sessions, positive mothers groups, and maternity-based education, key messages must be clear and consistent.

### Previous Awareness of Testing Services

More than half of mothers in Manica (58%) and almost three-quarters of mothers in Sofala (74%) have heard about HIV testing services for pregnant women before they arrive for the prenatal consult. Sources of information include radio, people around town, television, health care providers, and family members. More women in Manica cite radio as their source of information (86%) versus Sofala (64%). More than half of women interviewed in Sofala (57%) said they had heard about testing services from people around town, including friends, neighbors, and school mates.

Still, more than one-third (37%) of mothers don't learn about HIV testing services until they arrive for their first prenatal consult. The familiarity of testing services affects uptake. With pre-knowledge, mothers are able to discuss the decision to test with husbands and/or other family members in advance and more often choose to test.

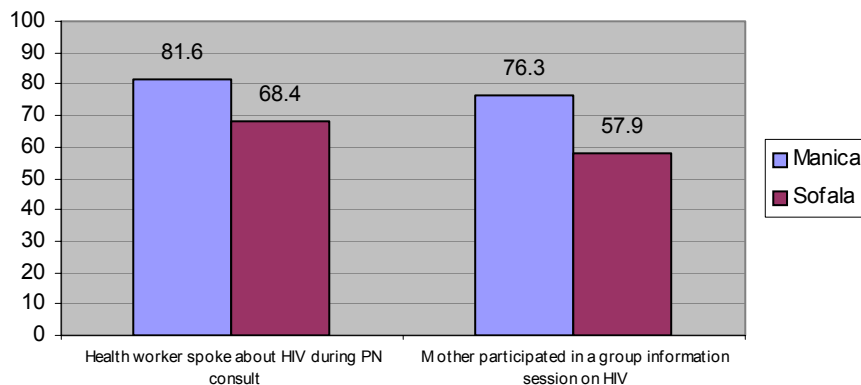
Mother who have previous awareness of HIV testing services and the source of the awareness (%)



### Information Received at Point of Service

The strength of the PVT program structure is that it draws on a large population of mothers seeking prenatal care. In year 2003, the project reports 16,629 first prenatal consults at the five project sites combined. In order to increase testing uptake and understanding of disease, these mothers must receive a basic message about HIV, vertical transmission, and HIV testing and counseling. While most mothers receive the message, some still slip away without understanding the options.

Mothers who report receiving information about HIV at their prenatal consult (%)



## Education at the Maternity

Project protocol calls for maternity nurses to provide education during the period of time the mother spends in the maternity. Information should include breast feeding options, the importance of follow-up at the Day Hospital, and a reminder to continue attending positive mothers clubs. Mothers usually enter the maternity between 2 and 24 hours before the birth of the child, and stay 24 hours after birth. In theory, that leaves the mother as a captive audience for at least some hours during the birthing process. In reality, very little education is done in the maternity due to a heavy client load, and limited time and incentive of health care workers and their supervisors.

## Mass Media

As noted above, a radio campaign in the two provinces has had some success. Just under half (49%) of all of mothers interviewed report having heard the radio spot.

Two relevant posters were observed in use at the five project sites. One (shown here) is titled “*Futura Mama*”, financed by UNDP for MoH. The other, also financed by UNDP and produced by MoH is titled “*Saiba como se apanha SIDA*” (“*Know how you get AIDS*”).

Project coordinators report that no other IEC materials specific to PMTCT exist. Project television/VCR sets are tuned to Brazilian soaps and/or cartoons.

## **5. Qualitative Results**

### **Summary of the Testing Process**

*Observation at point of service, supported by discussions with project staff where necessary.*

The following outlines the process that an individual woman follows when participating in the PMTCT project:

1. *Introduction:* All pregnant women who visit a health centers for antenatal care services attends a group session, presented by either the testing counselor or a MCH nurse, about the option to receive counseling and testing for HIV. After the prenatal consult, mothers who choose to test are sent to wait in line in front of the testing center.
2. *Pre-test Counseling:* Next, a women is offered pre-test counseling in a private room. The dialogue between the counselor and pregnant woman aims to confirm her understanding of HIV and addresses her concerns or potential fears.
3. *Testing:* Following the pre-test counseling, the women is given a rapid test for HIV using Determine as the first test and Unigold as confirmation; as specified

by national VCT standards. While waiting for test results, the counselor conducts the national VCT program demographic survey.

4. *Results and Post-test Counseling:* Within ten minutes, initial results are ready. Regardless of the outcome, the mother receives post-test counseling. If she is negative, the counselor gives advice on how best to continue to stay free of HIV. Patients who are positive are given comfort and further information, particularly on how to prevent HIV transmission to her child. All women are referred to the day hospital at this point. All positive mothers are encouraged to bring their husbands for testing. All mothers are encouraged to take condoms freely. Until April 2004, NVP wasn't provided as a take home drug, and all mothers were encouraged to birth in the hospital.
5. *Positive Mothers Club:* An innovative component of the project is the "Positive Mothers Club" that has been established in each of the five health centers. Clubs are open to pregnant women living with HIV/AIDS and positive mothers with children under 18 months of age. The groups offer psychosocial support, nutritional counseling, service referral, and reinforcement of the importance of delivery within health facilities with PMTCT services. At each meeting a nurse gives clinical information and offers advice on nutrition and breastfeeding. WFP food kits and complementary multi-vitamins are used as further incentives to increase participation.
6. *Anti-retroviral Prophylaxis:* When delivering in a health facility, a woman is given a 200 mg pill of Nevirapine (NVP) at the onset of labor. Children receive NVP in syrup form within 24 hours after their birth. Those children who are born at home may still receive NVP within 72 hours of the birth, and – if the mother has not taken NVP - may receive a second dose within another 72 hours of the first dose. Mothers who do not birth in maternities do not receive NVP.
7. *Post-natal Counselling:* Support is supposed to be provided before a HIV positive woman is discharged from the maternity but the reality differs at each of the five centers. Reasons include heavy client loads, lack of information, and lack of incentive on the part of the health worker. Mothers *should* be provided with information on possible complications, breast feeding, and nutritional alternatives for herself and her child. Mothers are informed of other clinics and services for herself, the newborn, and family members. The women are encouraged to continue participating in mother positive clubs.
8. *Follow-up for Children:* The follow-up for children takes place as part of the normal child health program. The child participates in the normal vaccination and weight control program. The HIV status of the child is usually determined with a rapid test (Determine and Unigold) at 18 months of age after the child has shed its mother's antibodies. For those who follow referrals to the Day

Hospital, children are entitled to regular consults every three months; and cotrimoxazol prophylaxis three times weekly to prevent opportunistic infections associated with AIDS.

