



Kingdom of Swaziland
Ministry of Health

PMTCT PROGRAM ANNUAL REPORT 2012

Strategic Information Department



ACKNOWLEDGMENTS

The Ministry of Health would like to extend its gratitude to all development partners who have provided financial and technical support to service delivery of PMTCT over the years. The accomplishments expressed in this report would not have been possible without implementing partners, who have been in the forefront, ensuring that PMTCT services are offered effectively and efficiently to the Swazi population. The 2012 PMTCT report is a result of efforts by many individuals and organizations that provided technical support in crafting and reviewing this document. The Ministry of Health extends its esteemed appreciation to the following:

- The PMTCT technical working group for their critical support provided during the review of the chapters and sections of the draft documents.
- The Monitoring and Evaluation (M&E) Unit?
- Stakeholders for their valuable inputs.
- Development and implementing partners for their continuous technical and financial support during the report writing process

It would be impossible to list all who have directly and indirectly contributed to the final outcome of the reports. Nevertheless, the Ministry of Health is indebted to the following reviewers:

Bheki Mamba	IHM
Nomsa Mulima	M&E Unit
Nompumelelo Dlamini-Mthunzi	M&E Unit
Sibongile Mndzebele	M&E Unit
Bonsile Nhlabatsi	PMTCT
Dr Caspian Chouraya	EGPAF



ABBREVIATIONS AND ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral (drug)
AZT	Azidothymidine
CHAI	Clinton Health Access Initiative
CTX	Cotrimoxazole
DBS	Dried Blood Spot
DNA PCR	Deoxyribonucleic acid-based Polymerase Chain Reaction Test
EGPAF	Elizabeth Glaser Pediatric AIDS Foundation
EID	Early Infant Diagnosis
HIV	Human Immunodeficiency Virus
HMIS	Health Management Information System
IHM	Institute for Health Measurement
M&E	Monitoring and Evaluation
MOH	Ministry of Health
NMCH	Neonatal, Maternal and Child Health
NRL	National References Laboratory
NSF	National Multisectoral Strategic Framework on HIV and AIDS 2009-2014
MTCT	Mother-to-child transmission (of HIV)
PEPFAR	(U.S.) President's Emergency Plan For AIDS Relief
PHU	Public Health Unit
PMTCT	Prevention mother-to-child transmission of HIV
PNC	Postnatal Care
SAM	Service Availability Mapping
SDHS	Swaziland Demographic and Health Survey
Sd-NVP	Single-dose Nevirapine
SID	Strategic Information Department
SOPS	Standard Operating Procedures
SRH	Sexual and Reproductive Health
UNGASS	United Nations General Assembly Special Session on HIV
WHO	World Health Organization

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EXECUTIVE SUMMARY

The Government of Swaziland has given high priority to the prevention of mother-to-child transmission of HIV (PMTCT) and according to the latest data, significant progress has been made in delivering PMTCT services in Swaziland. In 2010, Swaziland committed to the elimination of new infections in children and keeping their mothers alive through comprehensive scale up of PMTCT. Scientific and program evidence points out that PMTCT interventions, including primary prevention, reducing unintended pregnancy, antiretroviral (ARV) prophylaxis and care and treatment for mothers living with HIV and newborns exposed to HIV, can reduce the risk of HIV transmission from mother to child to less than 5% in countries where mothers predominantly breastfeed and to as low as 2% in non-breastfeeding counties. Although there has been a dramatic increase in commitment, resource mobilization and programming, especially around ARV prophylaxis, significant efforts are still required to realize the MTCT elimination goal of above 95% reduction of mother-to-child transmission by 2015. This will only be achieved if Swaziland continues to accelerate its commitment to making available comprehensive and effective PMTCT programs.

Analysis of the cascade of PMTCT services shows both advancements made as well as the biggest hurdles faced in implementation. Furthermore, such analysis helps to anticipate and to plan for improved future achievements and outcomes. The country started to implement PMTCT services within maternal, newborn and child health (MNCH) services in 2003. Swaziland has witnessed a dramatic scale up of PMTCT in the country. The PMTCT program and its supporting partners have implemented many actions to scale up PMTCT interventions and focus areas during 2012, including:

- Expanded targeted mentoring on PMTCT at health facilities
- Improved coordination at national, regional, and facility level
- Strengthened and expanded PMTCT service provision to community level
- Implementation of innovative program interventions for the involvement of male partners, significant family members and communities to create a supportive environment for PMTCT
- Strengthened tracing and follow up of antenatal care clients and HIV exposed infants

Data reported in calendar year 2012 have been used to develop this report. In line with the National Multisectoral Strategic Framework on HIV and AIDS 2009-2014 (NSF), this report provides information on the progress towards targets and objectives of the PMTCT Program for 2012. The report portrays the country's progress on key PMTCT indicators as highlighted in the NSF.

Some of the key results for 2012 include:

- An increase in overall HIV testing rates: By the end of 2012, 89% of pregnant women were tested for HIV.
- A decrease in HIV prevalence among pregnant women (37%).
- A dramatic decrease of sero-conversion among PMTCT clients: Over the past two years, sero-conversion rates have declined from 10% in 2010 to 2.8% in 2012. Enhanced efforts have been made during this period to educate and retest pregnant women during antenatal care and labor and delivery.
- The proportion of all HIV positive pregnant women who receive ARV prophylaxis has markedly increased, reaching 86% in 2012.
- Slight improvement in CD4 testing during pregnancy: The CD4 uptake among pregnant women has increased from 66% in 2011 to 68% in 2012.

Despite major successes, some barriers exist for continued work in 2013, including:

- Family planning has received little attention, yet prevention of unintended pregnancy is a critical factor to achieving the elimination goals.
- Follow-up care, treatment and support for pregnant HIV positive women and exposed and infected remains a challenge.
- There still exists some confusion about infant feeding recommendations for mothers living with HIV. Health workers often give incorrect advice or no advice at all.
- Stigma and limited involvement of male partners remain significant hurdles.



- Available information is largely based on health facility reporting and relies on the quality of national health management information system (HMIS). Data on women accessing PMTCT services through the private sector and delivering at home are not consistently captured.

To improve on the aforementioned challenges, the program will pursue full implementation of the elimination plan and will continue developing new evidence-based and targeted strategies.



CHAPTER 1: BACKGROUND

1.1 Background Information – PMTCT

The implementation of prevention of mother-to-child transmission (PMTCT) programs is a hallmark of national responses to HIV across the globe. For most developed countries, where resources are sufficient, mother-to-child transmission of HIV (MTCT) rates have dropped to as low as 2%. In developing countries, a significant number of mothers living with HIV do not have easy access to comprehensive PMTCT interventions resulting in a high burden of pediatric HIV infections. In 2005, the United Nations General Assembly Special Session on HIV (UNGASS) set a target to reduce pediatric HIV infections by 50% by 2010. Many countries were unable to meet this target due to low coverage of PMTCT services. In 2011, the Global Plan Towards the Elimination of New HIV Infections in Children by 2015 and Keeping Their Mothers Alive was launched with 10 targets including reducing new child HIV infections by 90% and reducing mother-to-child transmission to less than 5% in the most affected countries by 2015. The plan also targets 90% coverage with antiretroviral drugs (ARVs) for PMTCT during pregnancy, childbirth the extended postpartum period in breastfeeding populations.

