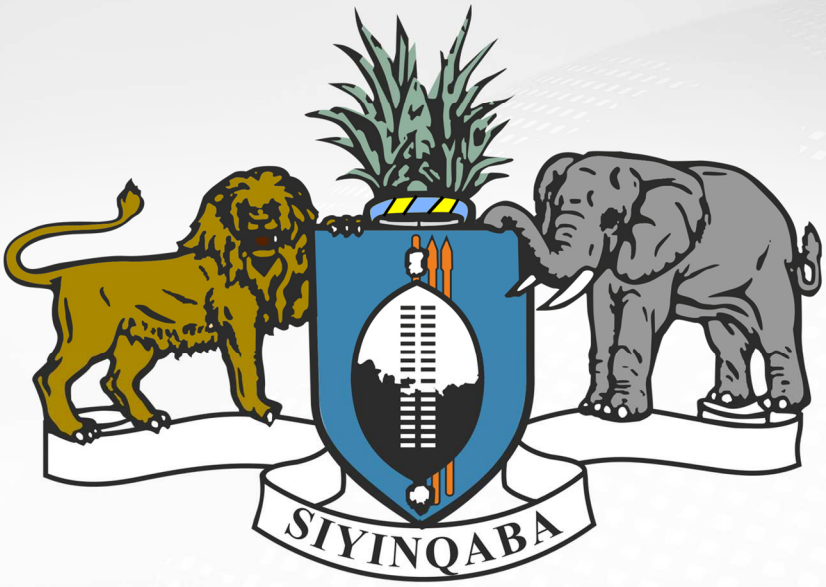

Kingdom of Swaziland
Ministry of Health

PMTCT PROGRAMME ANNUAL REPORT 2011

IHM

Acknowledgements

This annual report represents a collaborative effort of the MoH Monitoring and Evaluation (M&E) unit, the PMTCT Programme and stakeholders. The M&E unit was instrumental in coordinating the writing of this report through a series of meetings with the program and implementing partners.

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Finally but not least, the MoH acknowledges with profound gratitude the support accorded by PEPFAR. Sincere appreciation to George Bicego, whose support for the vision of Strategic Information within the Sector has made this report a reality.

List of Acronyms

ANC	Antenatal Care
ART	Antiretroviral Therapy
ARV	Antiretroviral
AZT	Zidovudine
CTX	Cotrimoxazole
DBS-	Dried Blood Spot
DDPH	Deputy Director of Public Health
DHS	Director of Health Services
DNA	Deoxyribonucleic Acid
EGPAF	Elizabeth Glaser Paediatric AIDS Foundation
EID	Early Infant Diagnosis
HCW	Health-Care Worker
HMIS	Health Management Information System
HTC	HIV Testing and Counselling
L&D	Labour and Delivery
M&E	Monitoring and Evaluation
MNCH	Maternal, Newborn and Child Health
MoH	Ministry of Health
MTCT	Mother-to-Child Transmission of HIV
NERCHA	National Emergency Response Council on HIV and AIDS
NVP	Nevirapine
PCR	Polymerase Chain Reaction
PEPFAR	President's Emergency Plan for AIDS Relief
PITC	Provider-Initiated Testing and Counselling
PMTCT	Prevention of Mother-To-Child Transmission
PHU	Public Health Unit
RHMT	Regional Health Management Team
SDHS	Swaziland Demographic and Health Survey
sdNVP	Single-Dose Nevirapine
SNAP	Swaziland National AIDS Programme
SRHU	Sexual and Reproductive Health Unit
UNICEF	United Nations Children's Fund
WHO	World Health Organization
3TC	Lamivudine

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Executive Summary

Introduction

This is the Ministry of Health's (MoH) 2011 annual report on PMTCT. The report covers the country context, PMTCT program description and evolution, outcomes, achievements and recommendations. The MoH leads the PMTCT program in collaboration with various implementing partners. PMTCT was officially launched in Swaziland during 2003. The PMTCT package of services includes: HIV counselling and testing for pregnant women, their partners and children; antiretroviral (ARV) prophylaxis for pregnant women living with HIV (long and short term) and their exposed infants; counselling and support for safe infant feeding practices; family planning counselling or referral; and referral for long-term antiretroviral therapy (ART) for eligible children. In health facilities, PMTCT serves as an entry point for ART services for the entire family, thus protecting the family unit.

Program Description

Swaziland follows the four-prong strategic framework for PMTCT, including primary prevention of HIV infections; prevention of unintended pregnancy among women living with HIV; prevention of vertical transmission; and, care for mother-infant pairs. To expand PMTCT coverage and achieve broader health benefits, the PMTCT program is integrated within the maternal, neonatal and child health (MNCH) platform.

Program Outcomes

Since 2003, significant progress has been made in the implementation and expansion of PMTCT services. While antenatal care (ANC) attendance is high (97%), fewer women (79%) make the 4 recommended ANC visits. There has been an increase in the number of ANC facilities that provide PMTCT services from 79% (136/172) in 2008 to 87% (150/172) in 2010. By the end of 2011, 91% of pregnant women who attended ANC were tested for HIV and got their results. During 2011, 40% of pregnant women testing were found to be HIV-positive. Of all identified pregnant women living with HIV, 86% received a full course of PMTCT prophylaxis. The proportion of women initiated on Art increased from 30% in 2010 to 35% in 2011. Of the newborns exposed to HIV, 87% received ARV prophylaxis for PMTCT.

By the end of 2011, 82% (127) of 154 child-welfare facilities offered DBS tests for DNA PCR. This expanded coverage has resulted in an increase in the number of infants tested for HIV. Of the HIV-exposed infants, 88%were seen in child welfare clinics at 6 weeks in 2011. More than half (57%) were tested within two months of birth. This is an increase from 2010 when only 49% were tested within this recommended time frame (PMTCT 2010 Annual report).

Strategies behind the Program Achievements

Over the years, the PMTCT Programme has improved in many areas, including coverage, service delivery and community involvement initiatives. Highlighted below are some of the key achievements:-

- Integration of PMTCT within the MNCH platform and other sexual and reproductive health programs
- Expanded and more equitable distribution and use of PMTCT services
- Capacity development and organizational improvements
- Male and community involvement in PMTCT
- Continued support of development partners

Recommendations

Although the program has grown, there remain some areas for improvement:

- Expand early infant diagnosis (EID) to all facilities providing child welfare clinics
- Reinforce strategies to ensure access to family planning services
- Strengthen messages, technical support and monitoring around infant and young child feeding
- Provide sustained technical support to private facilities to ensure the provision of PMTCT services according to national guidelines
- Develop and implement strategies to further decentralize paediatric ART

CHAPTER **1: BACKGROUND AND INTRODUCTION**

1.1 Country Context

The Kingdom of Swaziland is a landlocked country located in Southern Africa that covers a surface area of 17,000 square kilometres. According to the 2007 Population and Housing Census, the country had an estimated population of 1 018 449 with an annual population growth rate of 0.9[1]. In 2010, the population was estimated at 1,055,506. About 77% of the population live in rural areas and 23 % live in urban areas. Women of childbearing age (15-49 years) make up 26.2% of the population while all females account for 53% of the population. An estimated 4.6% of the population is 60 years of age or older. The Swazi population has a young age structure. According to the results of the Swaziland Demographic and Health Survey 2006-2007 (SDHS), about 60% of the population is below 30 years of age. Children under 15 years of age comprise 39.6% of the population. The total fertility rate is estimated at an average of 3.8 births in a woman's life, compared with 6.4 births in 1986. The country's population is evenly distributed across the four regions, Manzini; Hhohho; Lubombo and Shiselweni.

