Kingdom of Swaziland

Ministry of Health

ANNUAL HIV PROGRAMS REPORT 2013

HTC, PMTCT, and ART

Acknowledgements

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List of Acronyms

ANC	-	Antenatal Care
ANCSS	-	Antenatal Care Sentinel Surveillance
ART	-	Antiretroviral Treatment
BCC	-	Behaviour Change Communication
BSS	-	Behavioural Surveillance survey
CSO	-	Central Statistics Office
DHS	-	Demographic Health Survey
EU	-	European Union
HSS	-	HIV Sero-surveillance Survey
HTC	-	HIV Testing and Counselling
IEC	-	Information Education & Communication
MCP	-	Multiple Concurrent Partnerships
MDGs	-	Millennium Development Goals
MoH	-	Ministry of Health
MoT	-	Modes of Transmission
MTCT	-	Mother to Child Transmission
NAP	-	National Action Plan
NERCHA	-	National Emergency Response Council on HIV and AIDS
NGO	-	Non-Governmental Organization
NR	-	Non-Reactive
NRL	-	National Reference Laboratory
NSF	-	National Strategic Framework
PEP	-	Post Exposure Prophylaxis
PLHIV	-	People (person) Living with HIV
PMTCT	-	Prevention of Mother to Child Transmission
QA	-	Quality Assurance
RHMs	-	Rural Health Motivators
RPR	-	Rapid Plasma Reagin (syphilis screening test)

SBCC	-	Swaziland Behaviour Change Communication
SADC	-	Southern Africa Development Community
SDHS	-	Swaziland Demographic Health Survey
SEC	-	Scientific Ethics Committee
SNAP	-	Swaziland National AIDS Program
STI	-	Sexually transmitted infection
TFR	-	Total Fertility Rate
UNAIDS	-	Joined United Nations Program on HIV & AIDS
UNFPA	-	United Nations Population Fund
UNICEF	-	United Nations Children's Fund
VCT	-	Voluntary counselling and testing
WHO	-	World Health Organization

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Executive Summary

HIV and AIDS remains a public health and socio-economic development challenge for Swaziland. And closely related to this challenge is the issue of adherence to Anti-retroviral treatment for HIV positive individuals including pregnant mothers (PMTCT), and the HIV & TB co-infection. Swaziland National AIDS Program (SNAP) was established within the MoH in 1987 to respond to the HIV epidemic whose core mandate is to coordinate health sector based interventions as they account for more than 70% of the total HIV response. This report is intended to provide progress of the national AIDS program thematic areas, including the coverage of all other HIV related key areas such as ART, HTC, PMTCT and HIV & TB co-infection.

Reporting has been categorised into two areas, which are Prevention and Treatment, Care and Support. The thematic areas under prevention are: Social and behaviour change communication**,** Male circumcision**,** Condom promotion**,** Prevention of mother to child transmission**,** Workplace programme**,** Post exposure prophylaxis**,** Blood safety**,** Sexually Transmitted Infections (STIs)**,** and Key populations. The treatment, care and support programme has the following thematic areas; HIV Testing and Counselling (including provider initiated HTC), Pre-ART and Anti-retroviral therapy (ART), Tuberculosis and HIV co-infection (TB/HIV), Community Based Care and Support (CBCS), Psychological care for health workers.

Priority strategies and expected results have been highlighted as per each program area, and according to the targets of the year ending 2013. Based on these, highlights of some key achievements of the program can be listed, and these include:

- An increase in the rate of HIV testing over the years among the general population, with 308,480 tests conducted in 2013 alone.
- A 37.7% (347,966) in HTC services in 2013, from 252,678 HIV tests performed in 2012 and almost 50,000 more tests than the year's target of just over 300,000 HIV tests. Additionally, an overall high rate of HIV test results collection, with 335,313 (99.6%) of HIV antibody test results collected.
- PMTCT facility coverage in the country has increased over the years, from initially being implemented in only 3 health facilities in 2003, to an additional 11 and 12 facilities providing ANC and PMTCT services respectively, in 2013. Currently 162 (89%) of the 183 ANC facilities are now providing PMTCT services.
- A notable decreasing trend in HIV-positive DNA PCR tests for HIV-exposed infants. The proportion of HIV-positive DNA PCR tests decreased from 10.4% in 2009 to 4.4% in 2013, a decrease of 6%.
- There has been a steady increase in number of health facilities providing ART services during 2013; from 87,534 in 2012 to 101,730 in 2013.
- HTC uptake by TB patients has increase from 86% in 2010 to 96% in 2013. 74% of TB patients were HIV positive and 75% enrolled into ART.Implementation of ART, HTC and PMTCT program targets has not been without hurdles and challenges, and these are highlighted in detail in the "Program achievements and challenges" section of this report.

Given these hurdles and challenges, some recommendations for future HIV program improvement have been made and some highlights are:

- Implement SBCC interventions that target the key populations.
- Support provider initiated testing, and conduct research on the possible increase
- Implementation and roll-out of the revised PMTCT guidelines recommending ART for life for all HIV positive pregnant and lactating women
- Intensifying early provision of ART for HIV positive infants
- Engagement and involvement of private for profit health facilities in PMTCT and ensure they report services provided

CHAPTER 1: HIV IN CONTEXT IN SWAZILAND

HIV and AIDS remains a public health and socio-economic development challenge for Swaziland. Swaziland has a generalised HIV epidemic, with a high HIV prevalence rate of 26% among 15-49 year olds (Swaziland Demographic and Health Survey /SDHS 2006/07 and 31% among adults aged 18-49 (Swaziland Incidence Measurement Survey /SHIMS 2011). New HIV infections are declining and the HIV incidence rate among adults aged 18-49 is estimated as 2.38%, comprising of 1.7% and 3.1% amongst men and women, respectively– (SHIMS 2011).

According to the preliminary report of the Swaziland HIV Estimates and Projections 2013), the annual incidence rate among 15-49 years is expected to decline from 2.9% in 2011 to 2.06% in 2013, and new infections among children at 18 months of age are estimated to be 11% of all exposed children in 2012, down from 19.6% in 2009. At ages 6-8 weeks, the country has virtually eliminated mother to child infections. According to the SHIMS (2011) the peak incidence of HIV infections is borne by women aged 18-19, 20-24 and 30-34 and men aged 30-34. Both SHIMS and Estimates and Projections models support the evidence of generally declining HIV infections.

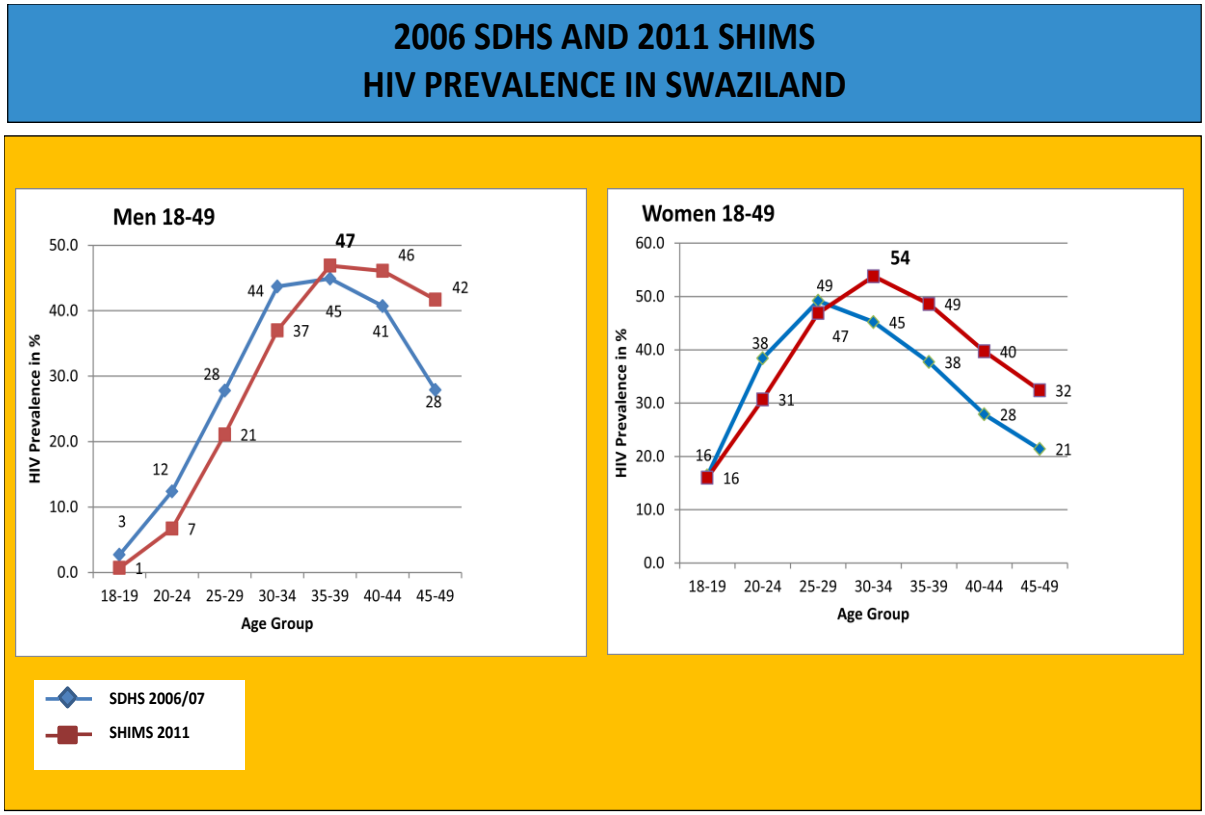
The epidemic is characterized by a gender disparity, with prevalence being higher among women (38%) compared to men (23%). Analysis shows that the HIV epidemic is stabilizing and shifting to older populations. Data from the SHIMS (2011) reveals substantial prevalence reductions among the18-24 year age group, comprised of a 54% and 20% reduction among males and females, respectively. Peak prevalence has shifted to older persons: to women aged 30-34 from those aged 25-29 in 2006/7; similarly for men, to those aged 35-39 from 30-34 year olds' in 2006/7. Reported HIV prevalence among female sex workers is very high (70%). Prevalence is slightly lower among men who have sex with other men (17%) than that of the general male population aged 15-49 (19%- SDHS).

Heterosexual contact is the main mode of HIV transmission in Swaziland (Modes of Transmission Study, 2009) and one in three couples (28%) is discordant (SHIMS, 2011). Sixty two percent of new infections occur among women, and almost two thirds (65%) of 100 new infections are among persons aged 25 years and older. Key populations - MSM, SW, and IDU - contribute between 7% and 11% of new infections in Swaziland.

The HIV incidence rate among adults 18-49 years is estimated at 2.38%, fewer than two percent (1.7%) among men and 3.1% for women (Swaziland Incidence Measurement Survey Study-SHIMS 2011). There is one incidence peak for men, at ages 30-34 and three peaks for women in ages 18-19, 20-24 and 35-39. The Ministry of Health programme data shows that only 2% of children born to HIV positive mother are infected with HIV at ages 6-8 weeks (PMTC Impact evaluation study 2012). This is a promising trend towards the elimination of MTCT, even though there are higher (11% in 2012) estimated new infections among children at 18 months of age.

The national HIV prevalence rate among those aged 15-49 is 26% (SDHS 2006/07). The SHIMS (2011) found HIV prevalence rate among adults aged 18-49 to be 31% ; and this figure matches the 2006-/07 Swaziland Demographic Health Survey findings for the same age group. This supports that the HIV epidemic is stabilizing. The epidemic is characterized by a gender bias with prevalence being higher in women (38.8%), compared to their male counterpart

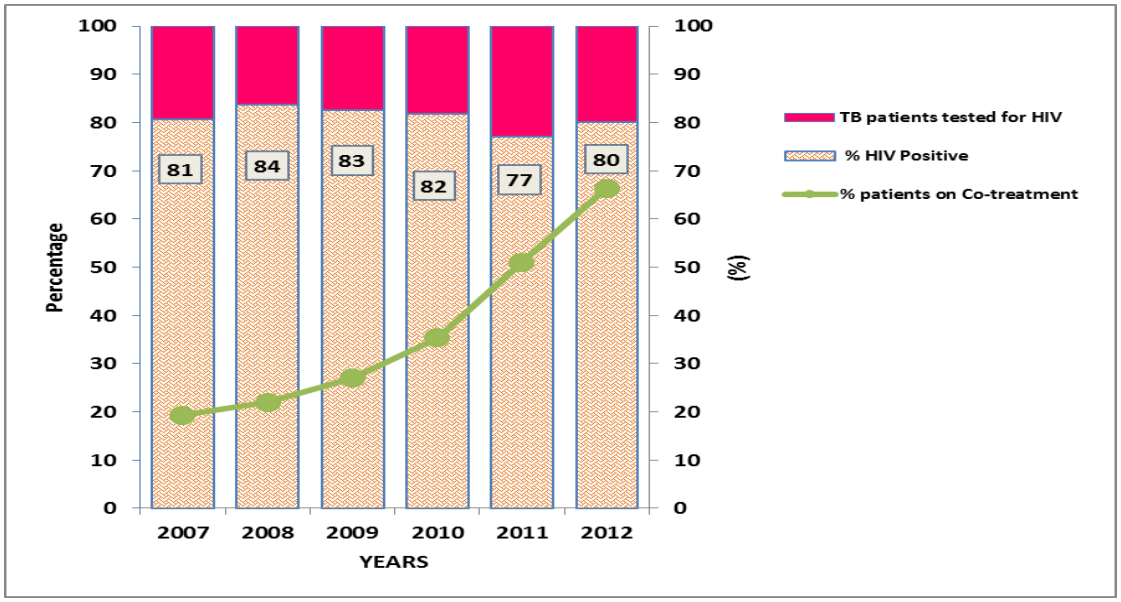
Figure 1: HIV Prevalence, SDHS and SHIMS



The country faces dual epidemics of HIV and tuberculosis (TB), where the risk of acquiring TB is between 20 and 37 times greater among people living with HIV. Over 80% of TB patients are also HIV positive, and TB is responsible for more than a quarter of deaths among people living with HIV. There are 1,380 per 100,000 incident TB cases occurring annually in Swaziland (World Health Organisation Global TB report 2012). Swaziland is making strides in responding to the co-epidemics, with 66% TB/HIV co-infected patients receiving treatment for both in 2012, an improvement from 35% in 2010. There has been remarkable improvement in the TB treatment success rate from 68% in 2009 to 73% in 2012, although this is still below the WHO target of 85%.