In the absence of PMTCT interventions about 15-25% of infants of women living with HIV will be infected during pregnancy or delivery, and an additional 5-20% may become infected during breastfeeding. PMTCT research in developing countries has focused on identifying simple, cost-

effective PMTCT regimens to achieve greater coverage. Clinical trials have shown several drug regimens to be effective.

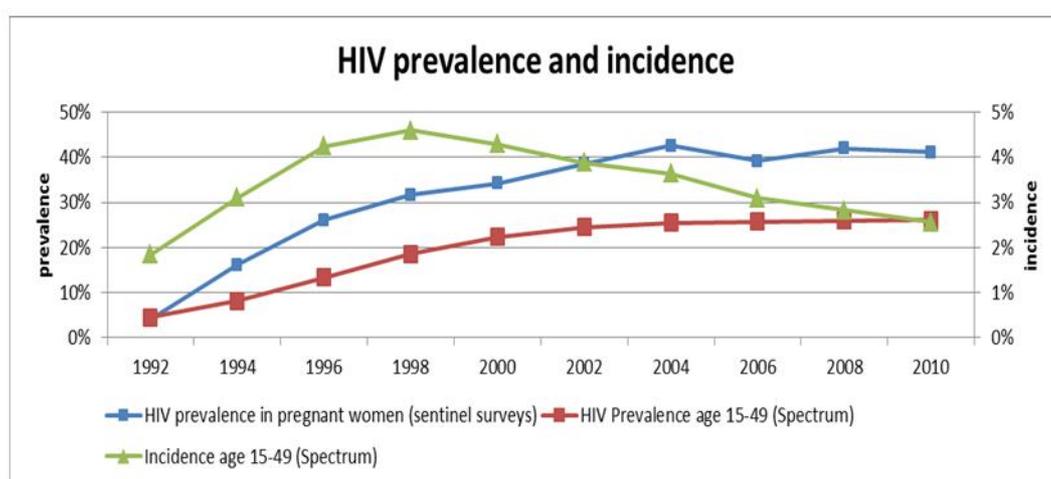
In 2010, the World Health Organization (WHO) revised its guidelines on the use of ARVs for the prevention of mother-to-child transmission of HIV. The revised recommendations placed increased emphasis on improving the mother's health while providing maximum protection against HIV infection in her child. These revised guidelines have provided countries with the hope of achieving virtual elimination of pediatric infections due to MTCT by 2015.

1.2 Health Profile

Life expectancy at birth drastically declined in Swaziland from 60 years in 1997 to just 40 years in 2007 (Swaziland Demographic and health survey [SDHS] 2007). This dramatic drop is mainly attributed to the impact of the HIV epidemic. Swaziland has the highest HIV prevalence in the world, with an estimated rate of 26% in age group 15-49 years (SDHS 2007). The HIV prevalence rate among pregnant women increased from 3.9% in 1992 to 41% in 2010. The following figure illustrates trends in both HIV incidence and prevalence over the years. Note that the red and green lines are based on the Spectrum modeling estimates for the population 15-49 years, while the blue line represents sentinel surveillance at antenatal care (ANC) sites.



Figure 1: HIV Prevalence And Incidence



1.3 Swaziland National PMTCT Program

1.3.1 PMTCT Country Profile

Swaziland has a prevalence of HIV among pregnant women of 41.1%.¹ The annual number of live deliveries of 33 000 translates to approximately 13 563 pregnant women living with HIV and the same number of infants exposed to HIV. These mother infant pairs are in need of services to reduce HIV transmission from the HIV infected woman to the infants. Swaziland has a high first attendance for ANC, with 97% of pregnant women attending ANC at least once, and 79.3% making at least 4 ANC visits. Eighty two per cent of deliveries occur in health facilities under the care of skilled birth attendants.² These conditions provide excellent opportunities for women and infants to receive HIV testing and PMTCT services during pregnancy, intrapartum and postnatal. However, it is important to note that only 25.8% of pregnant women attend ANC services during the 1st trimester of pregnancy.³ This presents a challenge in reaching pregnant women early, especially in line with the WHO guidelines that require women to attend ANC as early as 14 weeks.

1.3.2 Update On PMTCT Implementation

Swaziland's Ministry of Health (MOH) started to implement PMTCT services within its maternal, newborn and child health (MNCH) services in 2003. HIV testing was integrated within ANC services and single dose Nevirapine (SD-NVP) was the initial

regimen for ARV prophylaxis to reduce MTCT. In 2008, the country introduced use of a dual ARV regimen, including Azidothymidine (AZT) and NVP. From 2011, Swaziland started implementing Option A of the new WHO guidelines that comprise: earlier initiation of antiretroviral therapy (ART) for pregnant women living with HIV to benefit both the health of the mother and prevent HIV transmission to her child; longer ARV prophylaxis for those women who are not yet eligible for ART; and, provision of NVP for the HIV-exposed infant to reduce the risk of HIV transmission during the breastfeeding period.

Since 2003, there has been a progressive increase in the number of facilities providing PMTCT services, from 3 in 2003 to 150 clinics in 2012. This represents 88% of all health facilities.⁴ Similarly, there has been a tremendous increase in ARV uptake, from 4% in 2004 to 86% by end of 2011.⁵

The National Multi-sectoral Strategic Framework for HIV and AIDS 2009-2014 (NSF) prioritizes the scale-up of PMTCT and has an impact-level target of reducing the incidence of pediatric HIV infections to 5% by 2014. To determine the status of infants exposed to HIV, the country established early infant diagnosis (EID) through DNA PCR testing using dried blood spot (DBS) samples in 2007, allowing for diagnosis as early as six weeks of age. This technology is critical for assessment of the effectiveness of PMTCT services and to enroll HIV infants living with HIV into care early. According to the Service Availability Mapping (SAM) 2010, there are approximately 127 (82%) facilities capable of

¹ 2010 ANC Sentinel Surveillance

² Multiple Indicator Cluster Survey 2010

³ Assessment of bottlenecks towards virtual elimination of mother to child transmission, 2011.

⁴ Service Availability Mapping 2010

⁵ PMTCT Service Report 2012



collecting DBS samples for HIV testing using DNA PCR. The National Reference Laboratory (NRL) has the capacity to perform DNA PCR tests and performs an average of 860 tests per month. The DBS samples are transported to the laboratory in two stages: DBS samples from facilities are transported to laboratory hubs, in most cases by the National Transportation System, and then subsequently transported from the hubs to the NRL four times a week. Through the same system, DNA PCR results are transported back to the facility where clinicians give results to caregivers.

In 2011, Swaziland committed to the global elimination goals and conducted a bottleneck assessment. Findings from this national assessment contributed to the development and adoption of a national strategic framework and plan for accelerated action. The framework calls for continued efforts to extend and improve ARV prophylaxis for mothers and children, but also requires rapid acceleration of primary prevention, family planning and better linkage to care and treatment for mother infant pairs.