1.2 Organization of health services

The country has adopted primary health care as the platform towards universal access to health care. Health service delivery is decentralized through the regional health management teams. At community level, basic health care is provided by rural health motivators (RHMs). The formal health care system is organized in a four tier system; the clinics (type A clinic which are clinics without maternity and type B clinics which are clinics with maternity) and public health units comprise the first level. The second level includes health centres while the third level consists of regional hospitals The fourth level is the national referral hospital[2]. According to the 2010 Service Availability Mapping there are 261 health facilities in Swaziland and of these, 172 offer antenatal care (ANC) services and 154 offer child welfare services. These include Government, Mission and privately-owned facilities[3].

1.3 Health Profile

Life expectancy at birth has drastically declined in the past 10 years from 58 and 60 years among men and women respectively in 1997to 33 and 34 years in 2007 (SDHS, 2007). This dramatic decline is largely attributed to the AIDS epidemic. HIV prevalence among 15-49 year olds is estimated at 26%, (31.1% among women and 19.7% among men). [4] HIV prevalence among pregnant women increased from 3.9% in 1992 to 41% in 2010[5]. The following figure illustrates trends in the incidence and prevalence of HIV over the years[6].

[1] Swaziland Population and Housing Census, 2007, Central Statistical Office

[2] [2] National Health Sector Strategic Plan 2008-2013, Ministry of Health

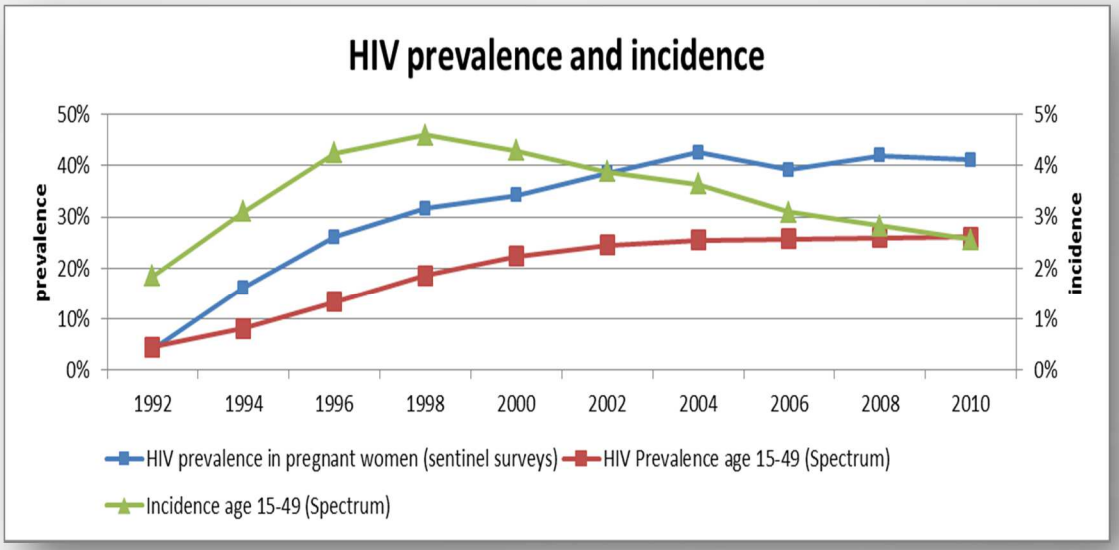
[3] Service Availability Mapping Report, 2010, Ministry of Health

[4] Swaziland Demographic and Health Survey, 2006-7, Central Statistical Office

[5] 12th Round of National HIV Sero-Surveillance among women attending Antenatal Services in Health Facilities in Swaziland, 2010

[6] Impact Assessment for ART, TB Treatment and PMTCT Using the Triangulation Approach, 2011, Ministry of Health

FIGURE 1: HIV prevalence and incidence



1.4 Sexual and Reproductive Health (SRH) Services

The country recognizes and has adopted the components of reproductive health care as derived from the 1994 International Conference on Population and Development (ICPD) Program of Action as well as the Maputo Plan of Action 2006 and endorsed by UN Agencies and Government. The program components, as outlined in the Integrated SRH Strategic Plan 2008-2015, are Safe motherhood including PMTCT, family planning, comprehensive pre and post abortion care, management of sexually transmitted infections (STIs), Promotion of adolescent SRH and the elimination of harmful practices such as gender violence. [7]

1.5 Antenatal Care (ANC) Services

The key objective for ANC is to prevent or identify and treat problems during pregnancy. ANC visits yield better health outcomes for women and their babies when sought early and continued through to delivery.[8] According to the 2010 MICS[9], 97% of pregnant women attend ANC in Swaziland. As the country heads towards virtual elimination of MTCT, recommendations are centred on early ANC bookings, preferably as early as 14 weeks and it is also recommended that women should make at least four ANC visits during pregnancy. A desk review of 2010 data from health facilities providing ANC services found that only 11% of pregnant women book as early as 14 weeks and approximately 79% make four or more visits.

About 33,000 deliveries occur every year in the country and 41% of ANC clients are HIV positive (13,563).[10] The HIV ANC Sentinel Surveillance report shows that although the HIV prevalence among pregnant women is still very high, it is stabilizing and expected to take a downward trend in the coming years (HIV Sentinel Surveillance Report 2010).

1.6 PMTCT

1.6.1 Overview

Prevention remains a priority for the national response to HIV, and PMTCT is identified as one of the key strategies in the national multi sectoral HIV framework. According to the 2009-2014 national HIV estimates and projections, the population of children living with HIV will continue to increase due to expansion of ART. However, with increased PMTCT coverage, the rate of new HIV infections among children is expected to decline during this period.[11]

In the absence of PMTCT, about 40% of babies born to women living with HIV, would themselves become infected[12]. The country however, has been implementing PMTCT since 2003. In the early years of the PMTCT program, the country focussed mainly on

[7] Integrated Sexual Reproductive Health Strategic Plan 2008-2015, Ministry of Health
[8] Guidelines for the Prevention of Mother to Child Transmission of HIV, 2010, Ministry of Health
[9] Multiple Indicator Cluster Survey (MICS), 2010, Swaziland
[10] Bottleneck Analysis Report, 2011
[11] Swaziland HIV Estimates and Projections, 2010
[12] De Cock, K. M., Fowler, M. G., Mercier, E., de Vincenzi, I., et.al. Prevention of mother-to-child HIV transmission in resource-poor countries: translating research into policy and practice. JAMA. 2010; 283:1175-1182

the 3rd prong of PMTCT, single dose Nevirapine (sdNVP) during pregnancy. In recent years, prongs 1 (primary prevention), 2 (family planning) and 4 (treatment and care) are being given more attention. The 4-pronged strategic approach is incorporated in the national PMTCT guidelines and the recently developed National Strategic Framework for elimination of new HIV infections in children and keeping mothers alive by 2015.

The PMTCT program provides a package of services that includes: HIV counseling and testing for pregnant women and their families; ARV prophylaxis to women living with HIV (long and short term) and their exposed infants; counseling and support for safe infant feeding practices; family planning counseling or referral; and referral for long-term ART for eligible newborns. In health facilities, PMTCT serves as an entry point for ART services for the entire family, thus protecting the family unit.

1.6.2 PMTCT Targets

In the National HIV Strategic Framework[13], the following targets have been set for PMTCT at impact, outcome and output level:

- % HIV infected infants born to HIV positive is reduced from 21.5% in 2007 to 5% by 2014 (IMPACT).
- % of HIV positive pregnant women receiving ARV prophylaxis to reduce mother to child transmission is increased from 65% to 80% by 2014 (OUTPUT)
- % of health facilities providing PMTCT services is increased from 79% to 95% in 2014 (OUTPUT)
- % of pregnant women tested for HIV is increased from 67% to 90% in 2014 (OUTPUT)
- % of HIV positive pregnant women receiving ARV prophylaxis to reduce mother to child transmission is increased from 65% to 80% by 2014 (OUTPUT)

1.6.3 Report Development Process

The process of compiling this report involved reviewing various PMTCT documents (local and international) to provide context for the progress of PMTCT in Swaziland. A meeting was held to allow stakeholders the opportunity to interrogate the MOH reported data. Coupled with inputs from the program, the report was compiled. Throughout the writing period, the report was regularly reviewed by the team to ensure that it presents the true picture of the program. After a number of consultative meetings and reviews the first draft was finalized. This stage was followed by dissemination to a wider group of stakeholders. Comments from this meeting were incorporated in the final report, which was then printed and distributed.