All TB centres offer HIV testing and counselling. On average, over 90% of TB patients are tested for HIV and the results show high co-infection rates, ranging in the 80% margins, as shown in figure 4 below. A smaller (66%) number of those co-infected with both TB and HIV receive treatment for both. It is encouraging that the treatment rate is increasing. The high TB/HIV co-infection rates emphasize the need for integration of TB and HIV/AIDS services in the country.

Figure 2: HIV Prevalence among TB patients



Source: Annual National TB Programme Reports (2007-2012)

HIV service delivery is guided by the following principles:

- Result-Based Management of the HIV Response: The planning and development of HIV and AIDS interventions at all levels will focus on achieving stated measurable or describable results or change.
- Accessibility of services: Services will be made accessible to all people from the different communities in the country in line with the international drive for universal access to HIV and AIDS prevention, treatment and care initiative.
- Quality of services: Capacity development of institutions and service providers will be undertaken to ensure delivery of quality services.
- Integrated approach in the delivery of services: To ensure sustainability of delivery of HIV services, efforts will be put in place to ensure that these services form part of the normative health service delivery and minimize the delivery of HIV services in a vertical manner.
- Three Ones' Principle: Stakeholders will harmonize their operations with the three one principles i.e. having one national (a) coordination authority, (b) strategic framework, and (c) monitoring and evaluation framework.
- Community engagement and participation in, and ownership of HIV and AIDS interventions. Communities will be supported, empowered and their systems strengthened to ensure that interventions at community level are driven and owned by the communities themselves. Stakeholders will ensure adequate support and strengthening of community solutions, the use of existing infrastructure, equity and sustainability of interventions.
- Gender Equality and Equity: Stakeholders will address gender inequalities that contribute towards fuelling the HIV epidemic, by incorporating gender dimensions in all aspects of HIV programming to reduce gender vulnerability and risks of HIV transmission, while at the same time improving equal access to HIV and AIDS services

1.2: Structure of the Report

The 2013 HIV report will cover the two thematic areas which are Prevention (HTC, PMTCT) and Treatment care and support (ART, HIV and TB co infection). The report is presented into six Sections namely; Introduction, Program description, Program Outcomes, Achievements and Challenges, Conclusion and Recommendations.

The data is presented in tables and graphs. The tables and graphs have narratives that discuss the program outcomes and performance. This report describes the achievements that the country realized during calendar year 2013 based on set targets. These achievements reflect the strong partnership and collaboration between Government and various entities that work in the area of HIV and AIDS response. They also indicate that, as the country aspires to achieve the three zeros (zero new HIV infections, zero HIV related deaths and zero stigma and discrimination) by 2015, and funding priorities shift, increased demand for efficiencies in programming and service delivery is central to a strong HIV response.

CHAPTER 2: SWAZILAND NATIONAL AIDS PROGRAM DESCRIPTION

Swaziland National AIDS Program (SNAP) was established within the MoH in 1987 to respond to the HIV epidemic whose core mandate is to coordinate health sector based interventions as they account for more than 70% of the total HIV response. The national program delivered the services through its several thematic areas which are; HIV Testing and Counselling (HTC), provision of Pre-ART including management of opportunistic infections, ART, TB/HIV Co infection, and community based care services, which include palliative care. Voluntary Medical Male Circumcision, Sexually transmitted infection, Most at Risk population. These programs are designed to complement each other and create an effective synergy to meet the broad objective, which is to improve the quality of life and life expectancy of PLHIV.

In line with the Multi-Sectoral National Strategic Framework 2009-2014, Health Policy of 2006, National Multi - Sectoral HIV and AIDS Policy (2006), the National Health Sector Strategic Plan 2008 – 2013, the Health Sector Response Plan to HIV and AIDS 2009 – 2014, the HIV Prevention policy . Implementation of the HIV and AIDS services were in pursuance of both the Vision and Mission of the Ministry of Health through the mentioned programs. The overall national targets on reducing HIV infections and HIV related deaths are;

i. 50% and 90% reduction of new HIV infections among adults and paediatrics, respectively, by 2015.
ii. Avert 15% deaths amongst PLHIV and in particular those with TB/HIV co-infection

The implementation of HIV interventions is structured according to two main programmes for the purposes for the report; HIV Prevention and Treatment and Care. The following section will describe the strategic direction of the programmes, the thematic areas, the key results, and the strategies to be employed to achieve the results.

1. PROGRAMMES UNDER PREVENTION

HIV Testing and Counselling and Social and Behaviour Change are considered cross-cutting themes in all core programmes. HTC also provides a critical entry point to programmes such as Pre ART, ART, voluntary male circumcision, PMTCT and management of TB HIV co infection.

The thematic areas under prevention are; Social and behaviour change communication**,** Male circumcision**,** Condom promotion**,** Prevention of mother to child transmission**,** Workplace programme**,** Post exposure prophylaxis**,** Blood safety**,** Sexually transmitted infections**,** Key populations

STRATEGIES FOR IMPLEMENTING THE ABOVE PROGRAMMES WERE:

a) Social and behaviour change communication Strategic direction: The strategic orientation of the intervention is to influence change in social norms and values that influence the spread of HIV at community level and support adoption of key prevention behaviours at individual levels.

Expected Results:

I. Percentage of young women and men aged 15-49 years who had sexual intercourse before age 15 years has reduced from 6.9% in 2007 to 6% in 2011 and 3.5% in 2014 for women and from 4.8% in 2007 to 4% in 2011 and 2.5% in 2014 for men.
II. Percentage of men and women aged 15 years and older who express accepting attitudes towards PLHIV has increased from 25.5% for women and 29.4% for men in 2007 to 30% for women and 34% for men in 2011 and 40% for both men and women in 2014
III. Percentage of men and women aged 15 years and older who express accepting attitudes towards PLHIV has increased from 25.5% for women and 29.4% for men in 2007 to 30% for women and 34% for men in 2011 and 40% for both men and women in 2014

Strategies:

- Strengthen the coordination and policy framework for Behaviour and Social Change Communication
- Develop specific interventions that focus on reduction of risk behaviours with focus on key populations most at risk.
- Develop and use target specific social and behaviour change communication materials that focus on specific behaviours or key epidemic drivers.

b) Male circumcision Strategic Direction: The inclusion of MC as an additional prevention strategy, is aimed at reducing the probability of male infection and hence reduce the vulnerability of women partners.

Expected Results:

I. Percentage of young men aged 15 – 24 years who are circumcised is increased from 5.1% in 2007 to 30% in 2011 and 80% in 2014
II. Percentage of mothers who support their newborn sons or teenage boys to be circumcised has increased to 20% in 2011 and 50% in 2014

Strategies:

- Strengthen advocacy and education on male circumcision with strong advocacy for continued use of condoms.
- Provide policy and strategic direction for provision of MC services
- Strengthen the capacity of health facilities to cope with demand for male circumcision services.
- Promote and support circumcision of neonates.

c) Condom promotion Strategic direction: Promotion of increase in consistent and correct use of male and female condoms.

Expected Results:

I. Percentage of young people aged 15-24 years reported to be using a condom during first sex is increased from 43.2% for women and 49.3% for men in 2007 to 50% for women and 60% for men in 2011 and 70% for men and women in 2014
II. Percentage of young people aged 15-49 years with more than one partner who have reported using a condom during last sex is increased from 54.6% for women and 56.2% for men in 2007 to 60% for both in 2011 and 65% for both in 2014.

Priority Strategies:

- Promote consistency in the availability of both male and female condoms
- Intensify education and awareness on the use male and female condom use
- Expand condom distribution through community based institutions such as KaGogo Centres and NCPs among others.

d) Prevention of mother to child transmission Strategic Direction: The thrust of PMTCT is to reduce the number of children born of HIV positive mothers and increase longevity of children born HIV positive.

PMTCT is one of the key HIV prevention strategies for Swaziland. In 2013, just over 34 000 births were expected in the country (National Population Projection 2007-2030) of which 41.1% of these are from women living with HIV (ANC sentinel 2010). Close to 14 000 children are exposed to HIV and

without PMTCT interventions, over 5 500 of these exposed children would be infected with HIV during pregnancy, labour and delivery, and during breastfeeding.

Swaziland provides comprehensive PMTCT services implemented through a four-pronged approach to reduce MTCT:

- 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, labour and breastfeeding.
- Prong 4: Care treatment and support for women living with HIV and their families.

Expected Results:

I. Percentage of women aged 15-49 years who did not want any more children when they fell pregnant has decreased from 36.9% in 2007 to 27% in 2011 to 20% in 2014
II. Percentage of HIV positive pregnant women who received a course of ARV prophylaxis to reduce MTCT in the last 12 months is increased from 65% in 2007 to 80% in 2011 to 90% by 2014

Priority Strategies:

- Strengthen and expand PMTCT service provision to community level.
- Implement innovative programme interventions for involvement of male partners, significant family members and communities to create a supportive environment for PMTCT
- Intensify awareness and education on PMTCT among communities, particular among male spouses.
- Strengthen tracing mechanisms of ANC clients and their infants at birth.
- Strengthen capacity for PMTCT implementation and service provision

e) Sexually transmitted infections Strategic direction: Prevent and reduce the prevalence of sexually transmitted infections among people aged 15-49 years with a key focus on ulcerative STIs

Expected Results:

I. The percentage of persons who present with genital ulcers is reduced from 20% in 2007 to 15% by 2014**.**

Priority strategies

- Strengthening of national capacity to provide STI services
- Strengthening of partner notification and establishment of active contact tracing system
- Strengthen behaviour change communication for sexually transmitted infections
- Include STI treatment as part of the package for sexual reproductive health services
- Scale up cervical cancer screening among HIV positive females

f) Post exposure prophylaxis Strategic Direction: To ensure that PEP services are rolled out to all health facilities and are accessible to those who qualify, including victims of sexual abuse, based on the criteria set in the in the national PEP guidelines

Priority Strategies:

- Strengthen the capacity of health sector especially nurses to provide PEP at community based health facilities.

- Create awareness of PEP services among the general population and in particular those that are more likely to need PEP
- Strengthen workplace infection prevention and control programs against the transmission of HIV

g) Key populations Strategic direction: Establish interventions that address population groups that have higher HIV prevalence and display risky behaviour

Expected Results:

I. Percentage of most at risk populations who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission is increased from 46.2% in 2008 to 56% in 2011 to 70% in 2014

Strategies:

- Develop programmes that address the needs of key populations
- Develop and operationalize a surveillance systems for key populations

2. PROGRAMMES UNDER TREATMENT AND CARE

The HIV programme includes treatment and care. The introduction of treatment and care was to ensure the improvement of quality of life of those infected and affected by HIV and AIDS. The overall national goal is to increase Life expectancy from 40.2 years in 2008 to 44 years in 2014.

The National ART program was established in 2003 to strengthen the national response to HIV and AIDS, following the introduction of the PMTCT program in 2001. The commitment of Government was demonstrated through the hiring of a National ART Program Coordinator. Services were initially provided by one doctor and one nurse operating from a room in the General Outpatients Department at the Mbabane Government Hospital. Since then the program has expanded rapidly to all hospitals and health centres, all the way down to primary healthcare clinics. Currently a total of 133 facilities are providing HIV care and treatment services in the country.

The treatment and care programme has the following thematic areas; HIV Testing and Counselling (including provider initiated HTC), Pre-ART and Anti-retroviral therapy (ART), Tuberculosis and HIV co-infection (TB/HIV), Community Based Care and Support (CBCS), Psychological care for health workers.

STRATEGIES FOR IMPLEMENTING THE ABOVE PROGRAMMES WERE

a) HIV Testing Counselling programme

Strategic direction: To promote the concept of people knowing their HIV status and seeking health care as early as possible.