1.4 Data Management, Monitoring And Evaluation.

It is vital for the PMTCT program to monitor its achievements and challenges so as to make informed decisions for future program implementation. All sites providing PMTCT services are expected to report through the national Health Management Information System (HMIS). There are PMTCT registers in all PMTCT sites, which are to be completed by the service provider each time a PMTCT client is seen. At regional level, the data are collated into monthly summaries. Each quarter, regional offices are expected to present a report and disseminate to the sites as feedback. The national Monitoring and Evaluation (M&E) unit also presents a quarterly report and shares it with the national PMTCT program, the Directorate and partners. Annually, the national M&E unit, the PMTCT program and its partners consolidate cumulative reports and develop an annual program report. Routine M&E of key PMTCT service indicators are reported on a monthly, quarterly and annual basis to monitor coverage, uptake and progress toward the scale-up of PMTCT interventions.

This report will inform the MOH and partners in PMTCT on the effectiveness of the interventions and will further guide program development.

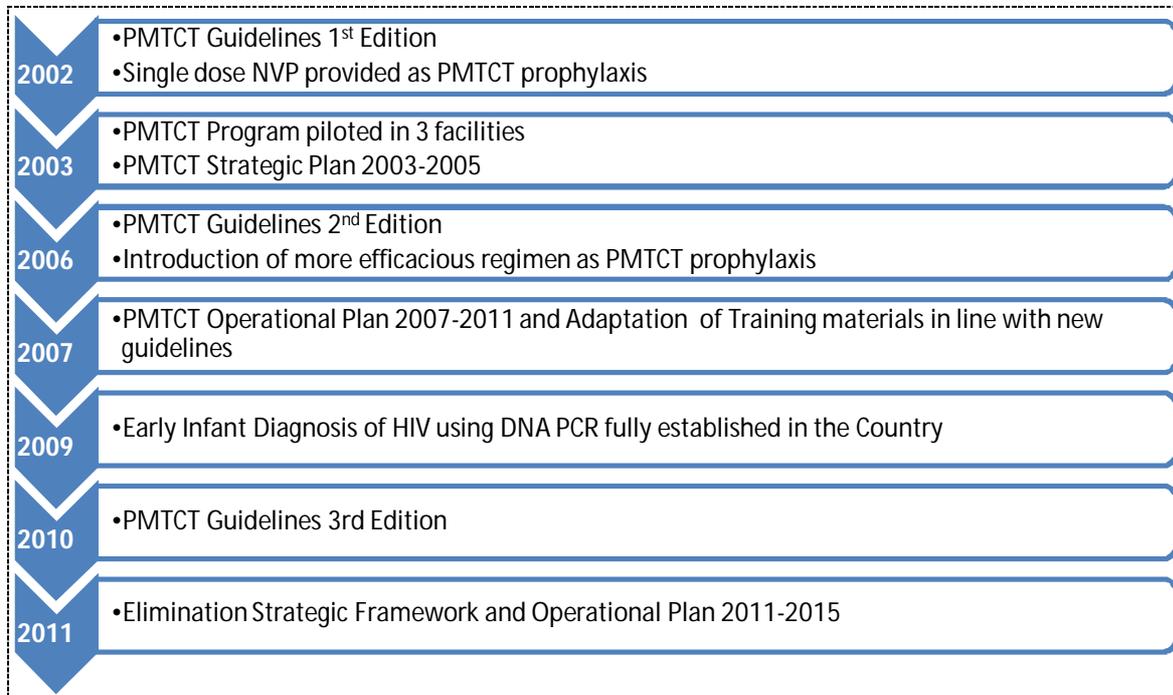


CHAPTER 2: PROGRAM DESCRIPTION

2.1 PMTCT Services Evolution

The evolution of PMTCT services over the past years is shown in the Figure 2 below:

Figure 2: PMTCT Program Evaluation



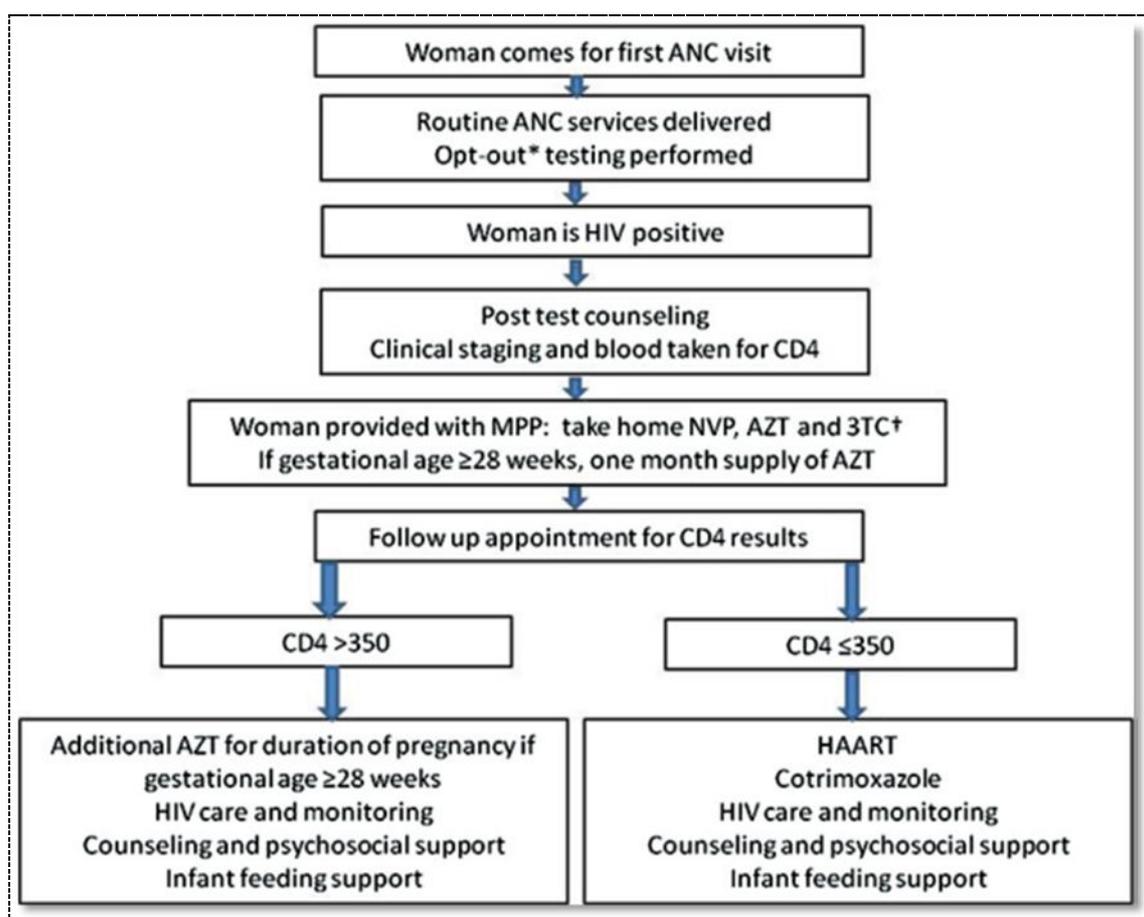
2.2 PMTCT Approaches And Models

PMTCT services begin with the routine offer of HIV testing and counseling to women of reproductive age. HIV testing is an entry point to: primary prevention of HIV among young women; prevention of HIV transmission from pregnant women living with HIV to their infants; and treatment and care services for mothers, children and family members living with HIV.