[13] [13] Swaziland National Multi Sectoral HIV and AIDS Strategic Framework, 2009 - 2014

CHAPTER 2: PMTCT PROGRAM DESCRIPTION

2.1 PMTCT approaches/models in Swaziland

Scientific progress in understanding MTCT, the availability of specific interventions to prevent MTCT and collective international experience over the last decade have provided better opportunities to reduce the number of children born with HIV worldwide. To significantly impact the paediatric HIV epidemic, the World Health Organization (WHO) and the United Nations (UN) articulated a comprehensive, four-pronged strategic framework for PMTCT (see figure 2 below) to which Swaziland subscribes.[14] The program is delivered within the broader MNCH platform.

FIGURE 2: FOUR PRONGED APPROACH OF A COMPREHENSIVE PROGRAM TO PREVENT MTCT

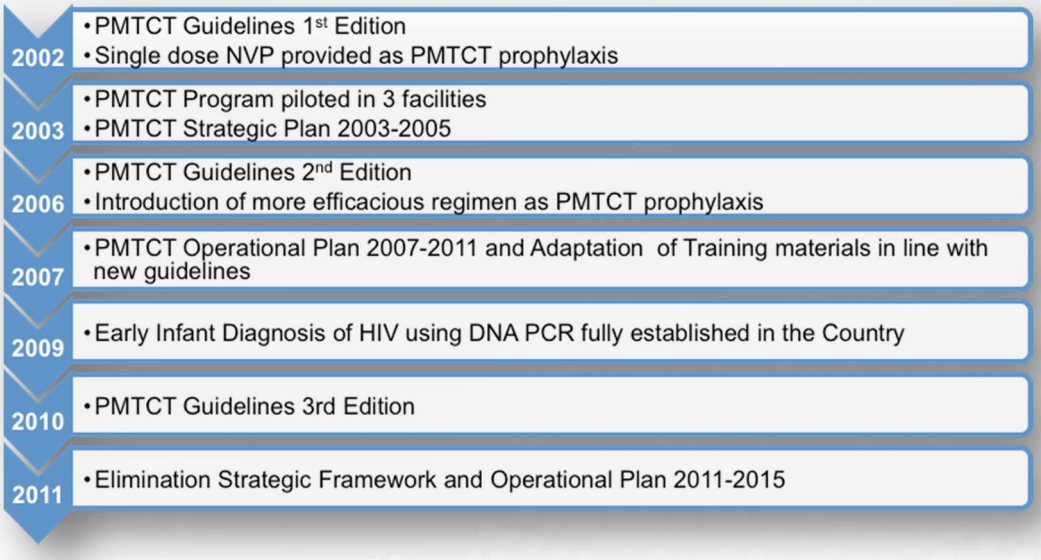
Prong 1: Prevent primary HIV infection	•Implement behavior change interventions •Improve sexually transmitted infection management •Make the blood supply safe •Address contextual factors that increase women's vulnerability to HIV (e.g., economic
Prong 2: Prevent unintended pregnancies among HIV infected women	•Provide family planning information and counseling to assist in decision-making •Integrate contraceptive services into voluntary counseling and testing •Strengthen linkages between FP & HIV services •Ensure access to safe FP options
Prong 3: Prevent transmission of HIV from infected women to their children	•Implement interventions to reduce transmission during pregnancy, labor and delivery •Implement interventions to reduce transmission through breastfeeding
Prong 4: Provide care for HIV-infected mothers and their infants and families (PMTCT-Plus)	•Ensure screening for, prophylaxis and management of opportunistic infections; Offer antiretroviral treatment; provide nutrition care and support services; Provide sexual and reproductive health counseling and support, including family planning services; Prevent and treat sexually transmitted infections; Offer symptom management and terminal care; Provide mental health and psychological support services; Offer social support

[14] Swaziland National MTCT Elimination Strategy, 2011, Ministry of Health

2.2 PMTCT Evolution

The evolution of PMTCT services over the past years is shown in Figure 3 below:

FIGURE 3: PMTCT PROGRAM EVOLUTION IN SWAZILAND



2.3 PMTCT Guidelines

The first national guidelines for PMTCT were developed in 2003. Scientific advances in this area informed the country in the development of all subsequent guidelines, including the latest released in 2010. These revisions have updated the interventions and strategies in line with international evidence and best practices. Some of the significant changes are described in more detail below.

2.3.1 ARV prophylaxis

Provision of sd-NVP to pregnant women living with HIV during the later stage of pregnancy and delivery, and to infants after delivery, cuts the risk of MTCT by more than 47% (Guay LA, HIVNET 012, 1999). Although sd-NVP is relatively cheap and easy to administer, it is less effective in reducing transmission than using combined ARVs regimens. Use of sd-NVP can also result in NVP resistance, making subsequent ART for women with regimens that include NVP or related drugs less effective As shown in Table 1 below, the National PMTCT guidelines recommend use of combined ARVs, including Zidovudine (AZT), Lamivudine (3TC) and Nevirapine (NVP). This combination is more effective than sd-NVP and reduces the risk of resistance.

TABLE 1: NATIONAL GUIDELINES ON ARV PROPHYLAXIS FOR PMTCT

	Regimen for HIV Infected Mothers			Regimen for Infants
	Ante-Partum	Intra-Partum	Post-partum	
Pregnant women with indications for ART (CD4 count<350 cells/ul or WHO stage 3/4)	AZT+3TC+NVP	AZT+3TC+NVP	AZT+3TC+NVP	Daily NVP for 6 weeks
Pregnant women who are not yet eligible for ART (CD4 count>350 cells/ul and WHO stage1/2)	AZT starting at 14weeks or as soon as feasible thereafter	AZT 600mg + 3TC 150mg + NVP 200mg (stat)	AZT/3TC x 7 days	*For breastfeeding infants* Daily NVP from birth for a minimum of 6 weeks, and until 1 week after all exposure to breast milk has ended. *Infants receiving replacement feeding only* Daily NVP from birth until 6 weeks of age
HIV infected women seen in labour who have not received ARV prophylaxis		AZT 600mg + 3TC 150mg + NVP 200mg (stat)	AZT/3TC x 7 days	*For breastfeeding infants* Daily NVP from birth for a minimum of 6 weeks, and until 1 week after all exposure to breast milk has ended. *Infants receiving replacement feeding only* Daily NVP from birth until 6 weeks of age

2.3.2 Infant feeding

Until recently, WHO guidelines recommended avoidance of all breastfeeding by mothers living with HIV when replacement feeding is acceptable, feasible, affordable, sustainable and safe or exclusive breastfeeding for the first six months of life when replacement feeding is not acceptable, feasible, affordable, sustainable and safe. To minimise the risk of HIV transmission through breastfeeding, the guidelines also recommended that breastfeeding be discontinued as soon as feasible, taking into account the woman's situation and the risks of replacement feeding.

The country adapted the guidelines to suit the local context by recommending exclusive breastfeeding for the first six months of life unless replacement feeding is acceptable, feasible, affordable, sustainable and safe and thereafter continuing breastfeeding with the addition of complementary foods, while covering the baby with extended NVP until one week after cessation of breastfeeding (PMTCT Guidelines, 2010).

CHAPTER 3: PROGRAMME OUTCOMES

3.1 Overview

Since the inception of PMTCT services, tremendous progress has been made. This is most evident in the documented MTCT rate of 2.4% at six weeks. The country is now working towards the virtual elimination of MTCT of HIV by the year 2015. The 2010 national PMTCT guidelines clearly stipulate that eligible pregnant women living with HIV should be provided with ARV prophylaxis or treatment from 14 weeks of pregnancy or as early as possible thereafter through labour and delivery and breastfeeding.