Expected Results: increased Life expectancy from 40.2 years in 2008 to 44 years in 2014

Strategies

- Strengthen national capacity to provide HIV testing and counselling (both Provider Initiated and client initiated) at all levels
- Expand HTC services in the community through decentralization of services
- Advocate for VCT as a core component of HIV and AIDS workplace programmes, and support public private partnerships to scale up VCT
- Develop an advocacy strategy focusing on “know your HIV status” campaign

- Strengthen referrals and linkages between community and facility based HTC
- Strengthen the quality of HTC service provision

b) Pre-ART Strategic Direction: Introduction of a comprehensive package of care that defines pre-ART services to be made available to PLHIV that would ensure delayed progression to the AIDS stage and ensure initiation of ART at higher CD4 count.

Expected Results: Increase the PLHIV average CD4 at ART initiation from 80 in 2008 to 150 in 2011 and 200 in 2014

Priority Strategies:

- Strengthen systems for the registration, monitoring and tracking of clients, and procurement planning for drugs for opportunistic conditions.
- Review policies in relation to the essential drug list and task shifting
- Strengthening linkages and referral systems between the ART programme and other complementary programmes such as HTC and PMTCT
- Provide services according to the comprehensive HIV care package

c) Anti-retroviral therapy (ART) Strategic Direction: Increase access to ART by all people in need and improve retention on treatment.

Expected Results: Percentage of adults and children with HIV still alive and known to be on treatment 36 months after initiation of ART has increased from 64% in 2008 to 75% in 2011 and 85% in 2014

Priority Strategies:

- Roll out ART services countrywide to increase availability and access
- Strengthen and expand the provision of paediatric ART and facilitate linkages between ART and PMTCT.
- Strengthen and improve laboratory services for ART, and related services
- Build capacity for health care workers to provide quality ART services
- Strengthen support services and systems for procurement and monitoring delivery of services
- Promote community involvement and participation, particularly people living with HIV and other groups including men, to play a significant role as treatment partners, expert clients and advocates for ART
- Strengthen nutritional management of AIDS patients initiating ART
- Strengthen ART programme management, co-ordination and supervision at all levels
- Conduct research studies in ART service delivery
- Implement quality improvement activities within the ART programme

d) Tuberculosis and HIV co-infection (TB/HIV) Strategic Direction : Improve the diagnosis and management of TB/HIV co-infection among patients.

Expected Results: Increased treatment success for HIV positive TB patients from 63% in 2007 to 80% by 2014

Priority Strategies:

- Strengthen active collaboration between TB and ART programmes and facilitate integration of services where practical
- Initiate a multisectoral community mobilization for TB/HIV literacy

- Implement quality improvement activities for TB/HIV activities

e) **Community Based Care and Support (CBCS) Strategic Direction:** Provision of a continuum of quality care and rehabilitation services for people in need of such services.

Expected Results: Percentage of households with vulnerable persons who have reported receiving timely, relevant comprehensive and good quality CBCS services in the past 12 months is increased to 80% by 2014.

Priority Strategies:

- Finalise and disseminate the guidelines for coordination of CBCS services at the various levels.
- Identify and develop programme interventions that reduce the burden of care among girls and women and increase involvement and participation of males in the provision of care at the community level.
- Strengthening linkages, referral systems and linkages between health facilities and community based care and support services
- Strengthen capacity for caregivers to apply universal precautions for protection while providing care and support.
- Promote the concept of family members being carers for people at home with emphasis on encouraging men to become caregivers. (Build capacity of primary carers including males).
- Strengthen the procurement and distribution systems for the provision of CBCS materials and other supplies, through a decentralized mechanism to ensure easy access and availability at community level
- Expanding rehabilitation services to all the four regions.

f) **Psychological care for health workers Strategic Direction**: Providing quality psychological support to health workers including community care givers providing prevention, treatment, care and support services

Expected Results: Percentage of health care providers who have scored at least 18 in the General Health Questionnaire – 12 is increased to 40% in 2011 and to 60% in 2014

Priority Strategies:

- Strengthen co-ordination of psychological care and support
- Strengthen technical skills to provide quality and comprehensive psychological support
- Develop appropriate programmes on psychological support and advocate for increased resources to support the programme
- Develop and disseminate policy guidelines and manuals on the provision of psychological support for carers

3. Data Management and Monitoring and Evaluation

All sites providing HTC services are expected to report through the National Health Management Information System (HMIS) routinely. There are registers in all HTC sites which are to be filled in by the service provider each time a test is conducted. These registers are in duplicate and at the end of each month; sites tear off the two perforated sheets and send to the Regional strategic information office. At the regional office, the data is entered to present monthly collations. Quarterly, regional offices are expected to present a report and disseminate to the sites as feedback mechanism. On the other hand, the National M&E level also presents a quarterly report and shares with the National HTC program, the directorate and partners. Annually, the

National M&E program, the HTC program and its partners consolidates cumulative reports to present a national HTC annual progress report.

CHAPTER 3: PROGRAM RESULTS

3. Prevention

HIV prevention in Swaziland is guided by, the National HIV Prevention Policy (2012). The following sections will present results achieved in prevention in 2013. The results will be structured according to the thematic areas.

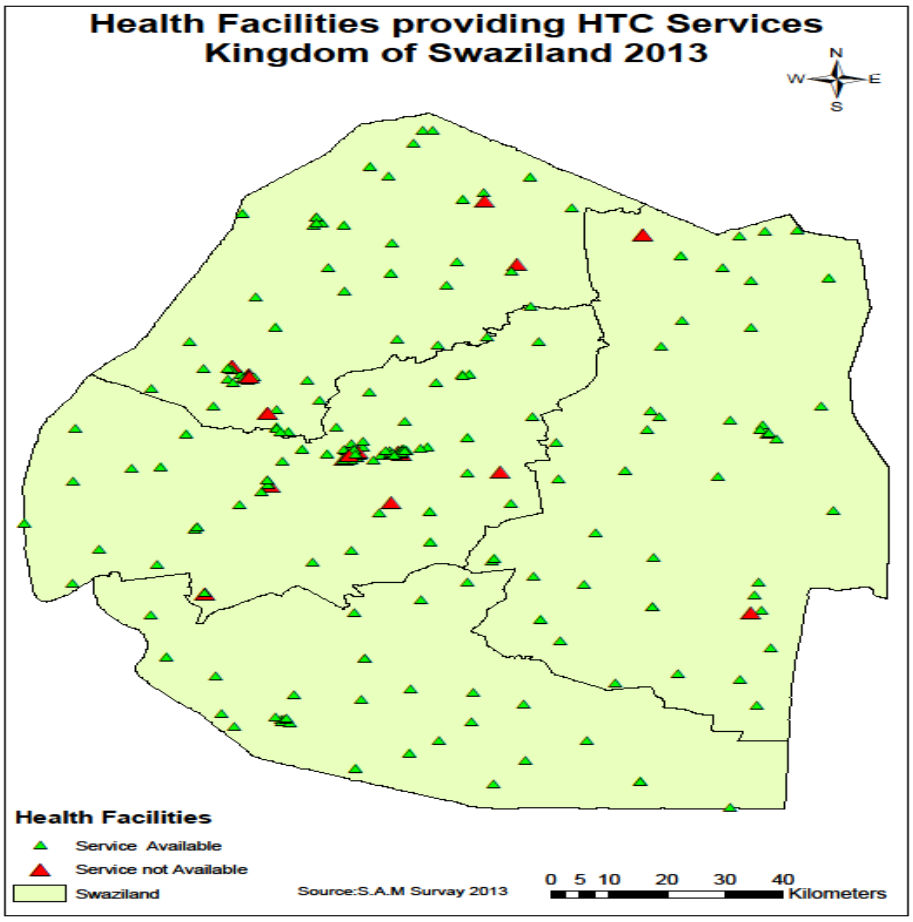
3.1 HIV Testing and Counselling

HIV testing rate has increased over the years among the general population such that women testing and receiving results was at 47.3% for women in 2010 to 55% in 2015 and 65% in 2018 and from 31.3% for men in 2010 to 45% in 2015 and 55% in 2018. In 2013 alone, 308,480 tests were conducted. The Ministry of Health, partners, and stakeholders continue to explore innovations and strategies in HIV prevention, care, treatment and retention services to address the high HIV prevalence and incidence and simultaneously mitigating their impact.

3.1.1 HTC service access and availability

HTC services are available in most health care facilities in the country, where they are integrated within routine health service delivery; at free-standing HTC sites; and in communities, through mobile outreach and home-based care services. **Error! Reference source not found.** shows the spatial distribution of health facilities which offer HTC services based on the findings of the Service Availability Mapping (SAM) exercise conducted in 2013 by the Ministry of Health.

Map 1: Geographic distribution of health facilities providing HTC Services, Swaziland 2013



According to the 2013 SAM report, 232 (80.8%) of the 287 health facilities in the country provide HTC services. This shows a continuing upward trend in HTC service availability, up from 51.2% of health facilities in 2008, and 77.4% of health facilities in 2010. The majority of health facilities offering HTC services are located in Manzini region, 94 (40.4%), followed by Hhohho and Lubombo regions, at 59 (25.4%) and 44 (19.0%), respectively, while Shiselweni has the lowest number of health facilities offering HTC, 35 (15.1%). These varying proportions of health facilities offering HTC services by region are in line with the overall regional distribution of health facilities in the country, where Manzini ranks first, followed by Hhohho, Lubombo and Shiselweni, in that order. The number of free-standing VCT sites in the country remained at the 2010 level of 7, distributed as follows: 1 free-standing VCT site each in the regions of Hhohho, Manzini and Shiselweni, and 4 free-standing VCT sites in the Lubombo region.

3.1.2 HIV testing trends

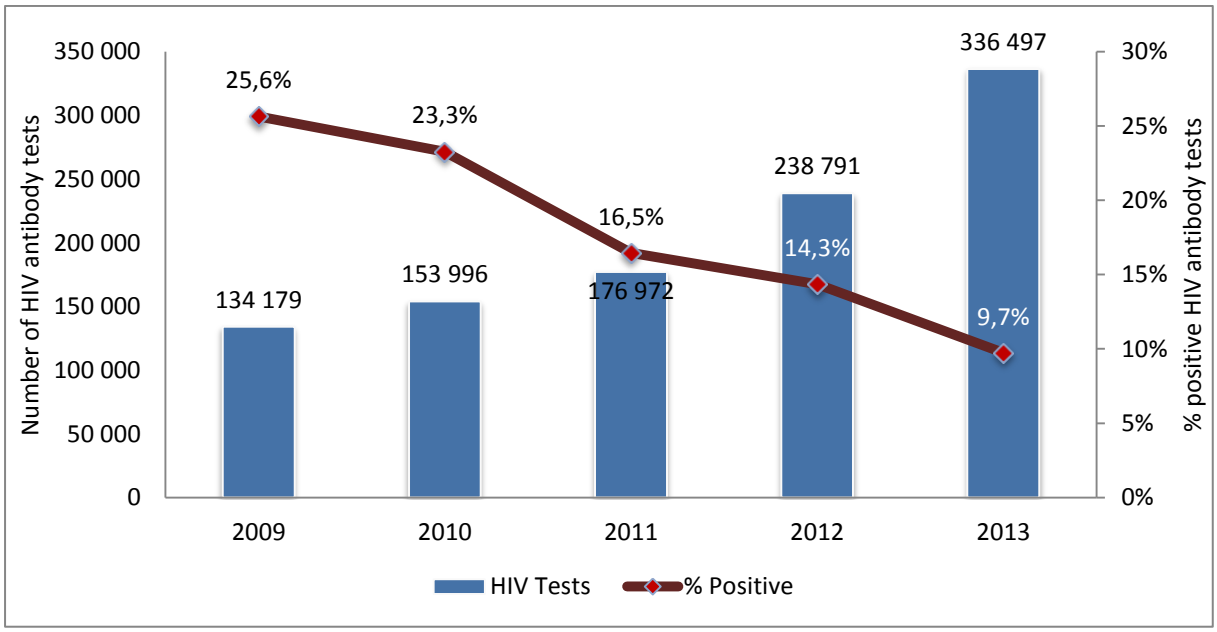
This section separately looks at the trends in HIV antibody tests and DNA PCR tests over the past 5 years, from 2009 to 2013. It should be noted that the results presented here pertain to the *number of tests* performed, not to unique individuals who accessed HTC during the period under review. In addition, the results presented include repeat tests.

A total of 347,966 HIV antibody and DNA PCR tests were performed in public and private health facilities that offer HTC services in the country in 2013. This represents an increase of 37.7% from the 252,678 HIV tests performed in 2012 and almost 50,000 more tests than the year's target of just over 300,000 HIV tests. The sustained increase in the number of HIV tests performed over the past 5 years is attributable to the continued scale-up of HTC services through PIHTC and community testing, as well as the availability of a critical mass of lay and professional counselors whose efforts have resulted in improved HTC uptake.

3.1.2.1. Trends in HIV antibody tests

Figure 3 shows that the number of HIV antibody tests performed in the country has increased in each successive year since 2009. The rate of increase was steady from 2009 to 2010, and from to 2011 to 2012, averaging about 15%. However, a pronounced increase of almost 35% over the 2011 figure was recorded in 2012 and this was surpassed by 40.9% additional tests in 2013.

Figure 3: HIV antibody test trends, 2009 to 2013



While the number of HIV antibody tests has risen over the past 5 years, a steady decline in the proportion of HIV-positive tests during the same period is evident. Fig # shows a pronounced decreasing trend in HIV-positive antibody tests, from 25.6% in 2009 to 9.7% in 2013, a decrease of 62.1%.