Comprehensive PMTCT is implemented through a four-pronged approach:

- Prong 1: Primary prevention of HIV infection among women of child bearing age
- Prong 2: Prevention of unintended pregnancies among women living with HIV
- Prong 3: Reduction of MTCT during pregnancy, labor and breastfeeding
- Prong 4: Care, treatment and support for women living with HIV and their families

Figure 3: Approach Used For Prong 3 Of PMTCT For ANC Clients



2.3 Integration Of PMTCT

The Sexual and Reproductive Health (SRH) unit oversees both PMTCT and MNCH services, thereby facilitating integration of HIV services within MNCH settings. HIV testing and ARV prophylaxis were the first services to be integrated in ANC. In 2010, the country began integration of antiretroviral therapy (ART) into PMTCT sites in 2010, starting with the Public Health Units (PHUs). In 2012, standard operating procedures (SOPs) for the integration of family planning services into HIV care and treatment facilities were finalized, printed and disseminated. The MOH and its partners support an on-going project to establish five centers of excellence in SRH-HIV integration and linkages.

2.4 Distribution Of PMTCT In Facilities

In total, 150 out of 171 ANC facilities provide PMTCT services. All government and mission facilities that provide ANC services are providing PMTCT services. The MOH now aims at strengthening PMTCT access and quality in private sector facilities.

2.5 Capacity Building And Organizational Changes

The SRH is responsible for updating health care providers on emerging and current issues. This could be in the form of workshops (basic or refresher) and orientation meetings. For the year 2012 the following trainings were undertaken:

Table 1: Trainings Conducted

Type of training/meeting	Achievement
Basic PMTCT	3 regional trainings held and 72 nurses trained (Shiselweni, Lubombo and Hhohho)
Orientation on PMTCT guidelines	3 regional orientations were done in Hhohho, Shiselweni and Lubombo. A total of 59 nurses were trained
Labor and delivery 1 day training	11 maternity centers trained and 14 sessions held. Namely RFMH, Mankayane, Mbabane, Piggs Peak, Dvokolwako, Emkhuzweni, Sithobela, Hlathikhulu, Nhlngano and Matsanjeni. A total of 185 nurses were trained.
Data collecting tools training; the new PMTCT monthly reports tools	3 regional trainings were done and 1 national training was done for mentors. Thus 176 health care workers were trained.
PHU planning meetings	5 PHU workshops were done and a total of 78 people attended. These include Mbabane, Siteki, Hlathikhulu, Piggs Peak, and Mankayane.
Quarterly data sharing meetings	12 sessions were held in total in 3 regions and a total of 303 health care workers attended.
Mentorship training	22 mentors and clinic supervisors were trained from different agencies that include MOH and EGPAF

2.6 Male And Community Involvement

Low male and community involvement in PMTCT contributes to poor program performance. Swaziland is currently intensifying efforts to involve

men and the community at large in PMTCT. This is being done through community mobilization, male dialogues, and use of letters to invite male partners to accompany PMTCT clients for clinic visits.



CHAPTER 3: PROGRAM ACHIEVEMENTS AND OUTCOMES

3.1 Introduction

This section of the report presents a summary of PMTCT data from the HMIS, EID Dashboard from the NRL as well as program records. The report focuses on data collected from 1st January 2012 to 31st December 2012. Consultative meetings with stakeholders, implementers and partners preceded the finalization of this report. This report is a result of coordinated effort by the Strategic Information Department (SID) and the PMTCT program of the MOH, the Clinton Health Access Initiative (CHAI), and PEPFAR Implementing partners, including the Institute for Health Measurement (IHM) The Elizabeth Glaser Pediatric AIDS Foundation (EGPAF) and Columbia University ICAP.

3.2 Scope Of Analysis

The level of analysis in this report is descriptive as it assesses program progress. The data are presented to depict a national picture and will sometimes portray regional and further disaggregation where helpful and available.

3.3.1 Health Facility Coverage

ANC is a central component of health care for women of childbearing age and, for many women, is the primary entry point into the health care system. Bringing PMTCT and ANC services together increases women's ability to care for themselves and their children, thus enhancing the likelihood of positive pregnancy outcomes. As stipulated in the NSF, at least 95% of health facilities offering ANC services are expected to also provide PMTCT services by 2014.

As highlighted earlier, PMTCT was initially implemented in only three health facilities (2003). By the end of 2008 due to scale-up efforts, 136 facilities reported to provide PMTCT services. SAM 2010 revealed that out of the 172 health facilities providing ANC services, 150 (88%) also offered PMTCT services. This shows a significant improvement and a positive trend towards the 2014 target of 95 per cent.

Table 2: Proportion Of Health Facilities That Provide PMTCT Services.

Region	# of facilities offering ANC services	# of facilities offering PMTCT Service 2008	# of facilities offering PMTCT Service 2010
Hhohho	47	39 (83%)	42
Manzini	58	43 (75%)	44
Lubombo	37	31 (84%)	36
Shiselweni	30	24 (80%)	28
Total	172	137 (80%)	150 (88%)

Source: Service Availability Mapping 2010

A remaining challenge is that many privately owned facilities do not offer PMTCT services and those that do, do not report to the MOH. The MOH intends to put in place a binding Memorandum Of Understanding that will compel all health facilities providing PMTCT services to report.

3.3.2 ANC Attendance

For 2012, 32 434 out of 33 407 (97%) pregnant women were seen in ANC facilities⁶. This is in line with the SDHS, which showed that 97% of pregnant women visit ANC facilities at least once

3.3.3 HIV Testing Among Pregnant Women At ANC

HIV testing is an essential entry point for PMTCT. It also offers an opportunity for women not living with HIV to gain the knowledge and skills they need to remain HIV negative. According to the PMTCT guidelines, pregnant women should be offered an HIV test during their first encounter and two months thereafter to ensure HIV infection is ruled out during pregnancy. Pregnant women are also expected to be tested for HIV throughout the breastfeeding period.

⁶ CSO estimates and projections



During ANC visits, 23 915 pregnant women were tested for HIV for the first time. This constitutes 23 514 women who were tested during their first ANC visit and those tested for the first time in subsequent visits and during labor and delivery

(401). Swaziland has witnessed a tremendous increase in the proportion of women tested for HIV during pregnancy. By the end of 2012, 90.6% of pregnant women were tested for HIV.