This chapter presents the PMTCT program results for the year 2011. Continued progress in implementation and expansion of PMTCT services has been documented. By the end of 2011 approximately91% of pregnant women who attended ANC were tested for HIV and got their results. A full 86% of all pregnant women living with HIV received a full course of PMTCT prophylaxis, whilst 87% of their new-borns received ARV prophylaxis for PMTCT[15]. Despite this impressive coverage, there remained some missed opportunities and gaps in the provision of the PMTCT services. Table 2 presents the core PMTCT indicators that measure programme performance.

[15] [15] HMIS Data, 2011, Ministry of Health

TABLE 2: PMTCT PROGRAMME INDICATORS

Indicators	2014	2010	2011	Source
Percentage of health facilities offering the minimum package for prevention of HIV infection in infants and young children	**95%**	88%	88%	SAM 2010 survey
Percentage of pregnant women making at least one ANC visit who have received an HIV test result and post test counseling	**90%**	81%	91%	HMIS
Percentage of pregnant women testing positive for HIV	**35%**	41%	40% HMIS	ANC Sentinel Surveillance
Percentage of HIV-positive pregnant women receiving a complete course of ARV prophylaxis to reduce the risk of mother-to-child-transmission	**80%**	86%	86%	HMIS
Number and percentage of HIV-exposed infants and children seen within 6 weeks of birth and started on cotrimoxazole prophylaxis			76%	HMIS
Proportion of children born from HIV+ mothers who are testing HIV positive at 18 months	**<5%**	13%	17%[16]	UNGASS

[16] [16] Swaziland UNGASS Report, 2010

3.2 Antenatal Care (ANC) Attendance

The strategy as outlined in the PMTCT Operational Plan 2007- 2011 states that PMTCT services are expected to be integrated into existing MNCH services (ANC, labour and delivery and postnatal care). ANC must be available to all pregnant women regardless of HIV status. All women need information on HIV prevention, including safer sex practices, diagnosis and treatment of sexually transmitted infections (STIs), and infant feeding counselling and support[17]. High ANC attendance (97% at first ANC) puts the provision of PMTCT services at an advantage.. In the absence of any complications, WHO recommends that pregnant women should make at least four focused ANC visits. It is worth noting that only 79% of women make four or more ANC visits (SDHS, 2007).

[17] [17] PMTCT Operational Plan 2007- 2011, Ministry of Health

3.2.1 Service Coverage

According to the National Strategic Framework on HIV and AIDS, the country should ensure that at least 95% of health facilities offering ANC services also provide PMTCT services. There has been an increase in the number of ANC facilities that provide PMTCT services from 79% (136/172) in 2008 to 87% (150/172) in 2011. Table 3 presents the distribution of facilities providing PMTCT by region, varying from 76% percent in Manzini to 97% in Lubombo. Table 3 shows progress in PMTCT service scale-up in all four regions indicating that PMTCT is available to most pregnant women who access ANC services and making coverage a strong feature of the country program.

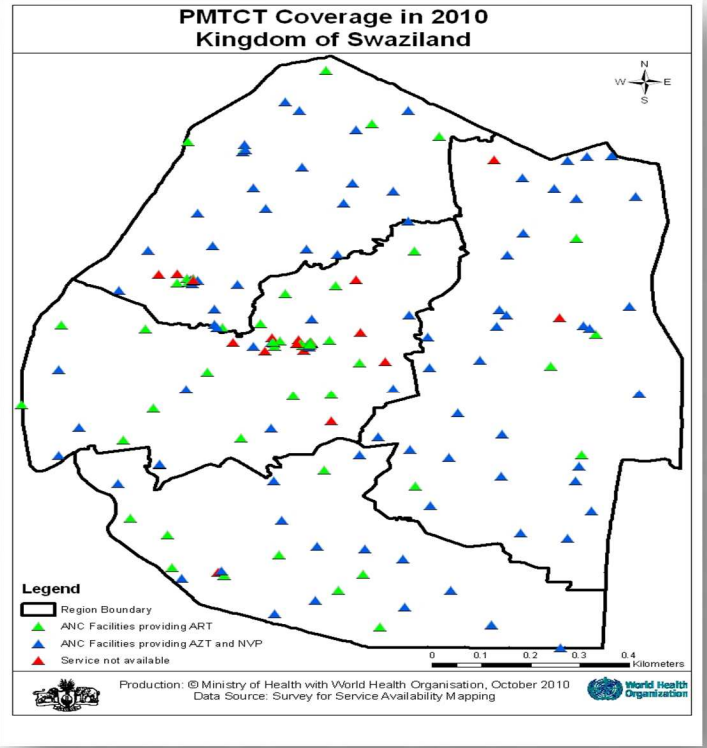
TABLE 3: NUMBER OF FACILITIES PROVIDING ANC AND PMTCT

REGION	No. OF FACILITES OFFERING ANC SERVICES	No. OF FACILITIES PROVIDING PMTCT SERVICES	
		2008	2011
HHOHHO	47	39 (83%)	42 (89%)
MANZINI	58	43 (74%)	44 (76%)
LUBOMBO	37	31 (84%	36 (97%)
SHISELWENI	30	24 (80%)	28 (93%)
TOTAL	172	137 (80%)	150 (87%)

HMIS 2011

As depicted in the figure 4, geographic coverage is very high although Manzini and to a lesser extent Hhohho and Lubombo regions still have health facilities that do not offer PMTCT

FIGURE 4: PMTCT COVERAGE MAP



3.3 Testing among pregnant women attending ANC

The 2010 PMTCT guidelines outline that HIV testing is the entry point to care and treatment services. It is fundamental that all pregnant women know their HIV status in order to take the appropriate actions. As HIV testing is part of the ANC package, there has been an increase in the proportion of women testing for HIV during pregnancy. Provider-initiated HIV counselling and testing (PITC) for all pregnant women has resulted in greater acceptability, increased opportunity to prevent MTCT, and has helped to minimize stigma. PITC is recommended for all clients seen within the context of maternal care (e.g., ANC, labour and postpartum). By the end of 2010, 82% of pregnant women were tested for HIV as a standard service within maternal care. In 2011, the PMTCT program reported that 24,659 pregnant women tested for HIV out of a total of 27,192 eligible for HIV testing (91%). Uptake of HIV testing ranges from 85% in Manzini to 96% in Lubombo as shown in table 4. Eligible pregnant women in this context refer to those with a negative or unknown HIV status. Out of 33,277 pregnancies, 6,085

already had an HIV positive status and thus did not qualify as eligible for HIV testing.

❖ Testing HIV Positive

The proportion of pregnant women testing positive for HIV was 40% in 2011 (Table 4) with a range from 38% in Shiselweni to 41% in Manzini. It is worth noting that these routine data depict a trend similar to the 2010 ANC Sentinel Surveillance Report which showed that 41% of women attending ANC are living with HIV. Using the HMIS data of those tested in 2011, 6,181 (25%) out of 24,659 tested HIV positive.

❖ Already Known HIV Positive Status

A total of 6085 (18%) of ANC clients had an already known HIV positive status on arrival at ANC. It is unknown whether pregnancy amongst these women was intended. As more women are seen at ANC with an already known HIV positive status, the program is working to integrate family planning services at all facilities providing ART and strengthening family planning counselling at all HTC sites. Studies are recommended to assess if the country needs to further strengthen prong 2 of PMTCT (prevention of unintended pregnancies among women living with HIV).