## **Mechanisms of Coordination, Management, and Decision Making**

*Interviews with project and DPS staff*

Experience from both provinces has pointed to the fundamental importance of leadership and effective management as key ingredients of successful PMTCT sites. This is unsurprising given that the program requires recruitment of new staff, creation for physical space, training and supervision of staff, establishment of linkages across geographic distances and sectors, community mobilization, and a regular stock of medicines, test kits, and supplies.

At project inception, a task force was formed including key HAI and DPS staff. Meetings were held each trimester to clarify project norms, standards, and protocols. When MoH central level began the process of creating national norms and standards, the task force ceased to meet. Still, DPS staff and their HAI counterparts have a close working relationship; information seems to pass freely between them.

In both provinces, service supervision occurs at least once per week according to health workers at health centers. When issues or questions arise, health workers discuss with supervisors (Maria Seuunda/Chimoio and Florencia Floriana or Joanna Coutino/Beira) who in turn can discuss with provincial counterparts (Focal Points for PMTCT Maria de Graca/Chimoio and Odete Paulo/Beira). For more complex management issues, the discussion can be directed to HAI regional support staff (Florencia Floriana, MCH program manager Manica/Sofala; Wendy Prosser, STI/HIV/AIDS Regional Manager; or Sarah Gimbell-Sherr, HIV/AIDS Coordinator) as well as DPS staff (Medico Chefs or MCH directors). Clinical issues concerning patient treatment and/or referral are directed to HAI/DPS Day Hospital medical doctors (Mark Micek, Clinical Advisor and Armando Melo, Provincial Hospital Director).

## **Human Resources and Training**

*Interviews with project and DPS staff*

Each province has a DPS focal point for PMTCT; who works closely with the MoH provincial and city directors of MCH. HAI provides counterparts to the focal point for PMTCT in each province, called either an assessor (in Chimoio), or an assistant (in Beira). Coordination between the two provinces is conducted by a MCH program manager (Florencia Floriana) who divides her time between Manica and Sofala Provinces, and a regional manager for STI/HIV/AIDS (Wendy Prosser) who also divides her time between the two provinces. Both Floriana and Prosser are HAI staff.

The project includes nine counselors, four of who are HAI staff and five of whom are paid by MoH. The long-term plan is that all of the counselors will be absorbed into the MoH system.

**Staffing at Manica and Sofala PMTCT Project Sites**

| Health Center | HIV Counselors | Counselor Salary Paid by    | SMI Nurses<br><i>(not including those who also work as counselors)</i> |
|---------------|----------------|-----------------------------|--|
| Chimoio       |                |                             |  |
| Ed Mondlane   | 2              | 1 DPS +HAI incentive/ 1 HAI | 2  |
| 1 de Maio     | 1              | HAI                         | 2  |
| Nhamaonha     | 2              | 1 DPS +HAI incentive/ 1 HAI | 3  |
| Beira         |                |                             |  |
| Ponte Gea     | 2              | 2 DPS + HAI incentive       | 3  |
| Munhava       | 2              | 1 DPS +HAI incentive/ 1 HAI | 1  |
| Total         | 9              |                             | 11   |

*Counselor Brigida, Nhamaonha, Manica*

The actual HIV test counselors and a few key staff members attended a three-week training course coordinated by MoH VCT Program at the central level in year 2002. Two weeks focused on voluntary counseling and testing in general and an additional week was added specifically for PMTCT. On their return, the participants provided a 2-day information review for *all* involved DPS/HAI staff, including managers, technicians, and nurses.

MISAU organized some refresher training in 2003 year for those health care workers who were trained  $\geq 18$  months before.

Some relevant finding from South Africa on training include:

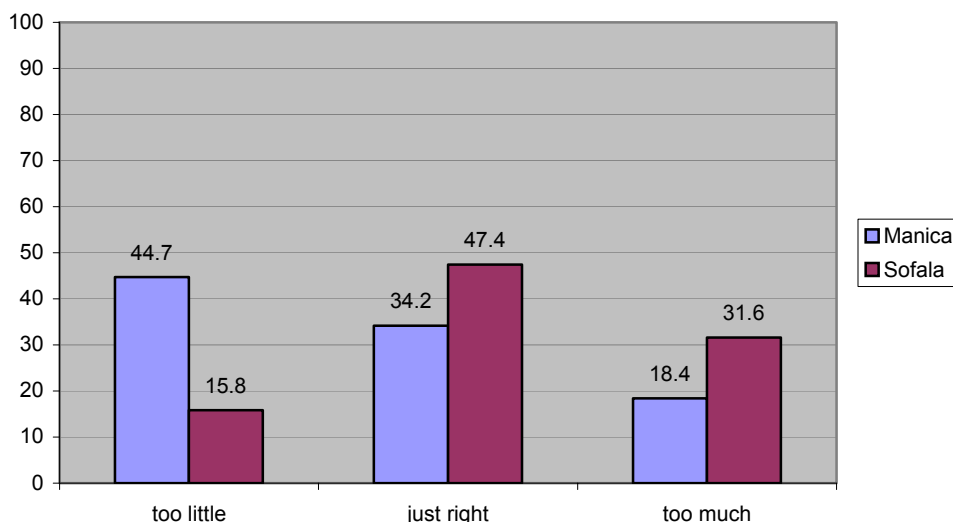
- Districts with easy access to technical experts are at a distinct advantage over those that don't.
- The focus of training has been on HIV testing and counseling and vertical transmission. There is a need to balance this with more training on infant feeding and child health.
- Off-site classroom based training needs to be complimented with on-site in-service training with a focus on skills development and problem solving.
- Doctors are inadequately targeted as both trainees and trainers
- The balance between providing in-depth quality training versus rapid training to achieve faster coverage needs to be carefully weighed on a site-by-site basis.
- Advocate an initiative to engage with nurse training curriculum(s) so as to develop undergraduate curriculum that covers PMTCT.