Table 3: HTC Uptake Amongst Pregnant Women Attending ANC In 2012

Region	First ANCs	# with Known HIV+ Status	Eligible for testing	# Tested at first visit	# tested at subsequent visit for the first time or in labor and delivery	# Newly Diagnosed HIV+	Total HIV Positive
Hhohho	10 267	1 773	8 494	6 933	81	1 397	3 170
Lubombo	6 351	1 291	5 060	5 016	122	807	2 098
Manzini	10 284	2 174	8 110	7 457	117	1 815	3 989
Shiselweni	5 532	1 099	4 433	4 108	81	808	1 907
Overall	32 434	6 337	26 097	23 514	401	4 827	11 164

Source: Routine HMIS database, 2012

3.3.4 HIV Positivity Rates Among Pregnant Women

From the 2010 ANC Sentinel Surveillance data,⁷ HIV prevalence amongst ANC clients has increased from almost 4% in 1992 to reach its highest peak of 42.6% in 2004. The trend has stabilized over subsequent years. In 2010, the HIV prevalence among ANC clients was estimated to be 41.1 per cent. Routine data for 2012 show a decrease in HIV prevalence among pregnant women (37%). This figure includes women who came in with an already known HIV positive status and those testing positive during routine HIV testing.

About 20% percent of the women seen during ANC visits have an already known HIV positive status. This indicator has shown an upward trend (10% in 2008 to 20% in 2012) and is of some concern since it has not been ascertained whether these were intended pregnancies. Relevant studies are needed to assess unmet need for family planning, as are increased efforts to reduce unintended pregnancy.

The program also closely monitors sero-conversion to HIV positive status during pregnancy, childbirth and postpartum. HIV negative pregnant women are retested eight weeks after the initial negative test and then at 36 weeks and throughout the breastfeeding period to identify transmission risk as soon as possible. Each test is accompanied by education and counseling about staying HIV negative. Data for 2012 shows that out of the 12 924 women that were retested for HIV, only 3% had

sero-converted during pregnancy, representing a dramatic decrease from 10% in 2010.

3.3.5 Distribution Of ARV Prophylactic Regimens For PMTCT

In 2012, 10 280 pregnant women living with HIV were provided with ARV prophylaxis to reduce MTCT. Data for health facilities show that 11 164 pregnant women living with HIV were seen in ANC facilities. Using the actual estimates as a denominator, a total of 86% (10 280 out of 11 918) of all HIV positive pregnant women received ARV prophylaxis to reduce MTCT by the end of 2012.

Steady progress is being made in reaching more pregnant women with ARV prophylaxis. Over the years the country has experienced a transition from SD-NVP to more efficacious regimens. Considerable effort has been invested in capacity building of health care workers about the use of the new PMTCT guidelines. Table 5 below presents the number of pregnant women living with HIV who received ARVs during pregnancy. Worth noting is the increase in the number of pregnant women on ART and decrease in the number of pregnant women who received only an intra-partum dose.

⁷ 2010 ANC Sentinel Surveillance



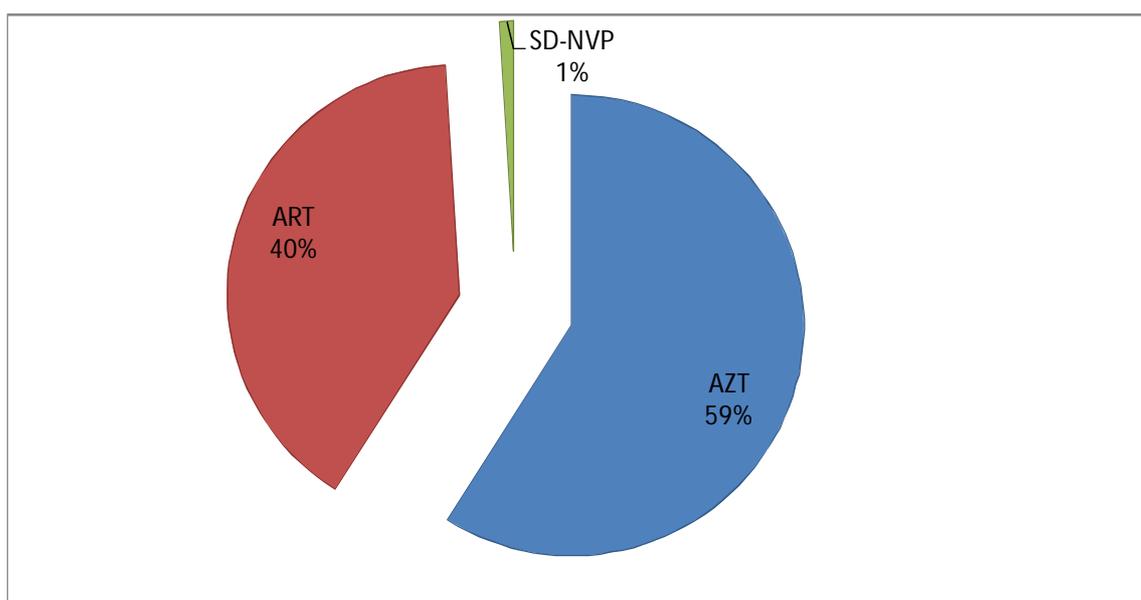
Table 4: ARV/Prophylaxis Uptake Among Women

Region	Total positive	Newly initiated on ART	Already on ART	IPD	AZT only	Total on ARVs
Hhohho	3 170	339	752	22	1 868	2 981
Lubombo	2 098	177	556	6	1 189	1 928
Manzini	3 989	513	883	73	2 130	3 599
Shiselweni	1 907	291	598	12	871	1 772
Overall	11 164	1 320	2 789	113	6 058	10 280

Figure 4 below shows the breakdown in ARV regimen for PMTCT during the year. The majority (59%) of pregnant women received AZT for prophylaxis. There has been an increase in the number of women already on ART from 30% in 2010, 35% in 2011 to 40% in 2012. This is likely due to the scale up and decentralization of ART services

in Swaziland. As highlighted earlier, the number of pregnant women who present at labor and delivery with an unknown HIV status has decreased. For the year 2011, 277 (2%) of pregnant women were given intra-partum dose and only 1 % (113) received the intra-partum dose during 2012.

Figure 4: Proportion Of Pregnant Women Receiving ARV Prophylaxis By Regimen In 2012



3.3.6 ART Eligibility

According to the PMTCT guidelines, all HIV infected pregnant women should be assessed for ART eligibility through clinical staging and through CD4

count testing. Women who were assessed using CD4 increased from 64% in 2011 to 68% in 2012.