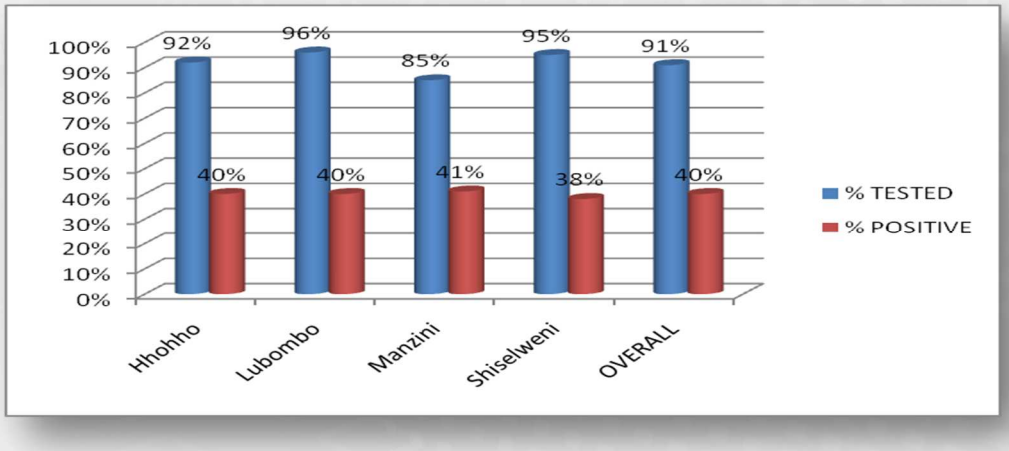
TABLE 4: HTC UPTAKE IN ANC BY REGION

Region	No. of First ANCs	No. with known HIV+ Status	No. Eligible for HTC	Total Tested	No. Newly Diagnosed HIV+	Total HIV Positive
Hhohho	10079	1805	8274	7581 (92%)	1919	3724 (40%)
Lubombo	6228	1308	4920	4703 (96%)	1076	2384 (40%)
Manzini	11193	1950	9243	7874 (85%)	2120	4070 (41%)
Shiselweni	5777	1022	4755	4501 (95%)	1066	2088 (38%)
TOTAL	33277	6085	27192	24659 (91%)	6181	12266 (40%)

HMIS 2011

As noted in table 4 above, there is a constant increase in the proportions of pregnant women tested for HIV, however, Manzini region presents with fewer women who are tested for HIV (85%), followed by Hhohho (92%). This may be attributed to a high volume of private clinics that offer ANC services that either do not test women for HIV or do not report on women tested for HIV.

FIGURE 5: HTC UPTAKE IN ANC BY REGION



❖ Sero-conversion in Pregnancy

One of the key strategies under the PMTCT program is to ensure that HIV negative pregnant women remain negative. Over the years trends have shown an increase in sero-conversion rates among women attending ANC. During the year, sero-conversion rates increased from 7% in 2010, to 12% in 2011.

3.4 ARV prophylaxis

As per the PMTCT guidelines, pregnant women living with HIV are eligible for ARVs for their own health or

for PMTCT. Women living with HIV should be initiated on ARV prophylaxis as early as 14 weeks of pregnancy if their CD4 count is above 350. Those with CD4 less than 350 or who are assessed at WHO clinical stage 3 or 4 should be initiated on ART as early as possible. Over the years the country has experienced a transition from Single dose Nevirapine (SD-NVP) to more efficacious regimens including ART for their own health. Considerable effort has been invested in training health workers about the use of more efficacious regimens. Table 5 below presents the number of pregnant women living with HIV who received a course of ARV prophylaxis for PMTCT disaggregated by regimen. As shown, 10590 received ARVs for PMTCT: 227 intra-partum dose (AZT+ SD-NVP +3TC), 6659 dual therapy, 3434 ART. In total 86% were given ARVs for PMTCT or for their own health. This shows an improvement in PMTCT coverage from 60% to 86%.

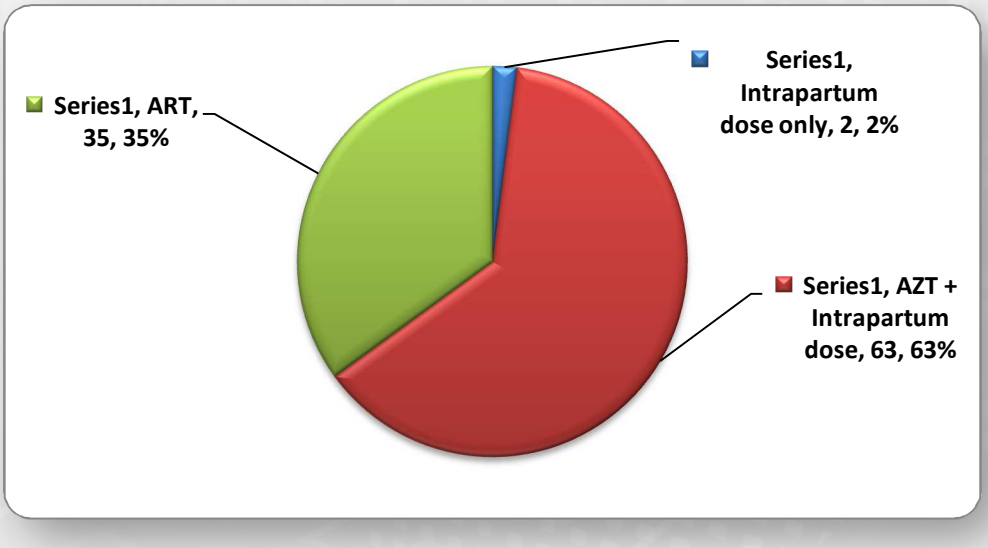
TABLE 5: NUMBER OF HIV INFECTED WOMEN WHO RECEIVED ARV PROPHYLAXIS 2011

Region	Total HIV+	Already on ART	ARV Prophylaxis		Newly on ART	Total ARVs	
			Intra-partum dose	Combination AZT		Number	%
Hhohho	3724	755	29	1966	364	3114	84%
Lubombo	2384	480	19	1438	154	2091	88%
Manzini	4070	700	129	2236	459	3524	87%
Shiselweni	2088	467	50	1019	325	1861	89%
Overall	**12266**	**2402**	**227**	**6659**	**1302**	**10590**	**86%**

HMIS 2011

Figure 6 below shows the breakdown in ARV regimens taken for PMTCT during the year. According to the national guidelines, all women should be receiving more efficacious regimens. Table 5 shows that 227 women were given the intra-partum dose only (AZT+ SD-NVP +3TC). These are the pregnant women who present in labour and delivery with an unknown HIV status. There was an increase in the number of women eligible for ART who were initiated on ART from 30% in 2010 to 35%.

FIGURE 6: PROPORTION OF PREGNANT WOMEN BY ARV REGIMEN



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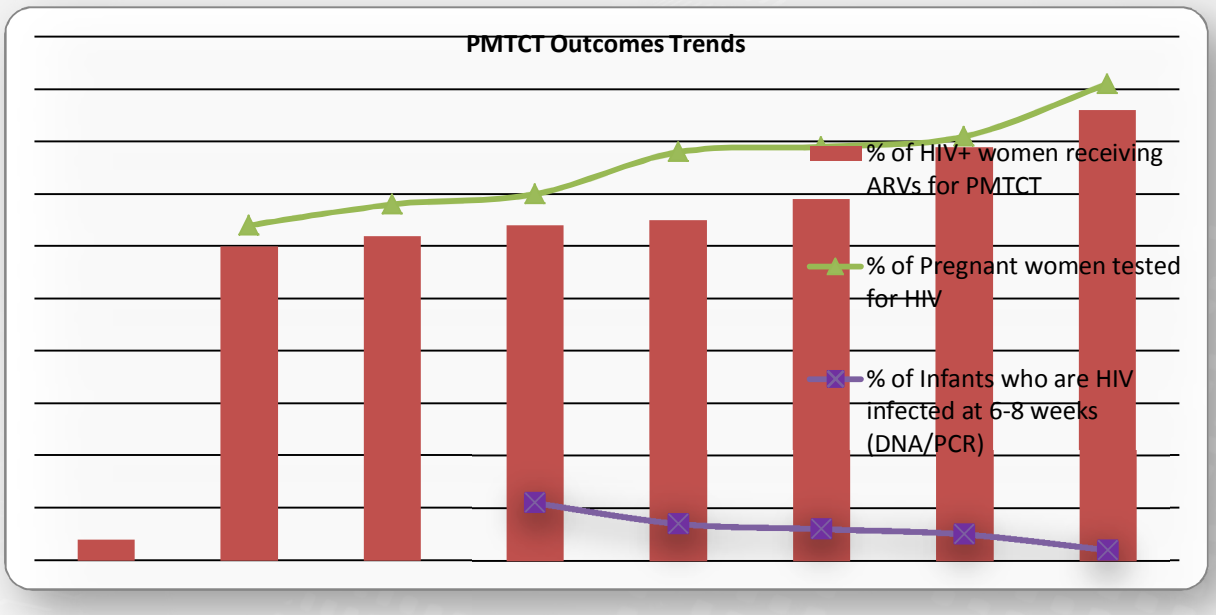
❖ **PMTCT Outcomes**

Since inception the PMTCT program has seen an increase in ARV uptake among pregnant women from 4% in 2004 to 86% by end of 2011. The consistent increase in proportion of HIV positive pregnant women receiving ARVs for PMTCT has resulted in the reduction of infants testing HIV positive at six to eight weeks as shown in figure 7 below.