## Quality of Counseling

Observation at point of service supported by exit interviews, simulations, and in-depth interviews with counselors at each of the five sites.

On average, counselors spent 22 minutes in the counseling session with each mother (range 10-35 minutes). Manica counselors spent slightly less time with mothers on average than Sofala mothers (20 versus 25 minutes). The average counseling period is slightly less than the national recommendation of 30 minutes minimum. While almost half of Beira mothers reported feeling the quantity of time spent with the counselor was 'just right', almost 44.7 percent of Manica mothers said they felt counseling time was too short. It is interesting to note that only *two* of the 20 Beira exit interview respondents (10%) were seropositive. HIV status of those counseled during the evaluation period wasn't noted in Chimoio due to confidentiality issues; but it is possible that there were more seropositive women in Chimoio; and seropositive women require more counseling time than those who are negative.

Mother's judgement of the time spent in the HIV counseling session (%)



The general format for a counseling session is as follows:

1. Introduction and general provision of information on HIV and risk
2. HIV Test, and MoH VCT demographic survey while test reacts
3. Presentation of test results and counseling on risk (contents varied for negative/positive results)
4. Referrals

In addition to the standard discussion of risk and risk behavior, PMTCT counselors are supposed to address additional topics for seropositive mothers:

- Partner involvement

- Identifying a confidant
- Birthing in the maternity
- Prophylaxis for prevention of transmission (nevirapine)
- Breast feeding and breast feeding alternatives
- Nutrition
- Positive mothers clubs
- Day Hospital referral

Quality of counseling and inclusion of all topic areas depends to a great extent on the motivation of the individual counselor and the workload on a given day. It was difficult to evaluate in the context of a rapid assessment. Empathy, listening skills, and technical understanding were superficially assessed using simulations at each of the five service sites; and the five counselors interviewed were found to exhibit knowledgeable and caring behavior.

A few deviations were noted from the project protocol, revealing the fact that there are no regular systems in place to assure quality control and standardization of counseling topics. At one site, for example, the counselor reported that breast feeding was not deemed an appropriate subject until after birth of child as the mother had too much else on her mind. In another simulation, partner involvement wasn't addressed. Nutrition wasn't addresses by any of the counselors in simulation sessions.

Unfortunately, one Manica counselor doesn't speak the local language, presumably leaving up to 30% of women unclear about the information they receive during the testing and counseling session (depending on which source one uses in relation to language abilities).

Quality of counseling is affected by a chronic shortage of counselors. According to project managers, H.C. Eduardo Mondlane (Manica) shows a lower uptake of services in comparison to the other sites in part due to training for one counselor, and then a two-week illness for another counselor during which time the site was forced to close. At H.C. Munhava (Sofala) during the evaluation period one of the usual HIV counselors was sick. As a result, one nurse had to first conduct sixteen prenatal consults and then open the HIV testing service. The last mother tested reported having arrived at 6 AM to mark her place in line; and she finally completed her HIV test at 14:30. Of the sixteen mothers who received their first prenatal consults that day, only 8 received an HIV test. Presumably, many of the others tired of the long wait and went home. Similar problems are reported to occur at other sites due to illness, training, or use of test counselors for clinical consults.

Counselors report that women are at times turned away from testing service after the counselor has reached the central level recommended quota of ten mothers counseled in a day. According to project data, depending on the month and the site, 13% to 76% of the days of the month, counselors surpass the recommended quota.

## **Stigma at Point of Service**

*Focus group discussions*

No perpetuation of HIV-related stigma by health workers is reported at any of the five health centers evaluated. During focus group discussions, mothers report feeling respected and well-treated at health services, and if, anything, receive a *better* quality of services than HIV- people because of the special services provided. All mothers interviewed, without exception, report feeling confident that health workers protect their privacy and will not reveal their HIV status.

However, the balance between confidentiality and tracking seropositive mothers is difficult to maintain. Inconsistencies were noted in the marking of test results on a mother's prenatal fiche and yellow test card. In many instances both were marked with a prominent **S.P.** (*seropositive*), leaving the mother's status open for anyone to see in the health center or at home. The normal protocol has been that only a code is written on the yellow test card, and 'S.P.' is written in the observation box on the bottom of the mother's prenatal fiche.

A new MoH protocol, currently being adopted, is even/odd codes to identify women as positive or negative.

Mothers have said their confidentiality is breached by other mothers in the positive mothers clubs. Invariably, people talk when they should not. Interestingly, Manica women expressed the opinion that very little stigma is experienced in their communities while woman from Sofala expressed the converse. At Ponte Gea (Sofala), in a support group of 60 women, eight women (13.3%) reported to have been thrown out of the home by their husbands after revealing their HIV status.

## **Clinical Support**

*Interviews with project managers*

When counselors need clinical or technical support in dealing with a certain case or question, they first refer to the written materials they have received during their training or the handouts pasted to the wall (topics include care during birth, care after birth, breast feeding/replacement feeding, use of condoms, and registration of the mother and child). Secondly, they refer questions to their supervisors during supervision visits. If the supervisor can't answer the question or case, she refers it to either the regional STI/HIV/AIDS manager (Wendy Prosser), the MCH Director at the DPS; or personnel at the Day Hospital.

No formalized technical exchange occurs between counselors, nurses, doctors, and/or program managers.

## **Physical Space**

*Observation at point of service supported by discussions with project staff.*

Space, like human resources, is a severely limited resource. In an ideal world, each service center should have a counseling room with separate exit and entry doors; an attached private waiting room, close proximity to prenatal consults, and a television for educational viewing. In reality, the adequacy of facilities differed at each one of the five sites. Two sites, Primeiro de Maio and Nhamaonha, lack private waiting rooms, leaving mothers to wait for an HIV test in a place where they might be viewed by neighbors or acquaintances and reported to husbands. Interestingly, these two show lower numbers in testing uptake (69% and 70% respectively).