3.1.2.2. Trends in HIV DNA PCR tests for EID

This section on DNA PCR tests for EID is brief, presented to provide a complete overview of HTC services offered in the country. For a detailed analysis of EID for HIV-exposed infants, please refer to the PMTCT section.

The pediatric HIV guidelines recommend that EID services for HIV-exposed infants should be integrated in all child welfare sites. However, according to the 2013 SAM report, the proportion of child welfare sites that collect DBS for EID, decreased from 88% in 2010, to 78.5% in 2013.

Figure 4: DNA PCR test trends, 2009 to 2013

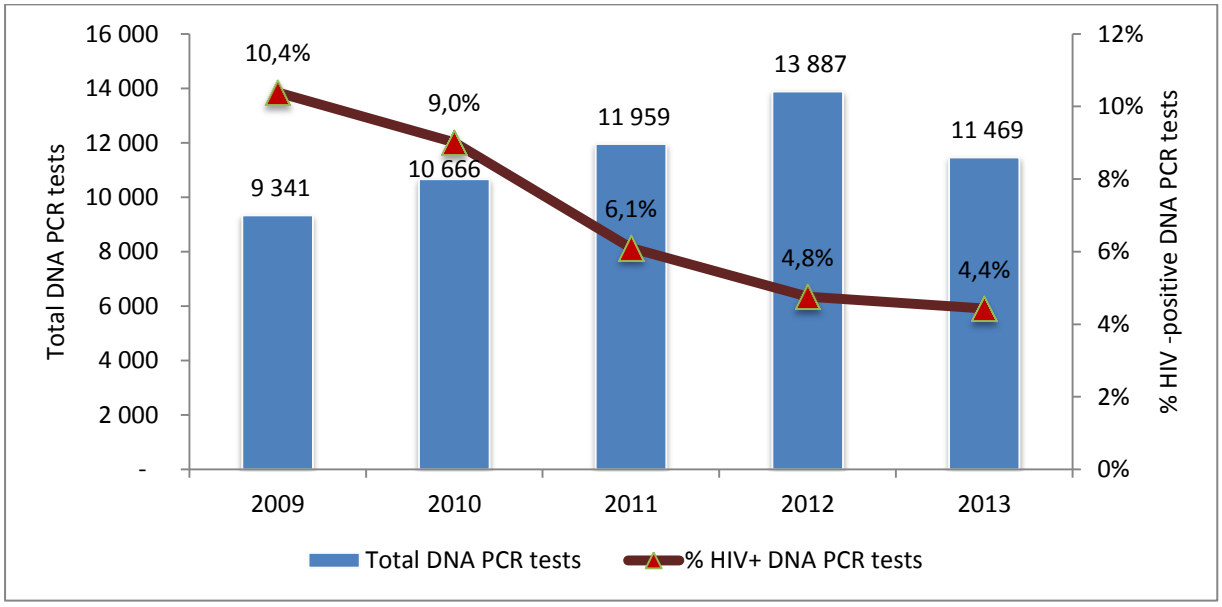


Figure 4 shows that the number of DNA PCR tests performed for HIV-exposed infants steadily increased from 9,341 in 2009 to 13,887 in 2012, an increase of 48.7%. However, 11,469 DNA PCR tests were performed for HIV-exposed infants in 2013, a decrease of 24.5% from the all-time high of 13,887DNA PCR tests recorded in 2012.

An exciting result is the pronounced decreasing trend in HIV-positive DNA PCR tests for HIV-exposed infants. The proportion of HIV-positive DNA PCR tests decreased from 10.4% in 2009 to 4.4% in 2013, a decrease of 6%.

3.2 HIV antibody testing services in 2013

This section focuses on the results on the HIV antibody test services provided in 2013. As mentioned earlier, the results pertain to the number of HIV tests, not unique individuals who accessed HTC during the year. Results are presented by age, marital status and region, disaggregated by sex.

Table 1: HIV antibody tests by age and sex, 2013

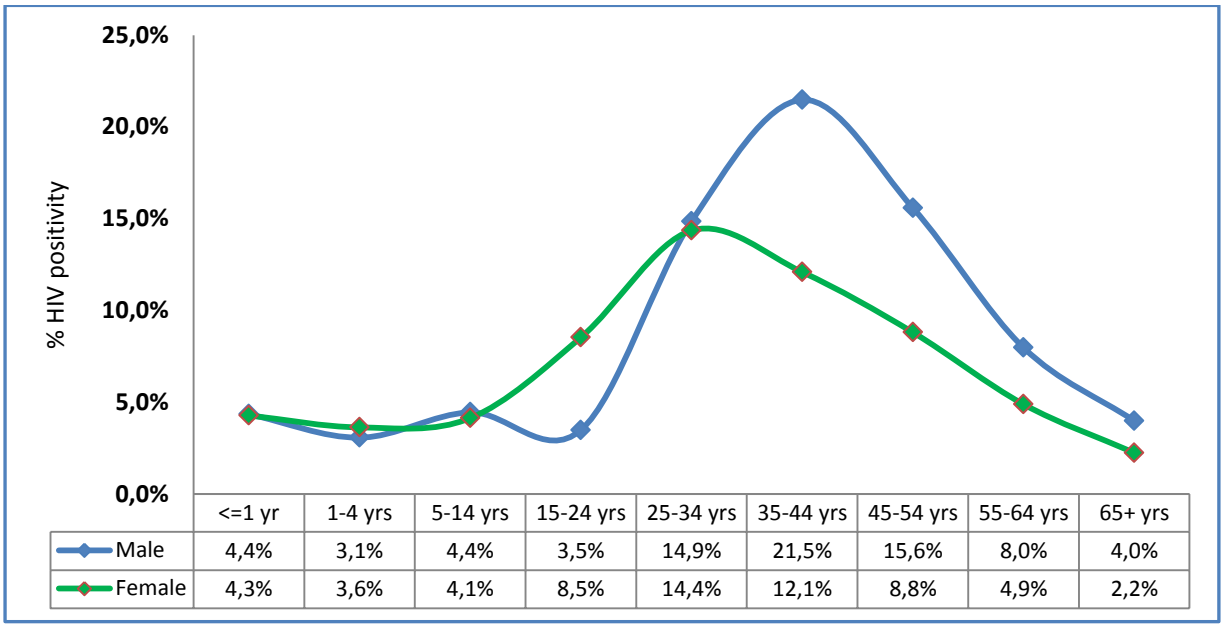
Age(yrs)	HIV Tests				Positive HIV tests			Percent Positive Tests		
	M	F	UK	**Total**	M	F	**Total**	M	F	**Total**
<1	4,021	4,321	421	**8,763**	175	185	**360**	4.4%	4.3%	**4.1%**
1-4	4,686	4,956	19	**9,661**	144	180	**324**	3.1%	3.6%	**3.4%**
5-14	10,945	9,548	17	**20,510**	487	395	**882**	4.4%	4.1%	**4.3%**
15-24	31,743	78,949	103	**110,795**	1,107	6,738	**7,845**	3.5%	8.5%	**7.1%**
25-34	33,748	57,412	92	**91,252**	5,013	8,242	**13,255**	14.9%	14.4%	**14.5%**

35-44	13,829	23,230	26	**37,085**	2,970	2,809	**5,779**	21.5%	12.1%	**15.6%**
45-54	8,205	15,097	22	**23,324**	1,279	1,330	**2,609**	15.6%	8.8%	**11.2%**
55-64	7,360	12,352	24	**19,736**	587	604	**1,191**	8.0%	4.9%	**6.0%**
65+	6,263	9,067	15	**15,345**	250	204	**454**	4.0%	2.2%	**3.0%**
UK	16	10	0	**26**	0	0	**0**	-	-	-
Total	**120,816**	**214,942**	**739**	**336,497**	**12,012**	**20,687**	**32,699**	**9.9%**	**9.6%**	**9.7%**

UK*: unknown HIV test results and age group
F*: Female
M*: Male

The highest number of HIV antibody tests was performed for clients aged between 15 and 24 years, followed by those in the 25 to 34 year and 35 to 44 year age categories, Table 1 These age categories largely represent the reproductive age group, which is at higher risk of HIV exposure. Most of the HIV antibody tests performed for infants younger than 1 year would have been to screen for exposure to HIV and would have been followed

Figure 5: HIV positivity by age and sex, 2013



HIV positivity was highest for tests performed for clients in the 35 to 44 year age group, closely followed by tests for those in the 25 to 34 year age group. Figure 5 better illustrates the significant differences in HIV positivity between the sexes, with tests for males in the 35-44 years age exhibiting HIV positivity of 21.5%, the highest positivity of any age and sex group. In addition, tests for males in the 25-34 years, 35-44 years and 45-54 years categories exhibited higher HIV positivity compared to females in the same age groups, while HIV positivity for tests performed for females in the 15 to 24 year age group was more than twice that for males in the same age group.

Table 2: HIV antibody tests by marital status and sex, 2013

Marital status	HIV Tests				Positive HIV tests			Percent Positive Tests		
	M	F	UK	Total	M	F	Total	M	F	Total
Single	76,677	115,495	262	**192,434**	6,398	12,761	**19,159**	8.3%	11.0%	**10.0%**
Married	38,379	86,075	120	**124,574**	5,288	7,108	**12,396**	13.8%	8.3%	**10.0%**
Divorced	187	192	0	**379**	34	30	**64**	18.2%	15.6%	**16.9%**
Widowed	1,307	9,308	15	**10,630**	112	597	**709**	8.6%	6.4%	**6.7%**
Other	4,081	3,367	11	**7,459**	151	138	**289**	3.7%	4.1%	**3.9%**

Unknown	185	505	331	**1,021**	29	53	**82**	15.7%	10.5%	**8.0%**
Total	**120,816**	**214,942**	**739**	**336,497**	**12,012**	**20,687**	**32,699**	**9.9%**	**9.6%**	**9.7%**

The majority of HIV antibody tests performed in 2013, 192,434 (57.2%), were performed for single individuals, while 37.0% of the tests were performed for married individuals. Only small proportions of tests were performed for widowed individuals, 3.2%, and for individuals whose marital status was recorded as "other", 2.2%, while only less than a tenth of a percent of the tests were performed for divorcees, Table 2 Simple ranking of the marital status by sex shows that proportionately more tests were done for males in the "other category" compared to females, while more tests were performed for more widows than widowers. However, the small number of cases on which these observations are made should be noted.

Tests performed for divorced individuals had the highest positivity overall, 16.9%, as well as within the two sexes, 18.2% for tests performed for male divorcees and 15.6% positivity for test performed for female divorcees. However, that was where the similarities in positivity between the sexes with regards to marital status ended, as positivity for tests done for married and widowed males was higher than for their female counterparts, while positivity for tests done for single females was higher than for tests done for single males.

Table 3: HIV antibody tests by region and sex, 2013

Region	HIV Tests				Positive HIV tests			Percent Positive Tests		
	M	F	UK	Total	M	F	Total	M	F	Total
Hhohho	30,593	53,278	100	**83,971**	3,160	5,150	**8,310**	10.3 %	9.7%	**9.9%**
Lubombo	21,987	39,501	103	**61,591**	2,106	3,322	**5,428**	9.6%	8.4%	**8.8%**
Manzini	39,279	68,179	120	**107,578**	4,716	8,407	**13,123**	12.0 %	12.3 %	**12.2 %**
Shiselweni	28,806	53,631	122	**82,559**	1,999	3,767	**5,766**	6.9%	7.0%	**7.0%**
Unknown	151	353	294	**798**	31	41	**72**	20.5 %	11.6 %	**9.0%**
Total	**120,816**	**214,942**	**739**	**336,497**	**12,012**	**20,687**	**32,699**	**9.9%**	**9.6%**	**9.7%**

Table 3 shows that 107,578 (40.0%) of HIV antibody tests performed in 2013 were for individuals who lived in Manzini region. Mbabane and Shiselweni regions contributed approximately the same proportions to the total number of HIV antibody tests, 25.0% and 24.5%, respectively, while Lubombo region contributed 18.8% to the total HIV antibody tests performed during the year. This regional distribution of HIV antibody tests performed in 2013 is in line with the population distribution in the country. The regional distribution of the HIV tests performed for the two sexes, as well as the positive HIV tests, mirrored the distribution of the HIV tests.

Table 4: Collection of HIV antibody test results by sex, 2013also shows that HIV tests performed for individuals from Manzini region had the highest positivity, 12.2%, followed by Mbabane region, 9.9%, Lubombo region, 8.8%, while the lowest positivity was recorded for tests performed for individuals residing in Shiselweni region, 7.0%. In Hhohho and Lubombo regions, positivity was slightly higher for tests done for males compared to those done for females, while the opposite was true for tests performed for individuals residing in Manzini and Shiselweni regions, where tests performed for females exhibited higher positivity compared to tests performed for males.