FIGURE 7: PMTCT OUTCOMES



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3.5 CD4 Uptake

CD4 test uptake among pregnant women has also improved. By end of 2010, 73% of HIV infected pregnant women were assessed with a CD4 count for their ART eligibility. In 2011, 66% of infected women had their CD4 count taken and 64% received their results. The reduction in the CD4 uptake in 2011 was due to stock outs of CD4 reagents mainly in the third quarter of 2011 and may have hindered access to treatment for eligible women.

TABLE 6: NUMBER OF HIV INFECTED PREGNANT WOMEN WHO HAD THEIR CD 4 TESTED

Region	Total HIV+	CD4 Tested	CD4 Result Received
Hhohho	3724	2264 (61%)	1455 (64%)
Lubombo	2384	1477 (62%)	923 (62%)
Manzini	4070	2856 (70%)	1685 (59%)
Shiselweni	2088	1541 (74%)	1172 (76%)
TOTAL	**12266**	**8138 (66%)**	**5235 (64%)**

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3.6 HIV Testing in Labour and Delivery

Despite the increase in number of women tested for HIV at ANC, there are still women who come to labour and delivery with unknown HIV status. These women either refused or were not offered testing in ANC, or did not attend ANC at all. The proportion of women arriving at labour and delivery with unknown HIV status has been dropping over the years. In 2010, 3% of women came into labour and delivery with an unknown HIV status, in 2011, 2% of women came to labour and delivery with an unknown HIV status, of

which 69% opted to test for HIV. It is worth noting that 76% of those tested in labour and delivery were found to be HIV positive. This poses an ongoing challenge for the program as these women missed out on the opportunity to prevent transmission during pregnancy.

3.7 Child Welfare

3.7.1 Nevirapine (NVP) Prophylaxis

According to HMIS data, 9912 out of 11258 HIV exposed infants (88%) were seen in child welfare clinics at six weeks (Spectrum Projections, 2012). Of all exposed infants seen, 95% were on NVP prophylaxis.

TABLE 7: NUMBER OF EXPOSED INFANTS RECEIVED A COURSE OF ARV PROPHYLAXIS

Region	Expected Exposed Infants (Spectrum Projections)	Exposed Infants Seen at 6wks	Infants on NVP Prophylaxis (All ages)
Hhohho	3418	3043	3466 (101%)
Lubombo	2188	2083	2076 (95%)
Manzini	3736	3272	3465 (93%)
Shiselweni	1916	1514	1727 (90%)
TOTAL	11258	9912	10734 (95%)

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3.7.2 Cotrimoxazole prophylaxis

Studies have shown that Cotrimoxazole (CTX) prophylaxis plays an important role in controlling infections among HIV positive patients and in HIV exposed infants. It is estimated that CTX can reduce mortality by 33% in HIV exposed children. According to the national PMTCT and paediatric ART guidelines, all HIV exposed infants should be initiated on CTX from 6 weeks of birth until their HIV status is determined. If a child is confirmed to be HIV positive, continuation on CTX is recommended. As shown in Table 8, a total of 79% infants were initiated on CTX prophylaxis at 6-8 weeks.

TABLE 8: INITIATION OF COTRIMOXAZOLE PREVENTIVE THERAPY (CPT)

Region	Expected Exposed Infants (Spectrum Projections)	Exposed Infants identified at 6wks	Expose Infants Initiated on CTX
Hhohho	3418	3043	2761 (81%)
Lubombo	2188	2083	1882 (86%)
Manzini	3736	3272	2767 (74%)
Shiselweni	1916	1514	1434 (75%)
TOTAL	11258	9912	8844 (79%)

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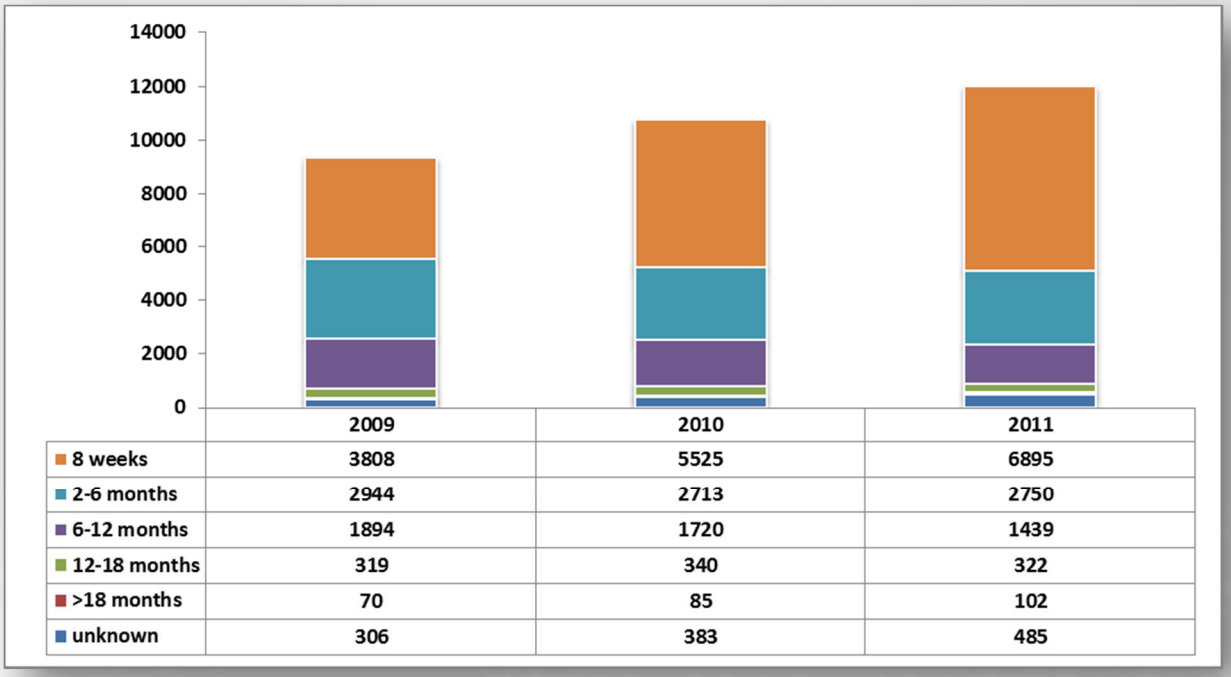
3.4 HIV Testing and Counselling amongst Infants

3.4.1 DNA PCR Testing

Guidelines stipulate that Infants should be tested through DNA-PCR from as early as two months of birth to facilitate early interventions and reduce infant mortality. Since its launch in 2007, the early infant diagnosis (EID) program has achieved a significant increase in coverage. By the end of 2011, 82% (127) of 154 health facilities offering child-welfare services offered DBS for DNA PCR. The figure below shows the constant increase in the number of children testing for HIV through DNA PCR, from 9,341 in 2009 to 11,993 in 2011 (HMIS). Figures 8, 9 and Table 9 also show an improvement in the timing of DNA PCR, where it is noted that 58% infants test within the recommended two months after birth. This represents an increase from 49% in 2010. It is noted that the majority (80%) of the infants test between 6 weeks to 6 months. The remaining three percent account for infants that either test beyond six months or their ages were not stipulated.