- *Eduardo Mondlane*: Counseling room connected to private waiting room with television. One entrance. Prenatal care adjacent.
- *Primeiro de Maio*: Small counseling room, no private waiting room, no television, single entrance. Prenatal care adjacent.
- *Nhamaonha*: Counseling room with single entrance, unconnected television room, public waiting bench for testing right in front of counseling room. Prenatal care around the back. Rehabilitation of new service site in progress.
- *Ponte Gea* (temporary facility): Counseling room with separate entry and exit, and attached private waiting room with television. Prenatal care directly across hall. Rehabilitation of new service site in progress
- *Munhava*: physically separate newly rehabilitated house with counseling room and private waiting area, including television and receptionist. One entry, facing away from health services.

## **Patient Flow and Wait Times**

*Observation at point of service and interviews with mothers supported by discussions with project staff.*

Few mothers complained about patient flow and wait times; often indicating they have no point of comparison since there is no choice in health facility for most women; but the organization of services leaves women sometimes waiting for up to eight hours (as observed at one Sofala service site).

The general system, as described above, is that women begin to arrive between 6:30 and 7:30 in the morning to queue for their prenatal care. At anywhere between 8:00 and 9:30, prenatal services begin, depending on the site and staffing. Most sites complete all first consults for pregnant women, including syphilis testing, and then conduct a group talk on the option to test. All women must wait for the results of the syphilis test, which is usually sent out to a nearby lab. Women who choose to test line up once again and enter the testing services one by one, each spending 20-25 minutes with a counselor. After completing HIV testing and counseling, women pick up their prenatal cards and syphilis test results and are free to go.

It wasn't clear whether or not HIV counselors perform routine duties during the period of time mothers are having their prenatal consults; or if they are simply waiting for prenatal services to send them clients.

## **Nevirapine, Test Kits, and Condoms**

*Observation at point of service supported by discussions with project staff.*

HIV testing and NVP treatment protocols follow MoH central level guidelines. Blood is tested with rapid antibody tests: Determine is used and; if positive, it is confirmed with Unigold. Results are immediately provided. A seropositive mother in labor is treated with a single dose of NVP; and the baby is treated also with a single dose within 72 hours of birth. If the mother does not arrive at the maternity in time for her dose of NVP, the newborn is given two consecutive doses.

Nevirapine is procured via Wellworth in Maputo who buys from private pharmacies in Johannesburg, South Africa. Cost is approximately 3 USD per mother/child short course treatment.

Rapid tests Determine (1.45 USD per test) and Unigold (2.85 USD per test) are procured by the same method; except a recent batch of Determine, which was provided through the MoH VCT initiative with procurement by the CDC in Maputo.

Condom provision is through MoH central level procurement mechanisms; as are testing supplies.

All staff agrees that *generally*, stock is well maintained in all the project sites. Neither province has ever run out of Nevirapine or rapid tests, but due to informal ordering systems, localized stock-outs can occur. According to project nurses, one center

experienced a six-month stock-out in condoms, and the reference maternity (H.P. Chimoio) for H.C. Eduardo Mondlane experienced a short stock out of Nevirapine.

While there have been no serious stock-outs, project managers report that the process of delivering NVP to the two provinces has been difficult. In theory, delivery should occur through existing national systems. In reality, it has been necessary to create a parallel distribution mechanism to assure dependable delivery.

### **Use of Peer Educators**

*Observation at point of service supported by discussions with project staff.*

In Manica Province, one activist spends one morning at each of the project health centers supporting the health care personnel in providing information and education for mothers. In Sofala, some positive mothers work as activists at the Day Hospital. Considering the many creative examples of peer educator/activist roles in the literature and the shortage of trained health care personnel in all health centers, it's clear that activists are underused at project sites.

### **Positive Mothers Clubs**

*Focus group discussions*

The bi-monthly support groups for seropositive mothers and those expecting babies appear successful in providing emotional support and education for those who attend. Most seropositive women, however, do not attend. A total of 473 participants are reported for all the clubs in the five project sites (of 2170 seropositive women).

Meetings are held alternatively for seropositive mothers with babies and for those expecting babies, each group meeting twice monthly. The support groups are considered obligatory for those enrolled in the PMTCT **plus** program, which includes ARV access at the Day Hospital. Women attending bi-monthly meetings show a high level of knowledge about HIV, awareness of prevention techniques and referral services, and a willingness to address the challenges they face.

Participants spoke openly and comfortably about their status and issues affecting their lives. In Manica, average attendance was 40 women. In Sofala, two meetings were observed with an average of 45 women per group (60 and 30, respectively, at H.C. Ponte Gea and H.C. Munhava).

Unfortunately, each health center has only one club for each category of women (pregnant and postpartum). The groups have reached enormous sizes in some

“...and so, at three months I told my mother-in-law I had an abscess in my left breast. Then, I pretended I had some pain in the other breast. So now, when four months arrives I'll tell her I have another abscess and she won't bother me about quitting breast feeding too early”

*A woman's account of creative management of a difficult situation at home.  
Focus Group, Munhava H.C., Sofala*

health centers (111 mothers with children at Eduardo Mondlane H.C. in Manica, for example), making meaningful education and/or dialogue virtually impossible. The clubs will only continue to grow as new seropositive women are referred to the clubs daily; and protocol calls for current participants to attend until their babies reach 18 months.

Meeting themes are not standardized across the five health centers; managers report that facilitators respond to the needs of the group, and themes discussed *should* include:

- Breast feeding and breast feeding alternatives
- NVP medication
- HIV testing in general
- Importance of birthing in the maternity
- Nutrition of mother and child

In comparison, MoH PMTCT recommendations for counseling a seropositive mother after birth include:

- Transmission of HIV
- Nutrition and general care of mother and child
- Growth and development of child
- Prophylaxis of opportunistic infections associated with AIDS
- Multivitamin supplementation
- Necessity of following child through 18 months of age
- Importance of antibody test at 18 months
- Health of mother
- Referral to other service and support groups in the community

Incentives for attendance are provided through a partnership with the World Food Program. Sixty mothers receive a food kit every three months. The kit includes:

- 108 kilos of corn flour
- 9 liters of oil
- 18 kilos of beans
- 54 kilos of soy beans

Project coordinators report that negotiations are in process to increase the allotment provided by World Food Program to cover 200 mothers. In addition, the Day Hospital is in the process of negotiating an agreement with the World Food Program to provide kits for 300 patients. Other incentives include multivitamins and a snack. It is interesting to note that at H.C. Dondo (not a project site, but offers the same set of services), mothers attending support groups *do not* receive either multivitamins or food kits and attendance is very low.