Table 4: Collection of HIV antibody test results by sex, 2013

Results collected?	HIV Tests				Positive HIV tests			Percent Positive Tests		
	M	F	UK	Total	M	F	Total	M	F	Total
Yes	120,518	214,355	440	**335,313**	11,978	20,624	**32,602**	9.9%	9.6%	**9.7%**
No	135	215	6	**356**	21	33	**54**	15.6%	15.3 %	**15.2 %**
Unknown	163	372	293	**828**	13	30	**43**	8.0%	8.1%	**5.2%**

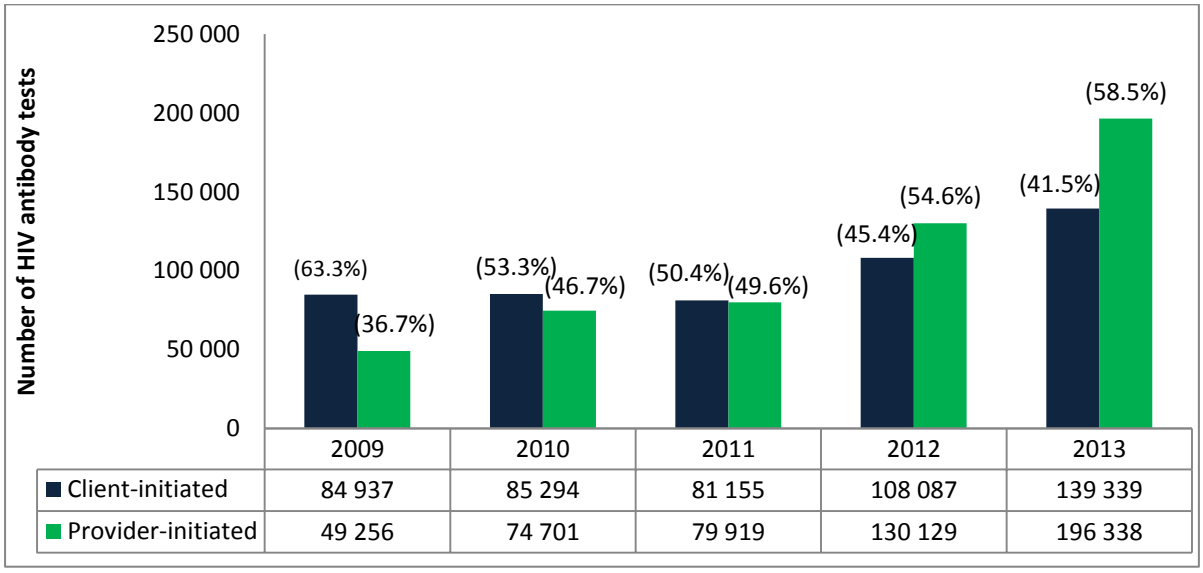
Total	**120,816**	**214,942**	**739**	**336,497**	**12,012**	**20,687**	**32,699**	**9.9%**	**9.6%**	**9.7%**

Overall, results collection was very high, with 335,313 (99.6%) of HIV antibody test results collected. Results collection was similar by sex. However, positivity was higher in results which were not collected 15.2%, compared to results which were collected, 9.7%. As with overall results collection, collection by positivity status did not differ by sex.

3.3 HIV antibody tests by HTC approach

Graph 1 compares the performance of Swaziland's two main HTC approaches, namely PIHTC and CIHTC, over the past 5 years. The contribution of PIHTC to HIV antibody tests performed in the country has significantly increased over time, from 36.7% in 2009, to almost half of total tests in 2011, to the current level of 58.5% in 2013, Graph 1.

Graph 1: Trends in HIV antibody tests by HTC approach, 2009 to 2013



	2009	2010	2011	2012	2013
Client-initiated	84 937	85 294	81 155	108 087	139 339
Provider-initiated	49 256	74 701	79 919	130 129	196 338

The performance of PIHTC and CIHTC over time is clearer in Graph 1 which shows the number of HIV antibody tests performed since 2009, by entry point. Overall, there was a discernible increase in the total number of HIV antibody tests performed in 2012 compared to the preceding 3 years when data from all the entry points are aggregated. This steep increase persisted in 2013. However, data reveals that although testing in the CHTC/VCT increased slightly in 2010 from the 2009 figure, testing in this entry point has gradually decreased in each successive year since then, from the maximum of 70,561 tests recorded in 2010, to 49,866 in 2013, a decrease of 29.3%. Although testing through Outreach/Mobile VCT has increased since 2012 in line with the overall trend, this increase was insufficient to make up for the loses in CHTC/VCT, hence the overall decrease in CIHTC. The forgoing analysis helps explain why PIHTC has overtaken CIHTC as the dominant HTC approach in the country.

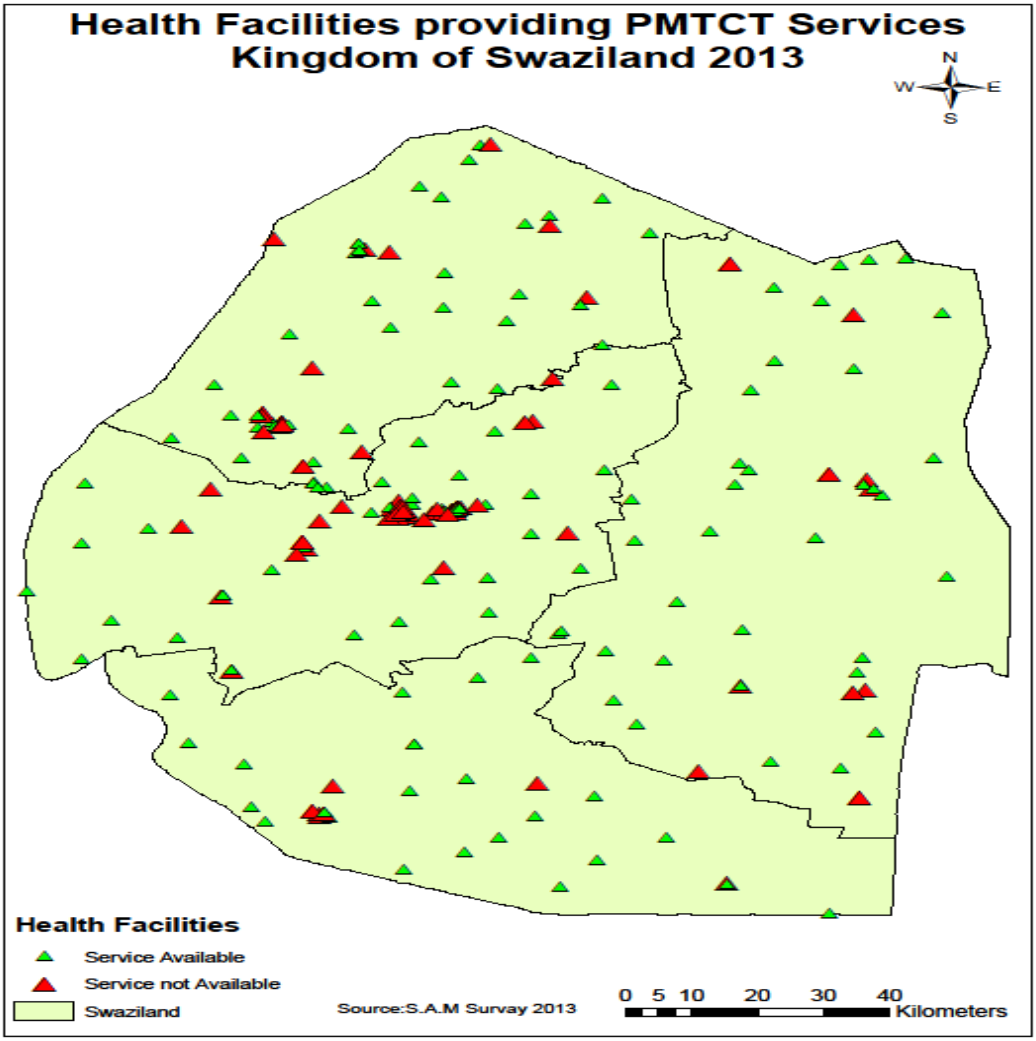
3.2. Prevention of Mother to Child Transmission (PMTCT)

According to the extended National Strategic Framework (eNSF) 2014-2018 at least 95% of health facilities offering ANC services should also offer PMTCT services by 2014.

3.2.1 PMTCT service access and availability (Geographic distribution of sites/facilities)

PMTCT was initially implemented in only 3 health facilities in 2003. According to Service Availability Mapping (SAM) 2013, PMTCT facility coverage in the country has increased over the years. In 2013, additional 11 and 12 facilities provided ANC and PMTCT services respectively. Currently 162 (89%) of the 183 ANC facilities are now providing PMTCT services

Map 2: PMTCT Services Availability



PMTCT availability differs by regions in Swaziland. According to SAM 2013, out of the 183 facilities that provide ANC, 162 provide PMTCT (89%). The region with the least is Manzini with 84% of ANC points offering PMTCT, and the highest region is Shiselweni with 93% of ANC service points offering PMTCT.

Table 5: Proportion of health facilities that provide PMTCT services

Region	2011		2012		2013	
	ANC	PMTCT	ANC	PMTCT	ANC	PMTCT
Hhohho	47	42(89%)	47	42(89%)	52	46(88%)
Manzini	58	44(76%)	58	44(76%)	63	53(84%)
Lubombo	37	36(97%)	37	36(97%)	38	35(92%)
Shiselweni	30	28(93%)	30	28(93%)	30	28(93%)
Total	**172**	**150(88%)**	**172**	**150(88%)**	**183**	**162(89%)**

3.2.2 HIV Testing for Pregnant Women

HIV testing remains an essential entry point for PMTCT. It offers opportunity for women to gain knowledge and skills to either remain HIV negative or if found HIV positive; access PMTCT intervention to reduce mother to child transmission of HIV. The PMTCT guidelines state that pregnant women should be offered an HIV test at first ANC visit. Women missed at the first ANC visit are offered HTC in subsequent visits and even during labour and delivery. Table below summarizes HTC services provided for women in 2013:

Table 6: HIV testing and counselling for 2013

Year	Projected Pregnancies[1]	First ANCs	Known HIV	Eligible for test	HIV Test	Know status
2011	33425	33277 (99.6%)	6086	27191	24699 (91%)	30785 (93%)
2012	33779	32434 (96%)	6337	26097	23514 (90%)	29851(92%)
2013	34091	29835 (87.5%)	6809	23036	22742 (99%)	29551(99%)

HIV testing for eligible women (first ANCs minus those already known HIV positive) in ANC and maternity continues to be high. In 2013, all (99%) eligible women who came to the health facilities were tested during ANC and in maternity.

Table 7: HIV testing coverage versus estimated pregnancies

Year	Projected Pregnancies	Known status	First time test	Total known HIV status
2011	33425	6086	24699	30785 (92%)
2012	33779	6337	23514	29851 (88%)
2013	34091	6809	23036	29551 (87%)

Since 3% (MICS 2010) of pregnant women do not come for ANC at all, the recommended way of determining testing coverage among pregnant women is to use estimated pregnancies as a denominator. However it is worth mentioning that the trend of pregnancies as projected by the National Population Projections 2007-2030 is increasing yet the opposite is evident in the actual number of pregnancies presented at facilities in 2013. The proportion of pregnant women knowing their HIV status (including those already known positive) was at 87% in 2013.

Positivity Rate among Pregnant Women

Swaziland is strengthening and implementing strategies to primarily prevent HIV infection among women of child bearing age.

Table 8: Positivity Rate among estimated Pregnant Women

Year	Projected pregnancies	Estimated Number of Pregnant Women[2]	Known HIV+ status	Newly tested HIV+	Total HIV+
2011	33425	33669	6086	6181	12266(36.9%)
2012	33779	31900	6337	4827	11164(34.4%)
2013	34091	29835	6809	4496	11305(38.4%)

[1] Projected pregnancies are data from the population projections based on the 2007 census report.

[2] Estimated pregnancies are those women who were seen for at least one ANC visit.

Table 8 shows the number of pregnant women that came in with a known HIV positive status, the newly diagnosed and the total HIV positives. While there seems to be a steady drop in number of pregnant women coming for ANC, the number of those coming in for the first time at ANC with an already known HIV positive status has been increasing since 2011. In 2013, 6809 (23%) women were already known HIV positive at first ANC representing. It still remains unknown whether these pregnancies were planned or not. The positivity rate among pregnant women in 2013 was 38.4% which is a slight increase from the previous year's which could be explained by the increase of those who are getting pregnant with already a known HIV +ve status.

3.2.3 Sero-conversion (Include ANC and L & D)

The program closely tracks new infections during pregnancy, childbirth and postpartum. In ANC, HIV negative women are retested every 8 weeks after the initial HIV negative test and between 32 and 36 weeks gestation age. During labour and delivery, all HIV negative women who were last re-tested over 8 weeks are also offered a re-test.

Table 9: HIV re-testing in ANC and maternity

	Eligible for retest	Re-tested	HIV +
ANC	19090	10642 (56%)	228 (2.1%)
L&D	2888	2424 (84%)	225 (9.3%)

Re-testing in ANC remains fairly low with 10 642 (56%) of eligible negative women retested and 2.1% of those re-tested had sero-converted. At L &D re-testing is fairly high with 2424 (84%) of those eligible being retested and 9.3% had sero-converted. It needs to be ascertained why so much (9.3%) women are sero-converting in particular at labour and delivery.

3.2.4 Immunological staging and ARV Prophylactic Regimens for PMTCT

According to the PMTCT guidelines all HIV infected pregnant women should be assessed for ART eligibility, through immunological and clinical staging. This would then determine the type of PMTCT regimen the woman will receive either ARV prophylaxis or ART.