FIGURE 8: CHILDREN TESTED THROUGH DNA PCR 2009-2011



	2009	2010	2011
8 weeks	3808	5525	6895
2-6 months	2944	2713	2750
6-12 months	1894	1720	1439
12-18 months	319	340	322
>18 months	70	85	102
unknown	306	383	485

HMIS 2011

TABLE 9: HIV TESTING FOR HIV- EXPOSED INFANTS

	% Positive in each Quarter / Year											
Age of Infant	Q1-2009	Q2-2009	Q3-2009	Q4-2009	Q1-2010	Q2-2010	Q3-2010	Q4-2010	Q1-2011	Q2-2011	Q3-2011	Q4-2011
<= 8 wks	6%	6%	8%	6%	6%	6%	5%	4%	3%	2%	3%	2%
8 wks - 12 mo	11%	13%	12%	15%	12%	13%	14%	10%	12%	9%	10%	9%
> 12mo	30%	27%	28%	21%	39%	25%	29%	30%	29%	23%	24%	35%

HMIS 2011

FIGURE 9: NUMBER OF INFANTS RECEIVING DBS TEST BY AGE OF INFANT

Samples by Quarter and Year - Number

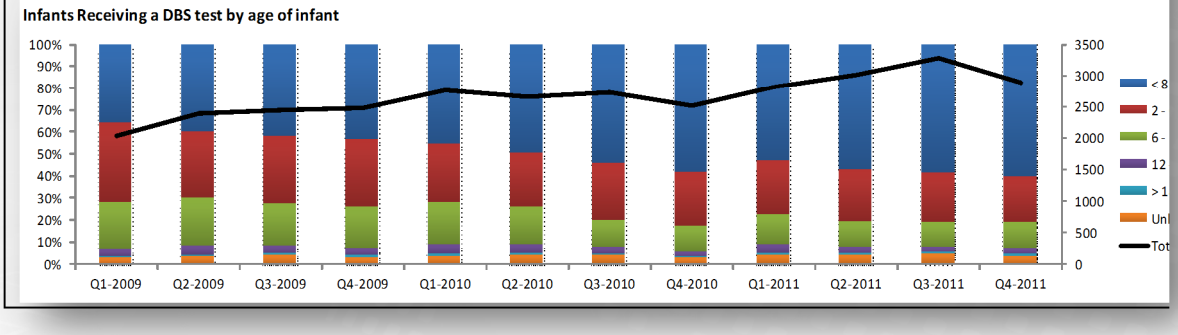
Number of Samples Per Age Category

Infant Age	Q1-2009	Q2-2009	Q3-2009	Q4-2009	Q1-2010	Q2-2010	Q3-2010	Q4-2010	Q1-2011	Q2-2011	Q3-2011	Q4-2011
< 8 wks	734	963	1027	1084	1260	1323	1480	1462	1496	1721	1927	1751
2 - 6 mo	728	715	745	756	737	648	716	612	697	714	735	604
6 - 12 mo	437	529	468	460	531	461	329	299	382	347	376	334
12 - 18 mo	67	92	80	80	119	94	77	50	98	80	66	78
> 18 mo	7	16	22	25	23	25	23	14	28	22	24	28
Unknown	60	79	96	71	99	105	105	74	114	124	150	97
TOTAL	2033	2394	2438	2476	2769	2656	2730	2511	2815	3008	3278	2892

Samples by Quarter and Year - Percentage

Proportion of Samples Per Age Category

Infant Age	Q1-2009	Q2-2009	Q3-2009	Q4-2009	Q1-2010	Q2-2010	Q3-2010	Q4-2010	Q1-2011	Q2-2011	Q3-2011	Q4-2011
< 8 wks	36%	40%	42%	44%	46%	50%	54%	58%	53%	57%	59%	61%
2 - 6 mo	36%	30%	31%	31%	27%	24%	26%	24%	25%	24%	22%	21%
6 - 12 mo	21%	22%	19%	19%	19%	17%	12%	12%	14%	12%	11%	12%
12 - 18 mo	3%	4%	3%	3%	4%	4%	3%	2%	3%	3%	2%	3%
> 18 mo	0%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%	1%
Unknown	3%	3%	4%	3%	4%	4%	4%	3%	4%	4%	5%	3%
TOTAL	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%



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CHAPTER 4: PROGRAM ACHIEVEMENTS

4.1 Integration of PMTCT within MNCH and other SRH programmes

Integration means that a combination of different services or programmes is offered together to ensure expected outcomes. This may involve referral of an individual from one service to another or provision of all requisite services at the same time and place. PMTCT services were originally established as stand-alone vertical programmes, lacking sufficient integration with MNCH programmes, which share the same goals and provide the basic platform and infrastructure for effective and sustainable delivery of HIV services. The realisation of the integration of PMTCT to MNCH platform facilitated the access of PMTCT services to a majority of pregnant women.

In 2004 PMTCT was jointly implemented by the Swaziland National AIDS Programme (SNAP) and the SRH unit. Seeing the confusion that this arrangement brought to the implementation level, the MoH officially moved PMTCT from SNAP to SRH. Housing PMTCT in the SRH Unit facilitated integration of HIV services within the MNCH platform. Integration of PMTCT services in MNCH clinics has given more pregnant women the opportunity to be tested for HIV, and for those testing positive to receive appropriate PMTCT and other HIV services.

There are several important benefits to integration. Integration has contributed to increased awareness of HIV and PMTCT among staff and clients. The integration of HIV and MNCH services reduces stigma because clients are attended to by one service provider. Integration has also reduced the number of clients lost in the referral chain, especially where services are offered in one location. PITC, offered to all pregnant women at the first visit to a health facility, has minimised missed opportunities in PMTCT. This has enhanced the protection of infants from HIV. The MNCH integration of PMTCT has provided excellent coverage and important entry points (ANC, maternity, well-child clinic) for HIV-positive mothers and HIV-exposed or -infected children, as well as other family members such as siblings and male partners. This has been made possible by health care workers who have embraced PMTCT services as part of routine services

Introduction of ART at facilities providing ANC began in 2010 with the Public Health Units (PHUs). Though this initiative started at a slow pace, 2012 has seen a commitment from partners to ensure that all PHUs initiate ART.

In 2011 standard operating procedures were developed for the integration of family planning into ART services. To help ensure that the elimination goal of reducing unintended pregnancy among women living with HIV is met, it is planned that family planning services will be made available in all ART sites.

The ongoing SRH/HIV Integration and Linkages project is meant to strengthen integrated service provision in a comprehensive manner. Within this project, five facilities have been identified as centres of excellence. These facilities are supported to identify and replicate at a greater number of facilities for the benefit of patients.

4.2 Distribution of PMTCT Sites and Use of Services

Though inequities are observed in access to PMTCT services, based on location, income and other socioeconomic factors in developing countries, the progress that has been seen in ensuring equitable distribution of health services in the country has made it possible to ensure that ANC services are provided, this includes PMTCT. In areas where there is no clinic, mobile clinics offer services. Though this has been affected negatively by the economic crisis, means are put in place by regions to provide services to hard to reach areas. It is planned that all government and mission facilities should provide PMTCT services by end of 2012. Under the Elimination Strategic Plan, effort will also be made to improve PMTCT service availability in private facilities.

4.3 Capacity Building and Organizational changes

Crucial to the successful scale-up of PMTCT has been the training of service providers using the National PMTCT Training Curriculum. Trainings were conducted to fulfil program expansion requirements as part of the roll out of PMTCT services. To expedite the training, four regional training teams were established. These regional-level trainers were tasked with the responsibility of cascading PMTCT training to cover all facilities where ANC services are provided. The regional trainers serve as a direct and easy support to facilities. The regional structures and training approach were also used in the orientation of the health care workers to the revised PMTCT guidelines.