## Day Hospitals

*Interviews with project staff*

All mothers in the PVT project receive a referral to the Day Hospital in either Chimoio or Beira after testing positive, and are eligible for access to the PMTCT+ project run by MISAU/HAI.

Services available to *all* women and their families in the PMTCT program include:

- Monitoring of disease progression (physical exam, CD4 count, hemogram, and biochemistry analysis)
- Analysis and treatment of TB, if necessary
- Prevention and treatment of other opportunistic infections
- Education and information through doctors, nurses, and activists
- Cotrimoxazol three times weekly as prophylaxis for children until 18 months

Additional PMTCT **plus** services include:

- TARV
- Adherence support
- Referral to HBC services and/or other services when indicated
- Viral load analysis for children aged 3-6 months

The requirements for starting ARV therapy are designed to assure adherence and include:

- Initial meeting with a Day Hospital social worker
- One home visit by a social worker
- Attend one positive mothers club meeting
- Live in the city of Beira

In the focus group discussion held at Munhava, every single woman reported to have made numerous visits to the Day Hospital. Sometimes, they reported, the visit was successful but frequently the receptionist turned them away even if they were presenting with a visibly sick child. Reasons for being turned away were reported as not enough doctors, confusion about date of marked consult, and non-admission if a woman was presenting without a marked consult.

Approximately 3-4 new seropositive mothers are referred to Day Hospital in each province *each day*; and four consults are recommended for each child per year throughout the first 18 months of the child's life. If even 80 percent of mothers acted on referrals, the Day Hospital would soon be overwhelmed with healthy children; the majority of whom will be seronegative.

## **Patient Referrals**

*Discussions with project staff, review of project data, and focus group discussions*

Women are routinely referred from prenatal care services to the testing site. From there, seropositive women are referred to maternities, positive mothers clubs, and Day Hospitals as integral project links. In all cases, challenges persist in referrals that require travel to another location and/or another day. Many mothers simply don't appear at the referred service. Referral isn't enough. More research is needed on creating functional linkages.

Experience has shown that referral works best when the referral service is offered in conjunction with primary health care. Ideally, for mothers, services should be integrated into prenatal and postnatal care. For some services, integration works. For others, broader, innovative approaches are needed.

### Maternities

The largest gap in provision of PMTCT services occurs at the time of birth. Only 32 percent of seropositive mothers with properly marked prenatal fiches birth in the maternity. Most mothers birth at home where there is no access to NVP. While all mothers in focus group discussions report full awareness of the benefits of birthing in the maternity, sometimes the decision seems to be outside their control. Logistics of travel to distant maternities, unpredictable timing of births, family traditions, fear, and stigma all play their role in keeping the mother at home.

### Positive Mothers Clubs

Tracking referrals remains a particular challenge in relation to women participating in support groups. A weekly register exists, but no analysis of the register appears to occur. According to project reports, a total of 473 seropositive mothers across the five project sites attend positive mothers clubs. According to project protocol, all seropositive mothers are referred to positive mothers clubs. Of the 2,170 seropositive mothers presumably referred, only 22 percent actually attend (attendance figures can vary monthly).

### Positive Mothers Club Participants

| Health Center | Expectant Positive Mothers | Positive Mothers with Children | Mixed Club | Total |
|---------------|----------------------------|--------------------------------|------------|-------|
| Chimoio       |                            |                                |            |       |
| Ed Mondlane   | 39                         | 111                            |            | 150   |
| 1 de Maio     | 32                         | 86                             |            | 118   |
| Nhamaonha     | 71                         | 34                             |            | 105   |
| Beira         |                            |                                |            |       |
| Ponte Gea     |                            |                                | 70         | 70    |
| Munhava       |                            |                                | 30         | 30    |
| Total         |                            |                                |            | 473   |

### Day Hospitals

Beira Day Hospital data only is presented (Chimoio Day Hospital just opened in March 2004). In the first four months of 2004, about 500 seropositive women received referrals to the Day Hospital from Ponte Gea and Munhava Health Centers. In the same year, 229 seropositive women (46%) enrolled as PMTCT plus program candidates<sup>2</sup>; and 34 women (7%) qualified and began ARV therapy. Year 2003 data reports a slightly higher uptake in referral service. Ponte Gea and Munhava referred 1,234 seropositive women to the Day Hospital, which reports 700 (57%) PMTCT plus candidates. Referral barriers include both logistics and stigma. Additionally, many seropositive mothers simply don't perceive themselves as sick.

### External Referrals

External referral services in use by the PMTCT program include GATV (for partners, if they don't want to attend the PMTCT center); and National Institute for Social Assistance (in rare cases of severe malnutrition and poverty).

There is no standard mechanism for referral from health centers to non-governmental or community organizations serving people with HIV/AIDS. Existing organizations that provide psychosocial support, home-based care and/or income generating activities include (but are not limited to):

#### Manica

- Kubatana - serving HIV positive people
- Kubatsirana - HIV positive people's group
- OMES - serving sex workers

#### Sofala

- Kulupira - serving HIV positive people
- Esperança/ADPP – providing workshops; clinical services; and HIV/STI testing and counseling

<sup>2</sup> Accessing to PMTCT services as described above

## Partner Inclusion

*Discussions with project staff and analysis of project indicators*

General health issues are usually the domain of the man of the family, while issues surrounding pregnancy are controlled more often by the woman herself. Due to the integration of HIV testing into prenatal care, mothers can *independently* choose to test, regardless of the opinion of a husband. This is a strong step forward for women who were previously powerless to choose to know their HIV status.

*In a focus group discussion in Ponte Gea H.C., Sofala, **13 percent** of mothers relate accounts of abandonment by their husbands after sharing their HIV status.*

But testing is only a first step. Accessing the day hospital, follow-up for the child, negotiating use of condoms while pregnant, choosing to birth in the maternity, attending support groups, implementing changes in diet, and making an appropriate choice about breastfeeding become impossible tasks when a woman has no family support. Partners must be involved.