Table 10: Trend of women who were expected to be HIV positive and received CD4 results (2011-2013)

Year	Expected HIV+	Identified HIV+	CD4 count done	Received CD4 results
2011	11418	12266	8138 (71%)	-
2012	11396	11164	8139 (71%)	-
2013	11307	11305	8469 (75%)	6567 (78%)

There has been a slight increase (75%) in the proportion of pregnant women done CD4 count when compared to 2011 and 2012. Table 10 also shows that 78% of the women that were assessed for ART eligibility through CD4 count received their results.

3.2.5 ARV Prophylactic Regimens for PMTCT

Swaziland now provides more efficacious PMTCT regimens to women testing HIV positive. All women with CD<350 or are WHO stage 3/4 should be initiated in lifelong ART while those whose CD4>350 and are WHO

stage 1/2 are provided AZT and intrapartum dose (IPD). Women testing HIV positive for the first time in maternity are provided IPD only.

Table 11: Percentage of pregnant women on ARVs (2011-2013)

Year	Expected HIV+	Identified HIV+	Already on ART	Newly initiated on ART	AZT plus IPD	IPD only	Total on ARV's
2011	11418	12266	2402	1302	6659	227	10590(92.7%)
2012	11396	11164	2789	1320	6058	113	10280(90%)
2013	11307	11305	3386	1640	5306	147	10479(93%)

Table 11 shows the trend of positive pregnant women on ARV's over the years. The country has been able to provide eligible women with ARV's and a constant trend is observed. The country has also been able to meet the global plan target of 90% coverage with antiretroviral drugs for PMTCT by HIV positive pregnant and lactating women. In 2013, 10479(93%) of expected HIV positive pregnant women were provided with ARVs for PMTCT purposes of whom 48% received lifelong ART for their own health.

Figure 6: ARVs for pregnant women by regimen

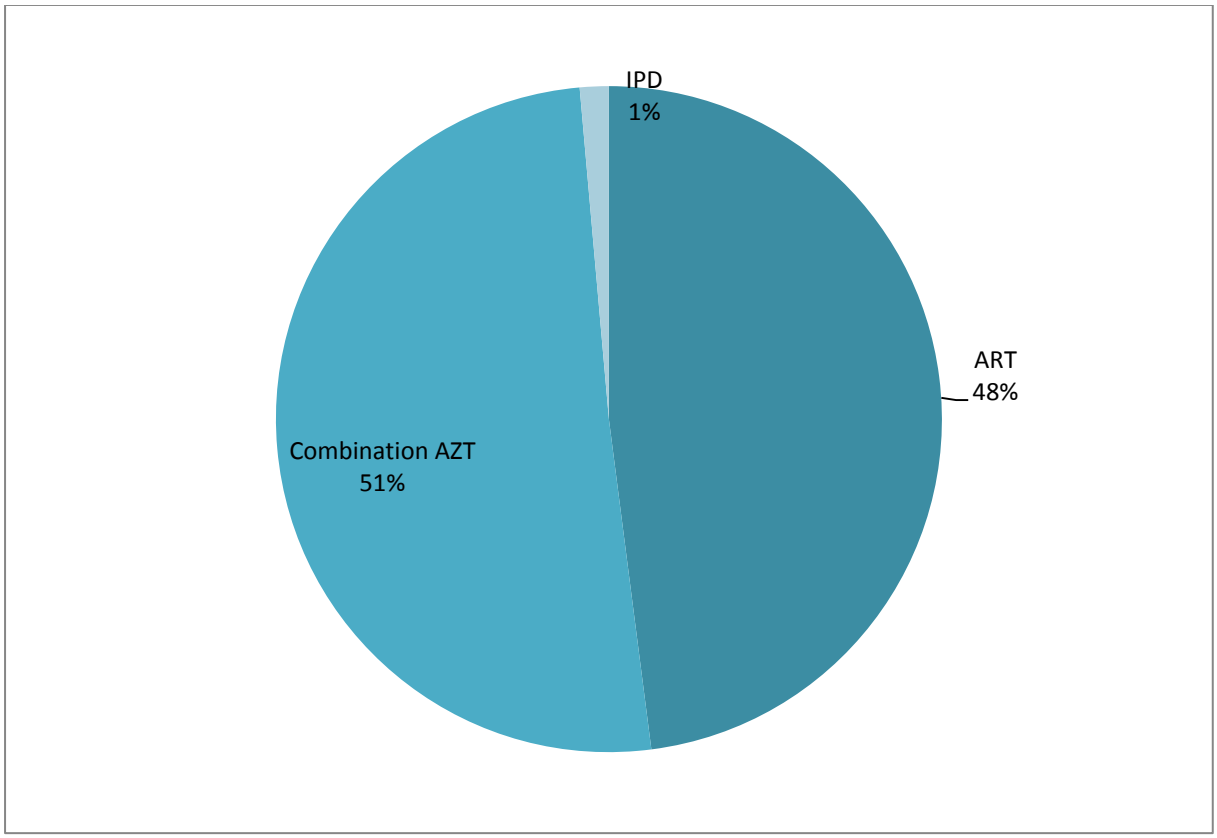
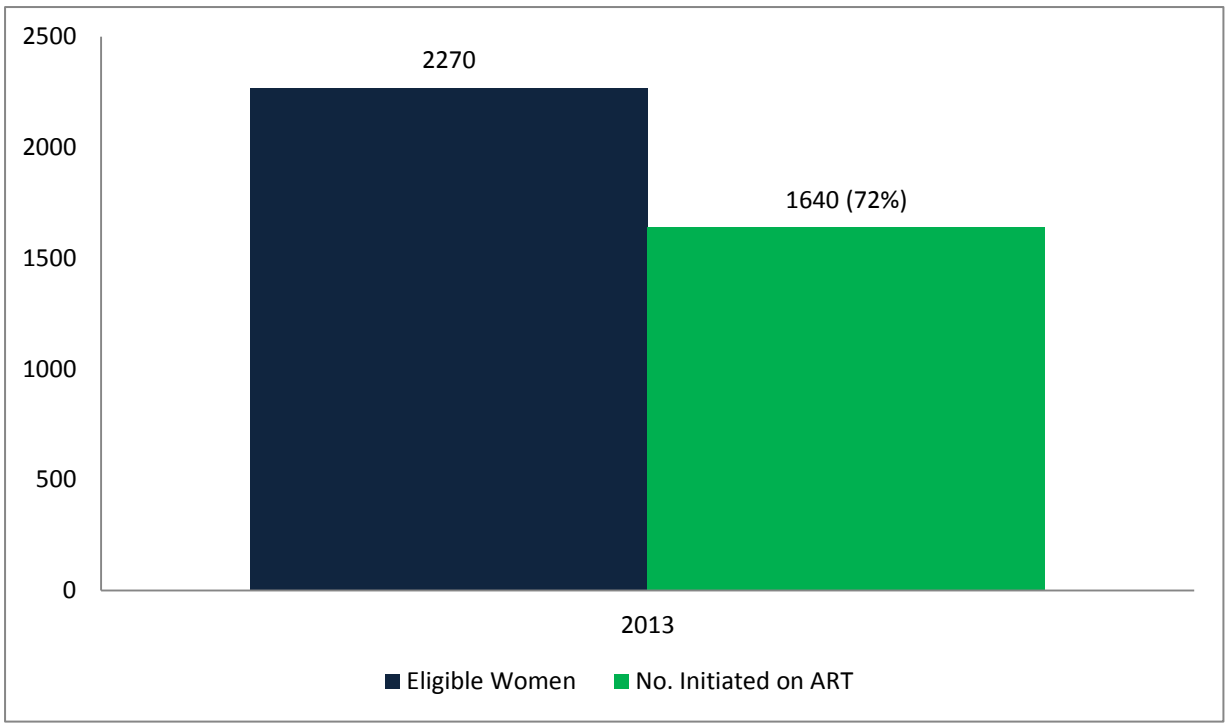


Figure 6 above shows the breakdown in ARV regimen given to the women in 2013. Forty eight percent of the women receiving ARVs got lifelong ART; 51% got AZT plus IPD while 1% received IPD only. Compared with 2012's data, more women are being initiated on the lifelong ART dugs. The 1% of SD NVP is still maintained as in 2012 1% of pregnant women received IPD.

Figure 7:Proportion of eligible women initiated on ART



Eligible pregnant women receiving ART for their own health now stand at 72% in 2013. This is a huge increase from the estimated 40% in 2009.

Summary PMTCT Cascade 2013 for Pregnant Women

3.2.6 Care of the Exposed Infants

PMTCT interventions continue during child welfare period providing a package of interventions with the goal of reducing mother to child transmission. PMTCT interventions have been aligned with immunization schedule so as to minimize missed opportunities. Care of the exposed infant includes Early Infant diagnosis, Provision of prophylaxis (CTX, NVP) and early treatment.

3.2.6.1 ARV prophylaxis for infants

The National PMTCT guidelines recommend that all HIV positive women should be provided with infant nevirapine at the time of HIV diagnosis. Those missed in ANC can be provided with the nevirapine for the first time in maternity. In 2013, 10750 (95%) of the expected HIV exposed infants received NVP for prophylaxis for PMTCT.

3.2.6.2 Early Infant Diagnosis (EID)

Early infant diagnosis is the key to determining the rate of mother to child transmission and in identifying HIV infected infants early and link them for care and treatment. EID can significantly decrease AIDS related pediatric mortality by enabling early detection of HIV in infants before they get sick. In 2013, according to the EID dashboard 134 sites were actively testing infants as early as 6 weeks using Dry Blood Spot (DBS) for DNA PCR.

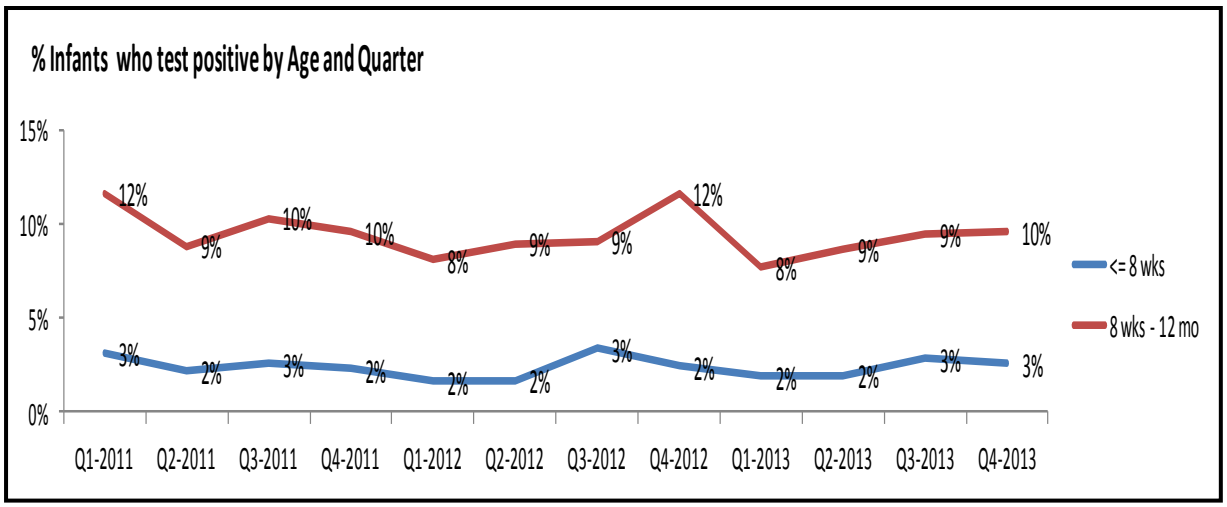
Table 12: Exposed infants tested using DNA PCR

Year	Estimated HIV exposed infants	No. of HIV exposed identified	Exposed infants taken for DNA PCR
2011	11418	9912	10734 (94%)

2012	11396	9414	8459 (74%)
2013	11307	9510	9087 (80%)

Table 12 above shows the number of exposed infants tested using DNA PCR. The national coverage of infants tested using DNA PCR in 2013 is 80%. Of the 9510 identified exposed infants 9087 (96%) were tested. This shows that most infants that came in to health facilities at 6-8 weeks were offered DBS testing The immediate goal is that MTCT is reduced to less than 5% by 2015. In 2013, the positivity rate among infants 6-8 weeks was 3% (268/9087). The goal of PMTCT is virtual elimination of mother to child transmission therefore interventions during the breast feeding period need to be strengthened as Figure 8 below indicates a higher positivity rate among infants two months and older.

Figure 8: Positivity Rate among Infants 6-8 weeks



3.2.8 Infants Outcome Results by Mother's Regimen

The country is moving towards the implementation of Option B+ whereby once a pregnant woman is detected as HIV positive; she is initiated on the lifelong ART drug regardless of her CD4 count. Though it is an international recommendation by WHO, it is always best for countries to make evidence based decisions when implementing. Option B+ is currently piloted in some parts of the country to assess feasibility and acceptability; and with lesson learnt from these pilots; will be rolled out to the other remaining parts. The piloting will inform how best to implement Option B+.