4.4 Male and community involvement in PMTCT

Low male and community involvement in PMTCT contributes to continued transmission, high HIV sero-conversion rates, limited uptake of services and poor adherence to ARV regimens among pregnant women. Though the program has covered some ground in this area, there is still need to intensify efforts to involve men and the community at large in PMTCT. This has been done to a limited extent through community mobilizations, male dialogues, and use of partner invitation letters.

4.5 Quality Assurance/Improvement

Given the dynamic nature of PMTCT, with frequently emerging new evidence, evolving programme experience and significant advances in the development of drugs and technologies, guidelines are expected to be revised approximately every two to three years. Since program inception, the country has been able to review and revise its PMTCT guidelines in accordance with new evidence and learning. The newly revised guidelines provide for highly effective regimens to significantly reduce the risk of MTCT and allow for safer infant-feeding strategies. If implemented in full, these guidelines can help reduce the risk of MTCT to less than 5% in breastfeeding populations, and even lower in non-breastfeeding settings, and can dramatically improve maternal and child health and survival. Already, the country has seen a reduction in the proportion of infants infected at 6 – 8 weeks. Working with the Quality Assurance Unit of the MoH, facilities continue to be supported to improve the quality of the service they provide.

4.6 Supportive Supervision

The programme with support from partners conducts joint visits with the regional clinic supervisors to provide supportive supervision to PMTCT providers at all health facilities. It is intended that health facilities receive supervision in PMTCT and care and treatment (C&T) on a regular basis. The regional approach allows the programme to provide technical assistance to the regional management teams to build their own capacity and take ownership of performing the necessary supervision to health facilities.

4.7 Mentoring PMTCT Facilities

Through support from partners, regions have put in place mentoring teams that visit health facilities, ideally once each month. The programme has utilised this structure to ensure that regional mentors enhance the skills of health care providers in PMTCT service provision. Mentors prioritize facilities to visit according to need, such as those with low performance in the previous quarter, those with newly trained staff, and those that have recently established PMTCT services.

4.8 Sharing of Knowledge and Experience

Health care providers working at the facility level are in the best position to make positive changes in service provision by sharing what they experience in their day-to-day work. Having realized the importance of experience sharing for service providers, the programme has supported and encouraged regions to have quarterly service providers' meetings. These meetings provide a platform for service providers to discuss problems and experiences, share site-specific quarterly data, update their PMTCT knowledge and develop plans for improving PMTCT services. This too has contributed to maintaining high quality of care.

4.9 Partner Support

The program acknowledges the technical and financial contributions that have been made by partners in PMTCT. The achievements were made possible by the close working relationship the program has with its partners. Partners have facilitated the dissemination of information at all levels (e.g., from community level to service providers). Partners have helped to ensure that PMTCT commodities - which range from test kits to equipment and ARVs - are available in facilities.

4.10 PMTCT Impact Evaluation

Since the inception of the PMTCT program in 2003, significant progress has been attained. However, the impact of the program remains unknown. In 2011, the country embarked on a PMTCT impact evaluation. The aim of the evaluation is to estimate the rate of early MTCT among all HIV-exposed infants aged 6-8 weeks. It is timely for the country to conduct a structured evaluation to assess the current impact of PMTCT interventions on actual paediatric HIV infections averted, and to provide insights on how to further reduce transmission. At the same time, it is important to establish and strengthen systems that can support periodic PMTCT program evaluations and impact assessments. The evaluation currently underway will help the country to measure its progress towards virtual elimination of MTCT of HIV.

4.11 Data Use

Over the years of the programme, use of PMTCT data has been expanded and improved. Through the MoH M&E Unit, key PMTCT service indicators are reported on a monthly basis to track coverage, uptake and progress. The robust EID programme that was put in place has enhanced evidence based decision making and policy guidance. For example data is used to

forecast drug needs and laboratory supply needs for the program.

4.12 Point of care CD4 Testing

Point of care testing allows for CD4 counts to be done onsite, which significantly reduces turnaround time. This gives greater opportunity for early ART initiation for eligible mothers. Though this service will not cover all facilities, it aims to target the high volume facilities thus reaching the majority of pregnant women.

CHAPTER 5: RECOMMENDATIONS AND CONCLUSION

Based on the data and findings reported above, the following recommendations are offered to the PMTCT program in collaboration with other MOH units and partners. It is hoped that implementation of these recommendations will build on the impressive gains made to date and help to ensure achievement of the elimination goals by 2015.

- **Challenge:** Women sero-converting during pregnancy and the breast feeding period. This is detrimental for the mother and places the baby at an increased risk of acquiring HIV infection.

  Recommendation: Strengthen prevention initiatives to keep the mother HIV negative. For example to test all know HIV negative mothers and those of unknown HIV status at children age 6 – 8 weeks and also periodic HIV testing for mothers as long as they are breast feeding.

- **Challenge:** Late initiation of ANC. According to the bottleneck Assessment, only 11% of pregnant women come to ANC as early as 14 weeks.

  Recommendation: Aggressive promotion of ANC services and the benefits for early booking to women, their partners and communities.

- **Challenge:** Not all child welfare clinics offer EID.

  Recommendation: EID should be expanded to all facilities providing Child welfare Clinics.

- **Challenge:** A certain proportion of women deliver at home

  Recommendation: The establishment of waiting shelters for mothers could increase their access to facility delivery. Health workers in ANC should conduct birth preparedness planning with women and assist them in finding ways to overcome their personal obstacles to deliver in a facility. Community mobilization around the importance of facility delivery and involvement of men in this area could also have an impact. Adequate staffing levels and skill mix in clinics with maternity wings will also be required to reduce the proportion of home deliveries.

- **Challenge:** Inadequate numbers of eligible children are ART.

  Recommendation: Strategies are needed to bring further decentralize paediatric ART**.**

- **Challenge:** Periodic stock outs of drugs and commodities

  Recommendation: Strengthen the commodity management system to reduce stock-outs.

- **Challenge:** Limited provision and uptake of family planning services among women living with HIV:

  Recommendation: Develop strategies to ensure that women living with HIV have access to the information and services needed to prevented unintended pregnancies.

- **Challenge:** Minimal provision of PMTCT services and data reporting in private facilities

  Recommendation: Provision of sustained technical support to private facilities to ensure that they offer PMTCT services according to national guidelines. Reporting on services provided should be a condition that for the renewal of the clinicians' licence.

- **Challenge:** Postnatal HIV transmission through breast feeding

  Recommendation: Strengthen messages around infant and young child feeding, technical support and mentoring to service providers and to put all eligible pregnant women on ART.

CONCLUSION

The PMTCT programme has facilitated rapid scale-up of services and performed well in terms of coverage and access. The number of facilities offering PMTCT services increased from three facilities in 2003 to 150 (88%) in 2011. Between 2010 and 2011, the proportion of pregnant women receiving an HIV test increased

from 82% to 91 per cent. Between 2004 and 2011, the proportion of eligible pregnant women that receive ARVs for PMTCT increased from 4% in 2004 to 86 per cent. Factors in this success include consistency in Government policies and guidelines; integration of PMTCT services into existing MNCH services at the facility level; partner support; and, evidence-based decision making.

The strategies that have been adopted to improve the quality of data are also bearing fruit. A remaining challenge is to understand and resolve the low figures derived from spectrum projections when compared to the country data. This is especially evident in the infant ARV prophylaxis, where the denominators derived from estimates are less than the numerators. It is in this regard that infants who were given ARV prophylaxis are estimated at 101%.

In the development of the current report, an important window of opportunity has been opened to work together towards the improvement of data quality and use. It is critical that the forum which helped to gather these data, provide analysis, and identify gaps be supported to continue with the aim of more accurate data, better dissemination and timely program response.