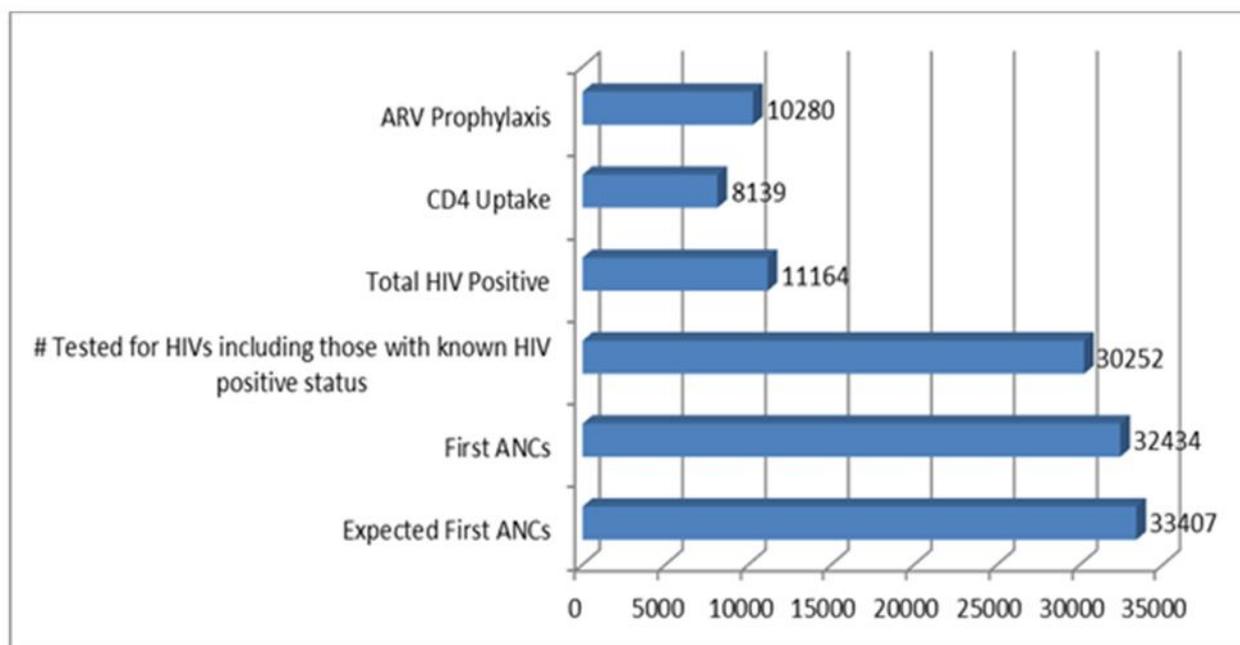
Table 5: Number Of HIV Infected Women Who Had Their CD4 Tested

Region	Total # of pregnant women living with HIV	# of women who had CD4 count done during ANC
Hhohho	3 170	2 259
Lubombo	2 098	1 214
Manzini	3 989	3 133
Shiselweni	1 907	1 533
Overall	11 164	8 139

There remain areas in ANC that need to be strengthened as the country moves towards virtual elimination of MTCT. Figure 5 below shows the PMTCT cascade. As noted, not all women (93%) are tested for HIV during ANC visits. About (8%) women

who test positive are not given any ARVs for PMTCT. Also, it should be acknowledged that a small percentage (3%) of women do not attend ANC services at all.

Figure 5: PMTCT Cascade



3.4 Postnatal Care (PNC) PMTCT Services

Although a number of PMTCT services are offered at PNC, there are no data available on these interventions. The national program has reviewed data collection tools to include indicators for PNC, including family planning services. Family planning services are now being discussed earlier during ANC visits and women are supported in choosing methods they want to opt for after delivery. Family planning services have been integrated into labor and delivery and also strongly promoted during PNC visits.

3.5 Care Of HIV Exposed Infants (Child Welfare Interventions)

The ultimate goal of PMTCT is to reduce MTCT and therefore interventions provided to the child are of great importance. According to the PMTCT guidelines, children of mothers living with HIV should receive a package of services that include HIV prevention, diagnosis, care and treatment. During 2012, 9 414 exposed infants were seen in child welfare clinics at the six-week visit post childbirth.



Table 6: Infants Born To HIV Positive Women Receiving CTX And ARV Prophylaxis

Region	HIV Exposed infants	CTX	Given ARV prophylaxis @ birth
Hhohho	2 641	2 569	2 471
Lubombo	2 005	1 905	1 832
Manzini	3 184	3 130	2 762
Shiselweni	1 584	1 488	1 394
Overall	9 414	9 092	8 459

Source: Routine HMIS, 2012

3.5.1 Cotrimoxazole Prophylaxis

Cotrimoxazole (CTX) is a safe, inexpensive, and highly effective antibiotic that can reduce morbidity and mortality among HIV-infected infants, especially in the first weeks of life. CTX is universally indicated for HIV exposed infants starting at six weeks of age, and should be maintained until cessation of risk of HIV transmission and exclusion of HIV infection. Using the estimate of HIV exposed infants seen at six weeks in child welfare clinics (9 414) as the denominator, 75% (9 092) were initiated during 2012.

3.5.2 Early Infant Diagnosis (EID)

PMTCT is also integrated under child welfare to follow the childhood immunization schedule. During these visits, HIV exposed children are immunized as well as tested for HIV and given CTX prophylaxis and refills of ARV prophylaxis. The SAM 2010 reported that, 82% of health care facilities have capacity to collect DBS for DNA PCR and offer

child welfare services and according to the EID Dashboard 85% (134 out of 157) of health facilities have capacity to collect DBS for DNA PCR.

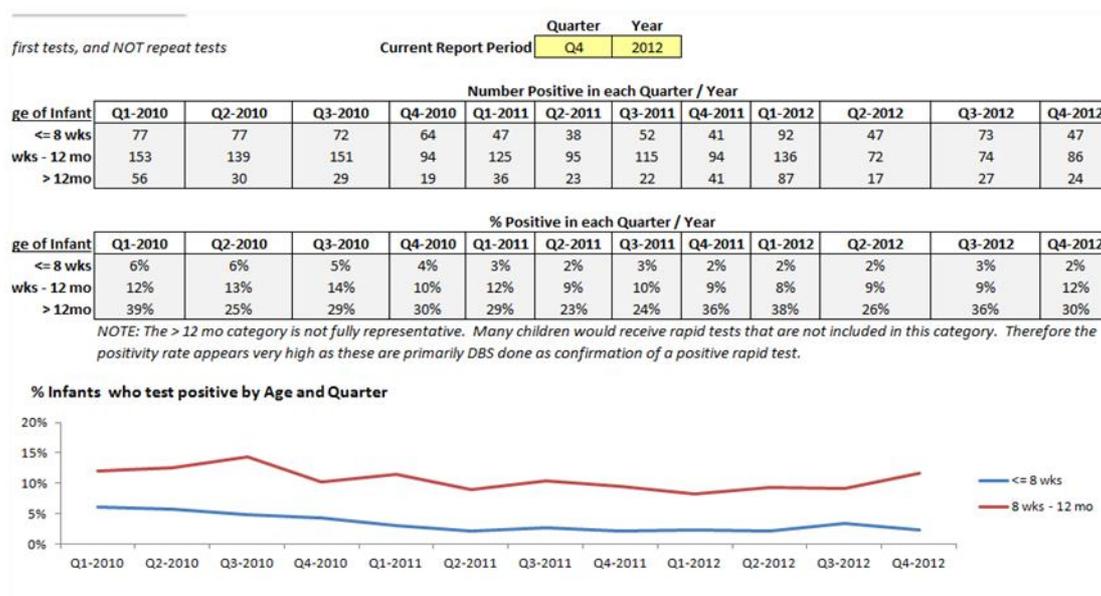
The introduction of virological testing for all HIV exposed infants at 6-8 weeks has increased EID and ART uptake for young children in the country. In 2012, a total of 10 067 HIV exposed infants age 6-8 weeks were seen during the year and 90.2% had been tested for HIV through DNA PCR. Two percent of these infants tested HIV positive. There is a declining trend for infants testing HIV positive over the years, from 21% in 2005 to around 2% by end of 2012 (Table 7,8 and Figure 6,8). It is also of note that infants born to mothers who were on ART during pregnancy were less likely to be HIV infected at six to eight weeks. Only 2% of those with mothers on ART tested HIV positive, whereas 8% of those with mothers who received single dose NVP in maternity, tested HIV positive (Figure 6).