Initially, women were encouraged to share their seropositive status with a '*confidant*'; which could be a husband, mother, or sister. Numerous account of breaching of confidentiality and abandonment alerted project managers to the sensitivity of issues surrounding partner involvement. Notification is not mandatory, but partners are verbally invited to test during a woman's counseling session at either at the PMTCT service or a local VCT site. Very few return to the PMTCT testing and site and no tracking mechanism exists to know how many refer to the VCT for testing. In year 2003, only 15% of all seropositive pregnant women brought their partners to the PMTCT service site to test. The numbers are particularly dire in Manica. Few other outreach efforts attempt to involve partners.

### Partners Tested at PMTCT Service Sites

|               | HIV+ mothers | Partner tested (#) | Partner tested (%) |
|---------------|--------------|--------------------|--------------------|
| <i>Sofala</i> |              |                    |                    |
| Ponte Gea     | 758          | 173                | 23                 |
| Munhava       | 476          | 117                | 25                 |
| <i>Manica</i> |              |                    |                    |
| Eduardo M.    | 308          | 1                  | 0                  |
| P. Maio       | 281          | 3                  | 1                  |
| Nhamaonha     | 347          | 29                 | 8                  |
| <i>Total</i>  |              |                    | 15                 |

## **Family Planning and Condom Use**

*Focus group discussions*

Women's empowerment hasn't reached the realm of family planning. While focus group participants express awareness of risks of sequential pregnancies, they rarely choose to use a family planning method. Many mothers are young and healthy, have only one child, and want more; others are unable to negotiate family planning with their husbands; others suffer from community pressure to have more children, especially if they have not gone public about their HIV status. Some have tried family planning unsuccessfully. In Sofala, a seropositive woman reported that despite desperate attempts to avoid further pregnancies, she was pregnant with her tenth child as her IUD had failed.

In another Sofala focus group, women described a tradition that makes consistent condom use difficult: sexual activity is prohibited during the first months of breast feeding a new baby. If sex occurs, it is believed that the baby will be harmed. When the time comes to initiate sex again, a ceremony is conducted which includes sexual relations with the husband. Apparently, a condom cannot be used during this act as the man's semen must enter the body, or, again, the baby will be harmed. If the woman has been unable to discuss her HIV status, she faces a challenge in insisting on consistent condom use.

## **Breast Feeding**

*Health worker interviews and focus group discussions*

Project health workers and counselors follow MoH guidelines, advocating exclusive breast feeding until 4-6 months of age; rapid cessation; and exclusive food thereafter. When mothers have financial means, exclusive replacement feeding is encouraged. No breast milk substitutes are provided.

No data is available concerning the percentage of project mothers who choose replacement feeding over breast milk, or at what point mothers stop breast feeding, but according to health worker reports the vast majority of mothers follow usual tradition and breast feed until a child is 18-24 months old.

During focus group discussions with members of positive mothers clubs, mothers displayed a clear knowledge about risks of breast feeding, and willingness to take on challenges at home concerning pressure to breast feed, but it was clear that the majority of women don't have the financial means to provide formula for their babies. Partial information/knowledge also plays a role. Mothers are not fully informed about the extent and duration of the risk incurred by breast feeding; when and how to cease breast feeding; and how to manage replacement feeding creatively. Some mothers, during focus group discussions, expressed the belief that NVP would protect their child from HIV/AIDS until 18 months of life. This belief, clearly, reduces the incentive to stop breast feeding earlier.

## **Clinical Follow-up for Children of HIV+ Mothers**

*Discussion with project staff and health workers, and observation*

Clinical follow-up for children of HIV+ mothers is limited in actual practice. If the child falls sick anytime after birth, it can be taken for consult to the Day Hospital<sup>3</sup>. By some accounts, all children of seropositive mothers are requested to attend Day Hospital medical consults every three months at a minimum. If a child appears well, it concurrently follows the normal schedule of visits for any healthy child which includes monthly vaccinations and weighing at the mother's health center.

Unfortunately, the normal system for well children doesn't provide adequate follow-up care. The child health card doesn't indicate the HIV status of a mother, she is unlikely to volunteer her status, and early signs of AIDS, opportunistic infections, contraindications for vaccinations, and delayed development of motor skills can be overlooked. Many children *don't* attend Day Hospital consults for a variety of reasons: neither child nor mother is showing visible signs of illness; AIDS associated stigma surrounds Day Hospital and/or mother finds it logistically difficult (long travel times and long wait times) to access the Day Hospital; and/or mother doesn't fully understand the options available to her as a seropositive woman.

Those mothers who have followed their referral to the Day Hospital (about 50% of all project mothers) are eligible for cotrimoxazol as a prophylaxis for opportunistic infections for the child. At 18 months, after the child has shed its mother's antibodies, he/she is given an antibody test. If the test is negative, the child leaves the program successfully. If the test is positive, the child continues to have access as needed to the Day Hospital.

Some mothers (about 22%) join positive mothers clubs where they have access to some form of follow-up for their child in the form of education/information; nutritional counseling; and emotional support. No mothers were observed returning for follow-up, post-test counseling at health centers; and counselors were generally observed to be far too overwhelmed with clients from prenatal consults to attend to second-visit clients.

In the past, a special program existed for children in high-risk groups, serving children losing weight, twins, and children exposed to tuberculosis. No formal action was taken, but apparently the program has virtually disappeared. The National PMTCT Program is now calling for revitalization of the program under a new name: '*consulta da criança em risco*' (CCR) which will provide a safety net for children of seropositive mothers.

In theory, all children of seropositive mothers will refer to the CCR program and their monthly visits will include not only vaccinations and weights, but also:

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<sup>3</sup> Chimoio Day Hospital did not begin to receive clients until March 2004

- Physical growth monitoring
- Motor skills analysis
- Continuing support and education on feeding alternatives
- Evaluation of clinical status of child
- Provision of prophylaxis for opportunistic infections for child
- Evaluation of vaccination status of child (BCG/measles contraindications)
- Referrals when indicated

To obtain this integration the following steps have been defined by the MoH to implement the PMTCT program:

- The CCR needs to be re-activated in health centers where PMTCT is implemented. If necessary, special hours may be designed for HIV+ mothers and their children, appointing an MCH nurse for specific support of these activities.
- The health workers in CCR must to be trained in PMTCT (including norms for care and prevention of OI)
- Drugs needed for OI prophylaxis need to be available
- Coordination with other services for referral is needed, including pediatric consultations; MCH vaccination services; FP; Day Hospital; and NGO/support groups.