Figure 9: Positive infants by mother's regimen

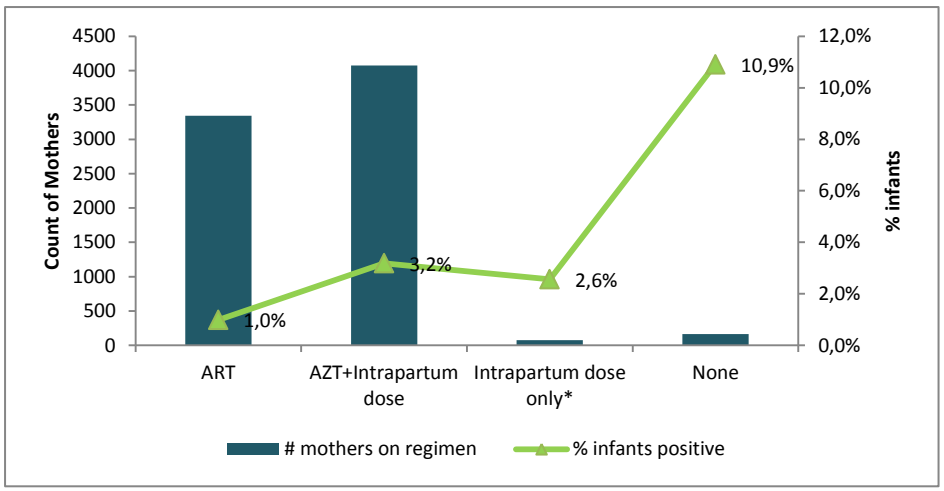


Figure 9 above shows the outcome HIV status of infants based on their mother's regimen when pregnant. According to the EID dashboard infants born from mothers who received ART had a low (1%) transmission rate, which supports the recommended option B+. The table above also shows that infants whose mothers are not in any PMTCT regimen are at a higher (10.9%) risk of contracting HIV.

3.2.9 Cotrimoxazole Prophylaxis

According to the HIV pediatric guidelines cotrimoxazole is given to all exposed infants from 6 weeks of age. CTX reduces morbidity and mortality among HIV exposed infants. In 2013, 82% of the expected exposed infants were initiated on CTX between 6-8weeks of age. The proportion of exposed infants initiated on CTX has been steadily increasing over the past years.

Table 13: Percentage of exposed infants initiated on CTX (2011-2013)

Year	Estimated HIV exposed infants	No. of HIV Eexposed infants identified	Exposed infants Initiated on CTX
2011	11418	9912	8844 (77%)
2012	11396	9414	9092(80%)
2013	11307	9510	9266 (82%)

3.2.9.1 ART initiation

The Swaziland guidelines recommend early HIV diagnosis and initiation of all HIV positive infants under the age of 2 years on ART. Without treatment more than half of the infants will die before they reach their second birthday.

Figure 10: Cascade of infants from HIV exposure to initiation on ART

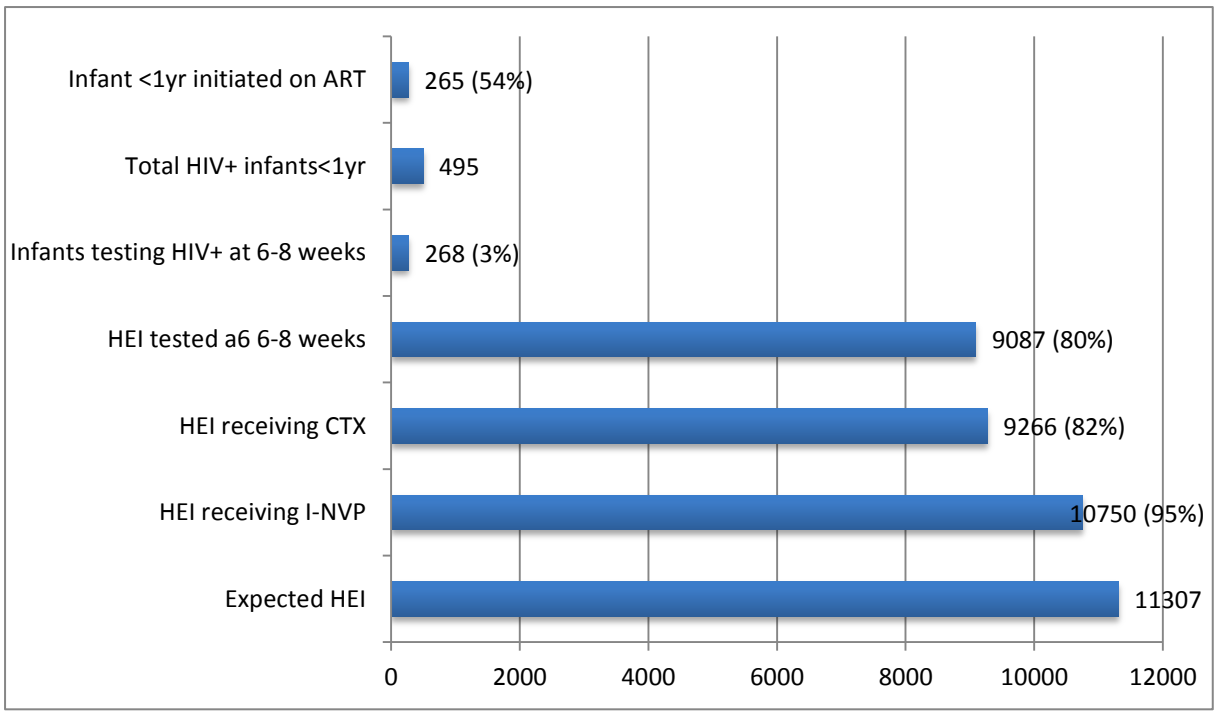
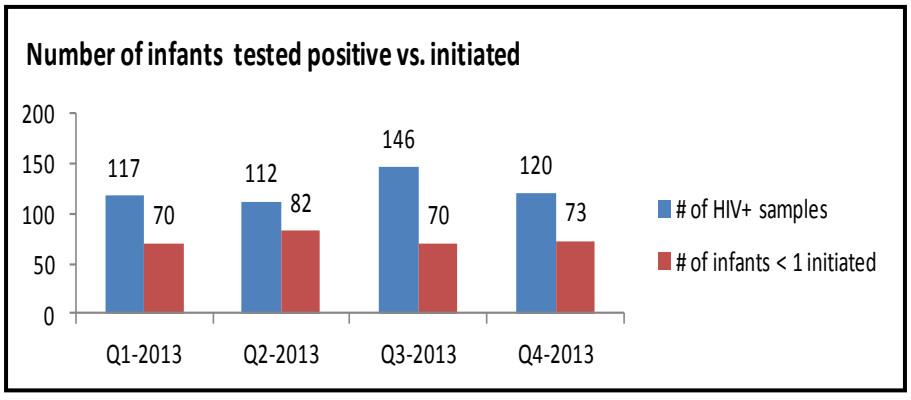


Figure 10 presents a cascade of infants from when they are exposed to HIV to the stage of when they become eligible for ART and eventually initiated on ART. As presented in the figure, of the 9087 infants who were tested for HIV by 2013, 495 were diagnosed HIV positive. Among the 495 HIV positive infants, 54% were eventually initiated on ART. The results suggest for accelerated efforts in terms of early initiation of HIV positive infants.

Figure 11: Number of infants tested HIV positive compared to infants initiated on ART by quarter in 2013.



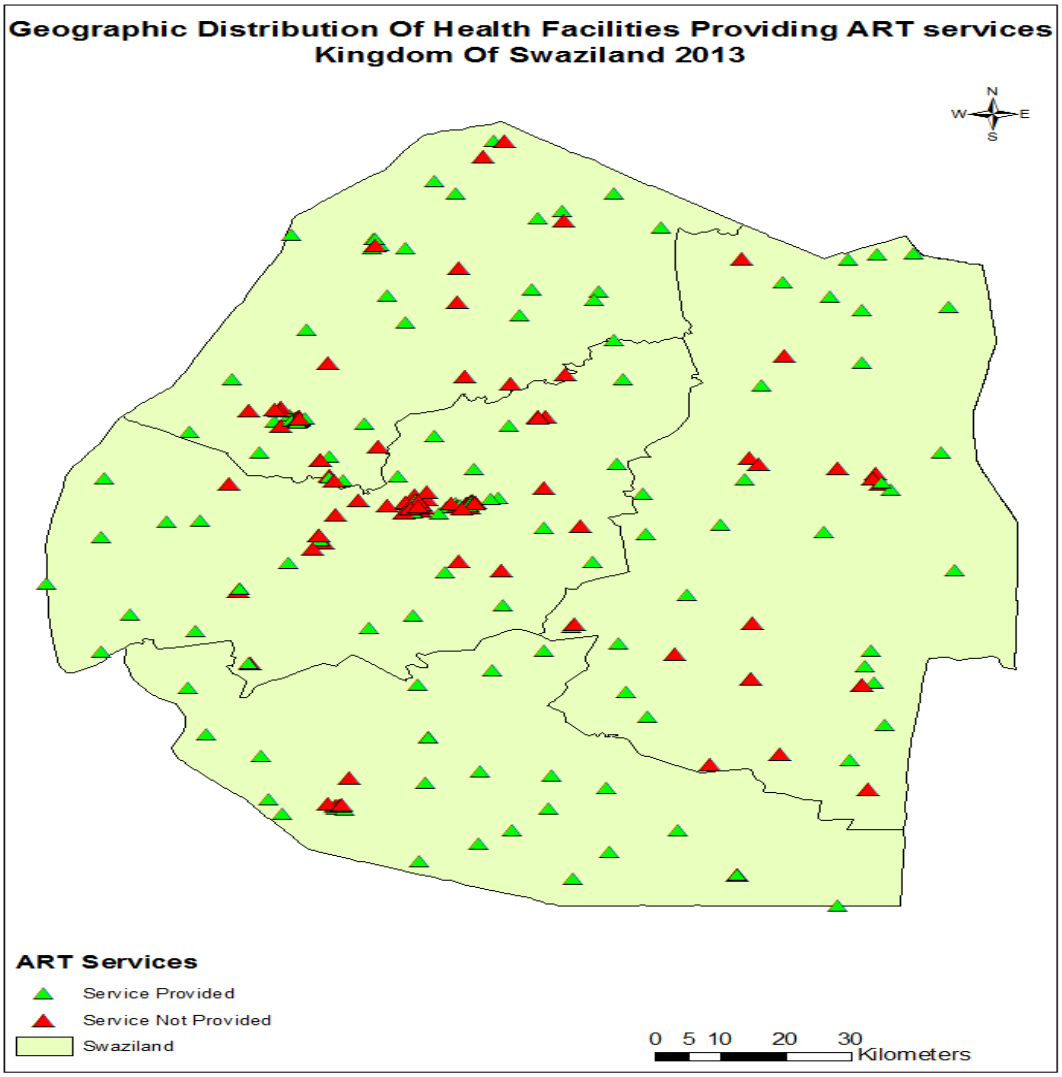
The bar graph Figure 11 above presents data on infants stratified by infants who tested HIV positive and those who were initiated on ART in 2013. Notably more (146) infants were diagnosed HIV positive in quarter 3 of 2013. However, of the 146 infants who tested HIV positive, less than 50% of them were initiated on ART. These results suggest a rigorous follow-up and linkage of HIV positive infants into care and ART services.

3.3 ART

3.3.1 Geographic coverage of ART services

The table and map below show the distribution of facilities providing ART services in the country in 2013. There has been a steady increase in number of health facilities providing ART services during 2013. However, more focus was put on ensuring that the facilities provide comprehensive services that also include TB diagnosis and treatment.

Figure 12:Spatial distribution of health facilities providing HIV and AIDS care and treatment services in Swaziland in 2013



As presented in the map above, it is worth noting that by 2013 there were a few sites providing ARV refills only, which means that more health facilities were upgraded/accredited to provide ART initiation services, especially led by nurses.

Table 14 presents a frequency distribution of health facilities within regions and across regions in Swaziland by the end of 2013. The facilities are also disaggregated by facilities that initiate ART and those that provide ART refills and follow-up care services for patients.. The table also shows coverage in percentage for facilities providing ART refill services.

Table 14: Number of facilities providing ART initiation and refills services versus ART refill facilities by region in 2013.

Regions	Number of facilities		Total	
	Initiation and Refills	Refills only	Number	Percentage
Hhohho	24	10	34	25.56%
Lubombo	23	5	28	21.05%

Manzini	44	0	44	33.08%
Shiselweni	26	1	27	20.30%
Total	117	**16**	**133**	**100.00%**

The table shows that 33% of the facilities providing ART services are in the Manzini Region, which also corresponds to the high number of health facilities in the densely populated region. The majority of facilities providing ART services (80.5%), are public owned (government and mission) health facilities.. All the large private hospitals and clinics have been accredited to provide free ARVs supplied by the government of Swaziland. The remaining facilities that still need accreditation are small private clinics, some of which (e.g. dental surgeries) are not suited for long term ART provision.

3.3.2 Pre ART and Pre-ART Enrolment

The Pre-ART program is designed to provide services for people who test HIV positive but are not eligible for ART initiation. The package of care for ART is described in the comprehensive HIV package of care of 2010. This keeps patients in care and allows for timely initiation of ART as soon as the patients are eligible. This also allows for the timely diagnosis and management of opportunistic infections plus execution of routine clinical and laboratory patient follow-up services.