Table 7: Infants Done DNA PCR Per Age Category In 2012

Infant Age	Q1-2012	Q2-2012	Q3-2012	Q4-2012
< 8 weeks	3 826	2 153	2 148	1 940
2 - 6 months	1 003	521	504	426
6 - 12 months	625	256	308	314
12 - 18 months	176	43	57	62
> 18 months	53	22	17	19
Unknown	202	97	123	92
TOTAL	5 885	3 092	3 157	2 853



Figure 6: Proportion Of Infants Testing HIV Positive By Age



CHAPTER 4: PROGRAM ACHIEVEMENTS AND CHALLENGES

4.1 Achievements

- **Political leadership and commitment.**

Political commitment to PMTCT and government leadership and ownership are critical to success and are very strong in Swaziland, as evidenced by the development and adoption of the framework and plan for eliminating HIV among children and keeping their mothers alive.

- **Effective management and co-ordination mechanisms.**

An effective national management team that guides program implementation and monitoring and an effective coordinating mechanism that brings together all key partners within and outside government are also essential to an effective program. A PMTCT technical working group has been established at national level, which meets quarterly, comprising stakeholders such as the MOH and development partners.

- **Decentralized approach.**

The PMTCT program adopted a decentralized approach, through which Regional Health Management Teams are responsible for implementation and monitoring of PMTCT services, including training of service providers with support from the national program. To support scale-up, Regional Health Management Teams have been oriented and a program management structure with clearly defined functions – co-ordination, integration of activities into regional plans, training regional trainers and health workers, logistics management, and M&E – has been established at regional level.

- **Adoption of new approaches to HIV testing and new technologies.**

The introduction of provider-initiated HIV testing in MNCH services has been credited with increasing uptake of PMTCT services. New technologies, such as Point of Care CD4 testing, have improved increase the number of pregnant women initiated on ART.

- **Increased access to HIV services.**

Success in scale-up of PMTCT services is also related to efforts to decentralize and expand access to HIV treatment and care, in particular increased availability of ART.

- **Involvement of communities and people living with HIV (PLHIV).**

There is wide agreement that community groups and PLHIV play an important role in raising awareness, promoting uptake and retention in HIV services and reducing stigma. For example, Mothers2Mothers, an innovative project that works with facilities and employs mothers living with HIV as peer educators or ‘mentor mothers’ found that women reached by the project were more likely to use PMTCT services; to adhere to ARV prophylaxis and exclusive breastfeeding; and, had higher rates of disclosure of HIV status.

- **SRH policy development.**

An SRH policy has been developed. Consultative and stakeholders meetings have been conducted and the document has been finalized. The policy is now pending cabinet approval.

- **Integration of family planning into HIV and other MNCH services.**

SOPs for integrating FP into HIV services were finalized and printed. Family planning guidelines were reprinted and are being distributed to all facilities. The information, education and communication materials, including job aids for nurses, were updated, printed and are now in distribution.

- **Development of a framework and operational plan for eliminating pediatric HIV and keeping mothers alive.**

In support of with global goals and commitments, Swaziland has developed and adopted a national framework and operational plan to eliminate pediatric HIV and keep mothers alive.

- **ANC guidelines.**

A workshop was conducted to develop the ANC guidelines and the first draft is available. Stakeholder validation will be pursued before finalization and printing.

- **SOPs for waiting wards.**

SOPs have been developed to assist in the revival of ‘waiting wards’. These are places where full term pregnant women who are challenged by geographical access to health care services, can wait nearby a facility for the onset of labor. This is important to contribute to reducing maternal



mortality. The first draft of the document awaits stakeholder validation.

- **PMTCT impact evaluation.**

It is important for the country to assess the impact of the PMTCT program including in reducing MTCT and keeping mothers alive and healthy. During 2012, data collection began for a PMTCT impact evaluation. Analysis and report writing will be completed during 2013.

- **PMTCT option B + pilot studies.**

While Swaziland is currently implementing the Option A PMTCT regimen (whereby pregnant women living with HIV who are not eligible for ART and their infants receive enhanced ARV prophylaxis), the WHO has called on countries to assess the potential for adopting Option B+ (whereby all pregnant women living with HIV initiate ART). Médecins Sans Frontières (MSF) and Columbia University ICAP will support the MOH in piloting option B+ in Shiselweni and Manzini respectively. The Shiselweni pilot started in November 2012.

4.2 Challenges

Challenges to PMTCT scale-up include: broadening PMTCT programs to include primary prevention, treatment, care and support for mothers and families, and prevention of unintended pregnancy among women living with HIV; lack of health system capacity for scaling up, including human resources for health; and, a decline in the proportion of women using services at every stage of the PMTCT cascade, likely due to denial, opposition from male partners, fear of disclosure of HIV status, and/or economic and geographic barriers to access.

4.2.1 Translating Policy Into Practice And Operational Guidelines

Although policies and technical guidance for PMTCT are strong, operational guidance to support implementation of *comprehensive* PMTCT is lacking. In practice, the Program continues to focus on interventions to prevent perinatal transmission (prong 3) and has made limited progress with respect to primary prevention, prevention of unintended pregnancy and follow-up treatment, care and support of mother infant pairs.

4.2.2 Weak Health Systems

Weak health systems, especially shortages of human resources and poor procurement and supply management, are among the main

challenges to the scale-up of PMTCT. Other health system constraints include the need for regular in-service training at regional level because of rapid staff turnover, inadequate infrastructure in rural areas, and capturing and mainstreaming data from all sites into the HMIS.

Provision of PMTCT services is also constrained in many settings by lack of availability of drugs and supplies. Challenges identified by an assessment of procurement and availability of drugs and commodities for the PMTCT program included: shortages of professional staff; limited management capacity at regional and facility levels; inadequate inventory control, resulting in expiry or running out of stock; weak quantification for procurement; and inadequate storage and handling capacity in pharmacies and laboratories.

4.2.3 Unmet Need For Family Planning

Preventing unintended pregnancy among women living with HIV is one of the four prongs of comprehensive PMTCT, but family planning interventions have received limited attention from the program. Unmet need is high among women living with HIV.. Family planning services have not been routinely offered as part of HIV testing and counseling, PMTCT or HIV treatment and care services. Many MNCH and family planning services are still oriented towards the child-spacing needs of married women and promoting the use of hormonal contraception. Health workers lack awareness of appropriate advice and contraceptive options for women living with HIV.

4.2.4 Limited Follow-Up Care, Treatment And Support

Follow-up treatment, care and support, the fourth prong of the comprehensive PMTCT approach, has also received inadequate attention. Follow-up of PMTCT clients and their children remains a major challenge and many children are lost to follow up. Greater efforts are required to identify and follow infants and children exposed to HIV, so that they receive ARV prophylaxis, are tested for HIV, and have access to appropriate treatment and care, including CTX prophylaxis and ART when indicated. Establishment of systems to identify and track exposed and infected children is a priority need.