## **Relationship to Communities and NGOs**

*Interviews with local and international NGOs*

All NGOs interviewed displayed awareness of the PMTCT project, and NGO staff members were clearly on familiar terms with PMTCT staff. However, no formal relationships or linkages were reported to exist.

## **6. Discussion and Recommendations**

The following discussion is organized by original project objective, followed success in meeting stated outputs, and targets.

### **a) Success in Meeting Original Project Objectives**

1. Reduce mother-to-child HIV transmission in selected health centers in Beira and Chimoio

Ultimate project success can be measured by the percentage of children who have received NVP at birth along with their mothers; *and* at of 18 months of age (or older) show negative results with an HIV antibody test<sup>4</sup>.

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<sup>4</sup> Considering about 35% of children contract HIV from their mothers; and NVP is approximately 50% effective (i.e.: reduces transmission to about 15%).

The project is not yet old enough to make a final evaluation of success in relation to reduced mother to child transmission. Assuming the average mother comes for her first prenatal consult at 5 months gestation, the project won't expect her child for testing until a minimum of 22 months later (4 more months of gestation, plus 18 months of life for the child). Of the five project sites, only H.C. Eduardo Mondlane (Chimoio) and H.C. Ponte Gea (Beira) have been established long enough to begin to expect children to return for testing. Four children have been brought for HIV antibody testing, and all four have reported negative results.

#### Duration of Project Sites

| Health Center | Project Inception | Project Duration in April 2004 |
|---------------|-------------------|--------------------------------|
| Chimoio       |                   |                                |
| Ed Mondlane   | April 2002        | 24 months                      |
| 1 de Maio     | February 2002     | 15 months                      |
| Nhamaonha     | February 2002     | 15 months                      |
| Beira         |                   |                                |
| Ponte Gea     | April 2002        | 24 months                      |
| Munhava       | February 2002     | 15 months                      |

#### 2. Increase pregnant women's utilization of voluntary counseling and testing services

There is no doubt that utilization of voluntary counseling and testing sites by pregnant women has been substantially increased by project services. Over the five project sites, in year 2003, testing uptake figures are reported at 71 percent. For various reasons as discussed above, including difficult access to services, low perception of risk, lack of knowledge, fear of results, stigmatization, and negative interference of families, most pregnant women *will not* seek testing if it isn't integrated into prenatal care services. The '*opt-out*' approach further encourages women to accept HIV testing as a normal part of prenatal services; and allows them to simply follow the patient flow in order to receive the HIV test.

There is still room for improvement in uptake of testing services. A study conducted by Gimbell-Sherr in 2002<sup>5</sup> cites stated acceptance by women for VCT services during prenatal care as 90 percent. The USG, working in cooperation with MoH and international NGOs, has set year 2004 test uptake targets at 80 percent for all new PMTCT sites in Mozambique. Some regional uptake figures exceed 70 percent: Malawi (75%), Zimbabwe (75%) and Tanzania (85%).

Key actions to increase uptake include training additional counselors to avoid interruption of testing services due to absent or sick staff; strengthening the '*opt-out*'

<sup>5</sup> Acceptance Study of Prevention of Mother to Child Transmission of HIV/AIDS in Chimoio, Mozambique, Health Alliance International, March, 2002

approach to service delivery; and standardizing education efforts at the point of service. Specific actions include:

- Maintain advocacy with central government and international donors to increase funding for human resources in the health sector.
- Promote full integration of PVT into MCH services, moving towards a cadre of MCH nurses with full training in HIV counseling and testing as well as other aspects of PVT.
- As an interim measure, create a pool of trained 'on call' HIV lay counselors in each province that can be summoned when needed.
- Explore creative staffing ideas, using community leaders, traditional healers and birth attendants, and 'graduated' positive mothers as peer educators to provide onsite and community-based educational/information sessions

### 3. Increase institutionalized births of HIV+ women

No baseline exists for rates of institutionalized births among HIV+ women before project inception. One can compare, however, to rates of institutionalized births among the general population. In year 2003, DPS Sofala reports that 48% of women gave birth in maternities in the city of Beira. In comparison, project records site a range of 24% to 42% of HIV+ mothers who were referred from the five project sites *four months earlier* have entered the associated maternities to give birth. Data is very rough as gestational age at which mothers take the HIV test varies, some mothers have suffered miscarriages, and some HIV+ mothers who do actually present at the maternity may have 'lost' or destroyed the prenatal fiche that identifies them as all HIV+. Nonetheless, it is safe to say that the challenge persists to increase the percentage of mothers who birth in a maternity.

A partial solution to the maternity challenge, in line with MoH guidelines and currently being instituted in Manica and Sofala Provinces, is to provide NVP for mothers to take home. But providing NVP for a mother to self-administer presents another set of challenges, including difficult confirmation of appropriate intake, lost pills, shared pills, misunderstood pill directions, and lost education/information opportunities.

Education/information must infiltrate communities where women live; targeting not just women, but husbands and extended family members who influence decision-making. Concurrently, construction of new maternities must remain a key discussion item in order to reduce barriers related to low access to existing maternities.

### 4. Reinforce referral and monitoring links between the PVT project and the HIV/AIDS support services in both provinces

Referral routinely occurs between specific PVT project services; i.e. from prenatal consult to HIV testing center; and from testing center to mother support groups, day

hospital, and maternity. Uptake remains a challenge in all cases; particularly in relation to birthing in maternities, as discussed above.

### Referral Services and Uptake Year 2003

| Referral Service                    | Chimoio: Range in Uptake over three Project Sites | Beira: Range in Uptake over two Project Sites |
|-------------------------------------|---|---|
| HIV Testing                         | 35%-70%   | 80%-93%                                       |
| Positive Mothers Clubs <sup>6</sup> | 30%-49%   | 6%-9%   |
| Maternities                         | 24%-42%   | 24%-37%                                       |
| Day Hospital <sup>7</sup>           | -   | 57%   |

### External Linkages

Beyond the integrated linkages listed above, external referrals are not well established, nor are they tracked and reported. International, NGO, and community organizations are underused as support structures for mothers living with HIV. Reasons include limited demand for services (home-based care, for example) as pregnant women are generally not yet showing signs of AIDS; and/or limited capacity of local NGOs to provide meaningful assistance to recently diagnosed women. Some specific actions for strengthening linkages include:

- Formalize partnerships with local and community groups, specifying roles and providing capacity building where needed.
- Encourage partner testing and tracking through implementation of a coded invitation card system.
- Barriers to uptake of post-partum counseling and family planning services must also be addressed. Where deemed necessary, expansion of service hours should be considered.