4.2.5 Lack Of Clarity About Infant Feeding

There still exists some confusion about appropriate infant feeding advice for mothers living with HIV. Health workers often give these mothers incorrect advice or no advice at all. Many wrongly believe that they should advise women living with HIV not



to breastfeed and should only provide information about formula feeding. This is despite the fact that Swaziland's national policy follows the WHO guidelines to promote exclusive breastfeeding for six months. There is poor follow-up to support women in their preferred option of feeding and weak monitoring and enforcement of the international code of marketing of breast-milk substitutes.

4.2.6 Stigma And Limited Involvement Of Male Partners And Communities

Another challenge identified is inadequate male partner involvement. PMTCT services, because they are linked to MNCH services, are perceived as services for women. The term 'prevention of mother-to-child transmission' may reinforce this view. Stigma and discrimination, which deter women from seeking care and treatment and other HIV services including PMTCT services, reflect limited community awareness and involvement.

4.2.7 Inadequate Data And M&E Systems

Establishing effective monitoring systems for PMTCT to improve program data and service delivery remains a challenge. Available information is largely based on health facility reporting and the HMIS. Data on women accessing PMTCT services through the private sector and delivering at home are not consistently captured.

There are national standardized PMTCT registers and the updated version of the PMTCT monthly reporting tool that was rolled out from July 2012, but these are not yet in use in all facilities. There are also multiple data and reporting forms, some of which are not linked into the national data system. There is confusion between the old and the new data forms, and no routine analysis of data quality. Many health workers find the burden of reporting strenuous, while others view the collection of data as a form of audit rather than a means to ensure effective planning and service delivery.



CHAPTER 5: RECOMMENDATIONS AND CONCLUSIONS

5.1 Recommendations

- **Increase early uptake of ARV prophylaxis.**

In line with the WHO recommendations that HIV-positive pregnant women begin taking AZT as early as 14 weeks of gestation, the program should encourage all pregnant women to attend their first ANC visit by 14 weeks.

- **Continue rollout of EID to all facilities with well childcare clinics.**

The identification and provision of services to HIV-exposed infants has lagged behind the provision of PMTCT interventions for mothers and needs to be routinely integrated into the program in all facilities. EID should be expanded to all facilities providing well-child care. Sample transport will also require increased attention and investment.

- **Develop mechanisms to increase the number of children on ART.**

Swaziland follows the WHO guidelines in recommending ART for all HIV infected infants younger than two years old. However, it is clear from the number of infants on ART in Swaziland that there are barriers to initiating pediatric ART. The logistics of diagnosing infection, obtaining results, and successfully getting the infants to a care and treatment center have not yet been optimally addressed. To overcome these obstacles, it is recommended that EID be made routine within the immunization program for all children under the age of five year. Provider-initiated HIV testing and counseling should also be offered for children at all entry points, including pediatric wards.

- **Reduce the proportion of home deliveries.**

For about 18% of pregnant women in Swaziland, the primary obstacle to delivering in a facility is the distance of these facilities from their homes. While it may be difficult to build more delivery facilities in strategic locations, the establishment of waiting wards for mothers could increase their access. Health workers in ANC should conduct birth preparedness planning with women and assist them in finding ways to overcome their personal obstacles to delivery in a facility. Some maternity facilities require small upgrades as well. Community mobilization around the importance of facility delivery and involvement of men in this area could also have an impact.

- **Strengthen data and M&E.**

There have been continued and significant improvements in M&E systems. A further need is to strengthen follow up of mother infant pairs as cohorts so that program outcomes and impacts are able to be measured through routine systems. There is also a need to improve reporting from private facilities.

- **Postnatal HIV transmission rates.**

Though many gains have been made in reducing HIV infections in infants by age 6-8 weeks, of note is the high transmission rate between 18 – 24 months. There is a critical and urgent need to strengthen the prevention of postnatal HIV transmission through extended ARV prophylaxis for infants, proper feeding advice and support, as well as EID and counseling of caregivers.

- **Increase uptake of PMTCT services.**

Reaching more women with PMTCT services requires making use of every contact with the health system. Ensuring that women who only make one visit receive PMTCT interventions is critical. Strategies to reach women who do not attend clinics and who deliver at home, and to increase uptake of ANC and delivery care, are also needed. The MOH is working with Traditional Birth Attendants to encourage women to deliver at health facilities, to take NVP if they deliver at home, and to bring their infants for HIV testing and PNC.

- **Promote clear messages about infant feeding.**

There is an urgent need to ensure that health workers and communities understand the risks of mixed feeding and specifically, to ensure that providers have a clear understanding of infant feeding guidance and can provide appropriate advice and support to women living with HIV about infant feeding and weaning. More rigorous analysis of health worker knowledge and attitudes concerning infant feeding and HIV is required, as is a better understanding of the most effective ways to provide effective infant feeding counseling and support.

- **Increase private sector and NGO involvement.**

It is of great importance to include private providers in efforts to reduce MTCT. A significant



proportion of women, including those who are not particularly wealthy, seek ANC and delivery care from the private sector.

- **Increase male partner and community involvement.**

Women confront a number of gender-based obstacles to PMTCT, including lack of negotiation skills, cultural barriers and violence. Involving male partners can make a real difference in improving women's uptake of PMTCT services. Male involvement will be essential to achieve all four prongs of the comprehensive PMTCT approach. This could involve increasing men's awareness of their role in primary prevention, securing their support for family planning, enabling women to discover their HIV status and access ARV prophylaxis and ART without experiencing stigma and discrimination, and ensuring that women and children living with HIV benefit from follow-up treatment, care and support. Initiatives that engage men through traditional leadership and community structures have shown good result and are recommended. Enhanced efforts are needed to promote couples HIV testing and counseling as available evidence suggests that uptake of testing increases when PMTCT clients are tested along with their partners. Awareness must also be raised on the issues facing discordant couples.

5.2 Conclusion

This report shows the importance of moving rapidly to the new, more effective ARV interventions recommended in the 2010 WHO guidelines, but also shows some of the broader challenges to achieving virtual elimination. The country's effort for PMTCT has focused largely on prong 3, provision of ARV prophylaxis, and to a lesser extent, on prong 4 care and treatment for mother infant pairs. This is shown by the increase in service coverage and improvement in HIV testing and increases in the number of HIV positive women receiving ARV prophylaxis and assessed for ART eligibility. To achieve the elimination goals, scale up must continue and additional effort is urgently needed on prong 1, primary prevention, and prong 2, meeting the unmet need for family planning among women living with HIV.

Improvement in access and utilization of both ANC and PMTCT services, especially efforts that increase the retention of HIV positive mothers in the continuum of care and enable tracking of such mothers, are top priorities. It is also recommended that the ANC and PMTCT data be better analyzed, interpreted and used by programs and sites to make informed decisions and action at all levels ensuring program challenges are appropriately tackled. Routine data show that with intensified, evidence-based effort, virtual elimination of pediatric HIV is possible in Swaziland by 2015.



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