### **b) Success in Meeting Expected Outputs and Results**

- The original project proposal planned for four health facilities providing test and counseling services for pregnant women for HIV, and four maternities equipped for administering Nevirapine. *The project has succeeded in establishing five health services as such.*
- Referral links between testing and counseling in antenatal care and both clinical and psychosocial support services will be strengthened and tracked for adequacy and appropriateness. *Partial success; see discussion above.*

<sup>6</sup> Data is CURRENT attendance. No figures available from 2003.

<sup>7</sup> Chimoio Day Hospital is too new to evaluate

- Improved postpartum care for HIV+ women and their babies, including counseling, clinical and nutritional support. *Limited success; see discussion above.*

### c) Success in Meeting Original Project Targets for Year 2003

Predictions were good for number of women seeking prenatal consults; as were those for testing uptake. Somewhat less mothers were seropositive than predicted; and far less mothers actually received NVP than was originally planned – mainly due to the low rate of institutional births and no system that allowed mothers to take home, self-administer NVP, and provide follow-up confirmation that the drug was taken appropriately.

#### Project Targets as Described in Project Proposal as Compared to Actual Results

| Health Center  | Target                | Actual | Target (70%)  | Actual (~67%) | Target (30%) | Actual (~20%) | Target (90%)  | Actual (~34%) |
|----------------|-----------------------|--------|---------------|---------------|--------------|---------------|---------------|---------------|
|                | # 1 <sup>st</sup> PNC |        | # Accept Test |               | # HIV+       |               | # Receive NVP |               |
| <i>Chimoio</i> |                       |        |               |               |              |               |               |               |
| Ed Mondlane    | 4,228                 | 4,056  | 2,960         | 1,429         | 888          | 308           | 800           | 217           |
| 1 de Maio      | 2,829                 | 2,943  | 1,980         | 2,017         | 594          | 281           | 535           | 84            |
| Nhamaonha      | 3,321                 | 3,700  | 2,325         | 2,601         | 697          | 347           | 627           | 66            |
| <i>Beira</i>   |                       |        |               |               |              |               |               |               |
| Ponte Gea      | 3,211                 | 3,422  | 2,248         | 2,724         | 674          | 758           | 607           | 180           |
| Munhava        | 2,807                 | 2,499  | 1,965         | 2,331         | 589          | 476           | 530           | 160           |
| Total          | 16,396                | 16,620 | 11,478        | 11,102        | 3,443        | 2170          | 3,098         | 707           |

## 7. Lessons Learned

The process and experience of implementation to date can illustrate some important lessons in relation to project expansion and improvement.

1. *Successful implementation and management of the PVT program is rooted in a strong partnership between DPS, HAI and UNICEF.*

The experience of creating coordination mechanisms and defining clear roles of DPS, HAI and UNICEF can be reviewed as an illustrative example in development of best practices in the implementation of the National Strategic Plan's integrated networks for prevention and treatment for HIV/AIDS.

2. *Integration of PVT services into prenatal and primary care services is crucial.*

There is no evidence that incorporating PVT into normal MCH services has diminished the number of mothers seeking prenatal services. On the contrary, the program has demonstrated increasing program attendance and adherence over time because women are empowered to make their own choices when PVT services are integrated into routine prenatal care.

- 3. The development of a successful PVT program can be a catalyst to reinforce all components of the MCH program.*

Many MCH program aspects are not directly dependant on PVT, but because of the increased vulnerability of seropositive mothers, it is imperative that associated services be strengthened.

Further integration of PVT services should be pursued, including in institutional births, child monitoring, family planning, nutritional counseling, post birth follow-up, and partner counseling.

- 4. Health facilities and trained health personnel are the single most limiting factor in terms of project expansion.*

Health facilities and human resources in both cities are insufficient to meet the demands of the population. The shortage is particularly dire for PVT services. HIV testing and counseling is a time-consuming procedure. Suggested standards for counseling sessions are 30-60 minutes per patient, with additional duties occurring in prenatal consults, the maternity, and management of positive mothers clubs. Actions must be urgently taken to increase access to services and meet the demand of pregnant women.

- 5. Ongoing training needs must be regularly addressed.*

The provision of training is one of the most important functions of national and provincial management. Unless managers, counselors, MCH nurses, and Day Hospital staff have appropriate knowledge, skills, and attitudes, the PVT project is only partially effective.

- 6. IEC can be a powerful mobilization tool in increasing uptake of testing and associated PVT services.*

Interpersonal and mass communications has proven to be effective in mobilizing and informing mothers about PVT services. Expansion and standardization of strategies and messages is needed to support a complete IEC campaign. In order to create motivation to seek follow-up care for mothers and their babies, the project must develop a communications strategy aimed at developing an accurate perception of risk in men and women. High attendance at positive mothers clubs could be interpreted as evidence of the interest of the population in seeking information, education, and support concerning health care.

- 7. Stigma and discrimination of seropositive women are important aspects that must be considered in expansion of PVT services.*

Stigma must remain a key issue at all steps of planning and implementation of projects. Clear strategies developed in partnership with PLWHA and community-based women's organizations must be explored.

**8. *Greater partner involvement is essential.***

The experience of the project demonstrates that the participation of partners is possible; but greater participation must be stimulated through active outreach. A successful partner inclusion strategy must include the involvement of women themselves.

**9. *Women must be rallied as peer educators and program advocates.***

The best mechanism for mobilizing women and encouraging adherence to the PVT project is involving women themselves as project activists – otherwise the project runs a great risk of continuing to lose women.

**10. *Comprehensive monitoring and reporting systems can best illustrate project successes and ongoing challenges.***

Identification of project strengths and weaknesses can only occur with accurate and consistent collection and reporting of data. All project staff, from health workers to supervisors to manager must be included in development and monitoring of data systems.