Table 15 below shows the number of HIV positive individuals enrolled into pre-ART during the year 2013. It is however worth-noting that data capturing for Pre-ART services is still in its infancy stage, and there is a lot of room for improvement. The figures reported here are lower than in 2012 and may not be representative of the actual situation on the ground as pre-ART data is not adequately captured into the electronic ART patient management system. It should be noted that the figures reported for Shiselweni region are from only one facility.

Table 15: Number of individuals enrolled on pre-ART stratified by children and adults

Region	Tested HIV+	Age-group in years		HIV+ in Pre-ART (%)
		(>=15)	(<15)	
Hhohho		8349	291	
Lubombo		5573	258	
Manzini		8823	273	
Shiselweni (1 Facility)		51	0	

**Data is from 112 ICAP supported sites which do Pre ART data capturing*

Quality of clinical care

Table 16 below shows the number of HIV positive individuals enrolled into pre-ART during the year 2013. It is however worth-noting that data capturing for Pre-ART services is still in its infancy and there is a lot of room for improvement. The figures reported here are lower than in 2012 and may not be representative of the actual situation on the ground as pre-ART data is not adequately captured into the electronic ART patient management system. It should be noted that the figures reported for Shiselweni region are from only one facility.

Table 16: Percentage of People Living with HIV receiving quality clinical care services in 2013

Indicator	National Target	Achieved
Proportion of clients enrolled on Pre-ART put on CTX	100%	94%

Proportion of HIV clients seen and screed for TB	100%	97%
% of TB co-infected Pre-ART clients initiated on TB treatment	100%	98%
% of enrolled Pre-ART clients assessed for ART eligibility	100%	94%
% of eligible Pre-ART clients initiated on ART	95%	83%

Ninety four percent of people on pre-ART were put on co-trimoxazole preventive therapy in 2013. This is good coverage and is a pillar of the pre-ART package of care. The majority of pre-ART patients were screened for TB and 98% of those diagnosed with TB were successfully enrolled into anti-TB treatment. It is of concern that only 83% of eligible pre-ART patients were initiated on ART, whereas the target is 95%. The National ART program, therefore, will continue to accelerating efforts aimed at linking Pre-ART patients to HIV and AIDS treatment services.

3.3.3 Antiretroviral Therapy

As the HIV pandemic matures, increasing numbers of people are reaching advanced stages of HIV infection. Antiretroviral combination therapy has demonstrated to reduce mortality among those infected, and efforts have been made to make it more affordable and accessible to all who need the services in the country. This section assesses progress in providing antiretroviral combination therapy to everyone with advanced HIV infection (eligible for ART) in the country. This section will also present performance of the national ART program in retaining patients in clinical care, hence prolonging the lives.

3.3.4 New ART Enrolments

The numbers of HIV infected people who are initiated on ART have increased over the years. Such an increase is attributed possible to the operationalization of the decentralization strategy for ART services. ART Services' accessibility and uptake have improved since ART services are conveniently provided within local health care facilities in communities. The table 13 presents number of HIV infected people who were initiated on ART over time stratified by region and age category. It compares numbers of HIV infected people who were in initiated on ART in 2013 to those initiated in 2011 and 2012. The data is also disaggregated by region and age (adults vs children). The country has averaged over 15,300 initiations over the last year. The number of children initiating ART has declined slightly over the last 3 years. Hhohho region has shown the largest decline (47%) in children initiating ART between 2011 and 2012. Generally the trend in ART initiations is upward, and this is in keeping with the expansion that has happened in the ART program.

Table 17: Number of individuals newly enrolled on ART by region, age group and year of initiation

Region	Age group in years	2011	2012	2013
Hhohho	(<15)	494	307	259
	(15+)	3316	3514	3536
Lubombo	(<15)	298	267	263
	(15+)	2422	2336	2468
Manzini	(<15)	375	454	416
	(15+)	4433	5916	6379
Shiselweni	(<15)	218	206	228
	(15+)	2628	2438	2830
Sub Total	**(<15)**	**1385**	**1234**	**1166**
	(15+)	**12799**	**14204**	**15213**
Grand Total		**14184**	**15438**	**16379**

The Figure 13is a graphical representation on number of HIV infected people who are newly initiated on by region and age category in 2013. The Manzini region recorded the highest number of patients who were initiated compared the other administrative regions. This is expected as this region is densely populated and has the highest number of health facilities in the country.

Figure 13: Number of HIV infected people initiated on ART by region and age in 2013

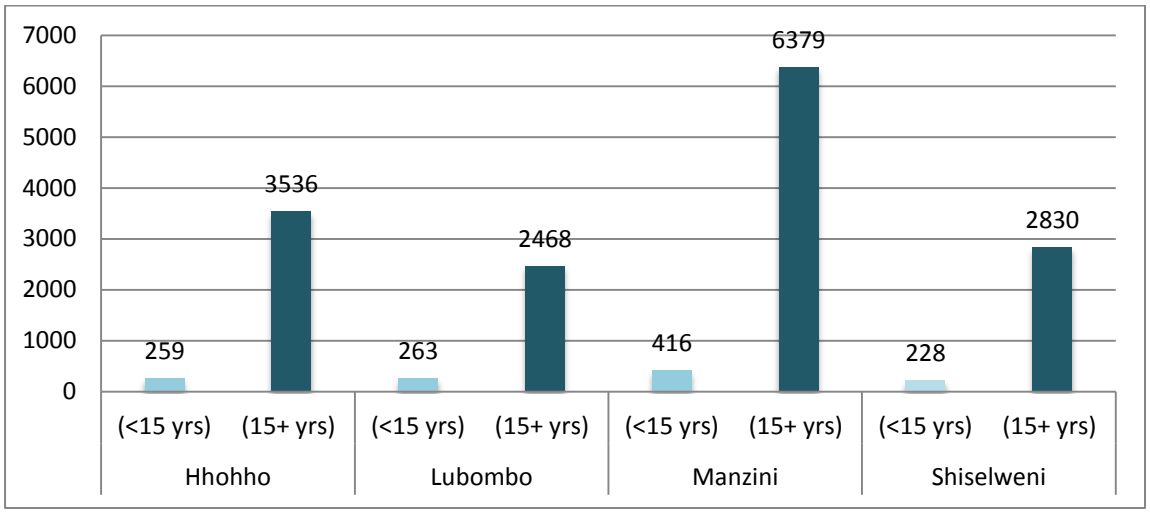
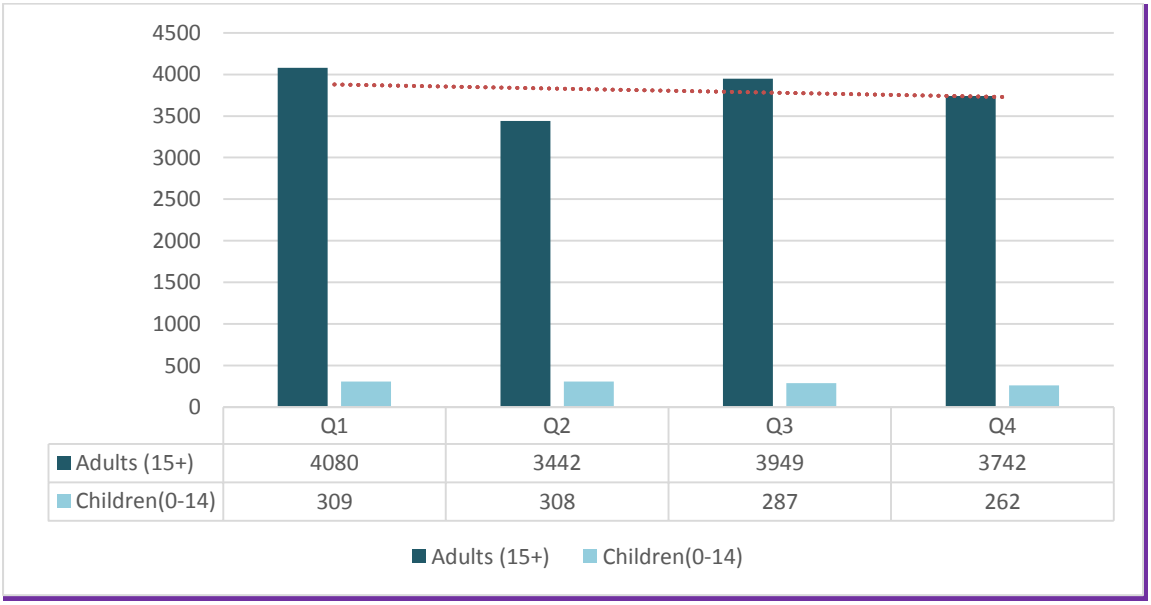


Figure 14: Number of patients newly initiated on ART by age and quarter in 2013



The Figure 14 presents the number of HIV infected people who were initiated on ART stratified by age group and quarter in 2013. The number of patients initiated on ART was fairly constant through the four quarters in 2013, although quarter one recorded the highest number of patients who were initiated on ART.

3.3.5 Cumulative on ART

Table 18: Cumulative number of HIV infected people receiving ART services by region and age

Region	age group in years	2011	2012	2013
Hhohho	(<15)	3174	3460	3752
	(15+)	25825	30597	38145
Lubombo	(<15)	1993	2200	2316

	(15+)	16408	19263	21227
Manzini	(<15)	1941	2355	2531
	(15+)	25993	33876	41293
Shiselweni	(<15)	1316	1522	1670
	(15+)	16645	19632	22486
Sub Total	(<15)	**8424**	**9537**	**10269**
	(15+)	**84871**	**103368**	**123151**
Grand Total		**93295**	**112905**	**133420**

The Table 18 shows the cumulative number of patients on ART stratified by region and age-group during the period of2011 to 2013. The data presented on table 14 indicate gradual increase in the number of patients initiated on ART over time. As many as 133, 420 people have been initiated on ART by the end of 2013 in Swaziland.

Figure 15: Cumulative number of people on ART over time by region

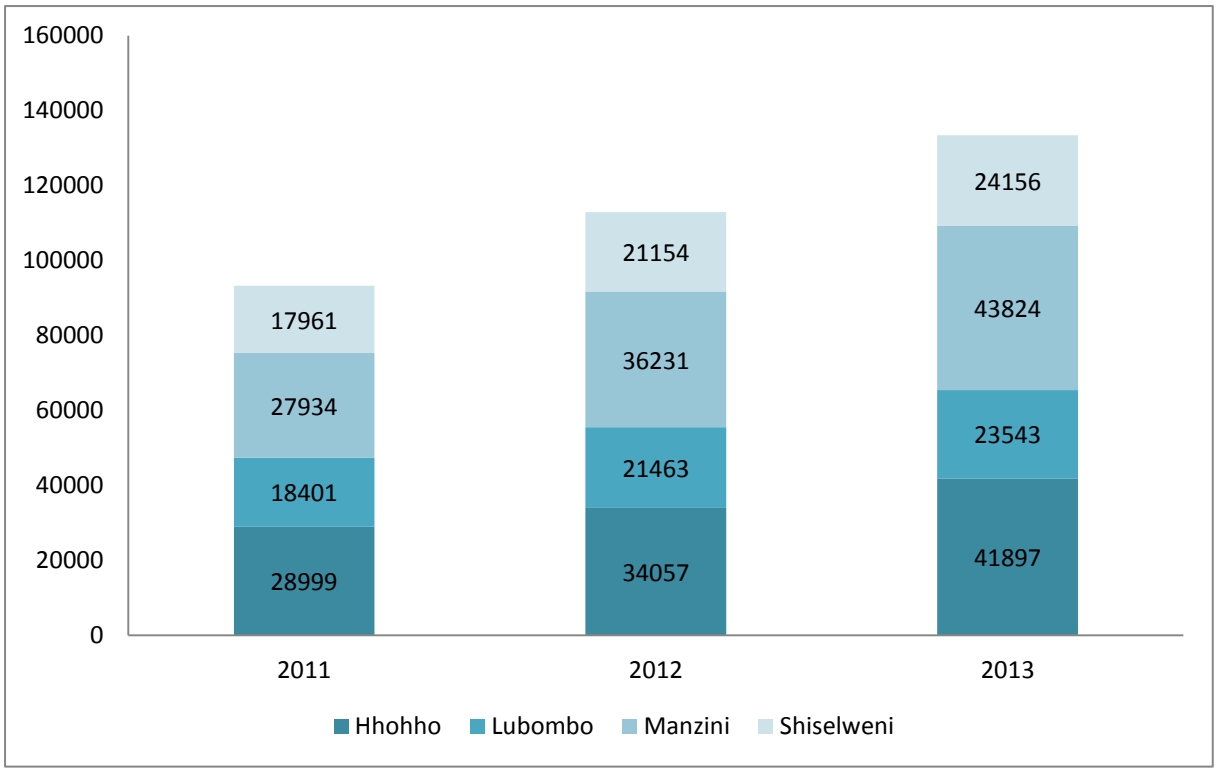


Figure 15 is a graphical illustration of the cumulative number of people ever initiated on ART stratified by region and year. As presented on figure 7, the Manzini region has surpassed the Hhohho region and now contributes the highest number of patients ever initiated on ART.

3.3.6 Current on ART

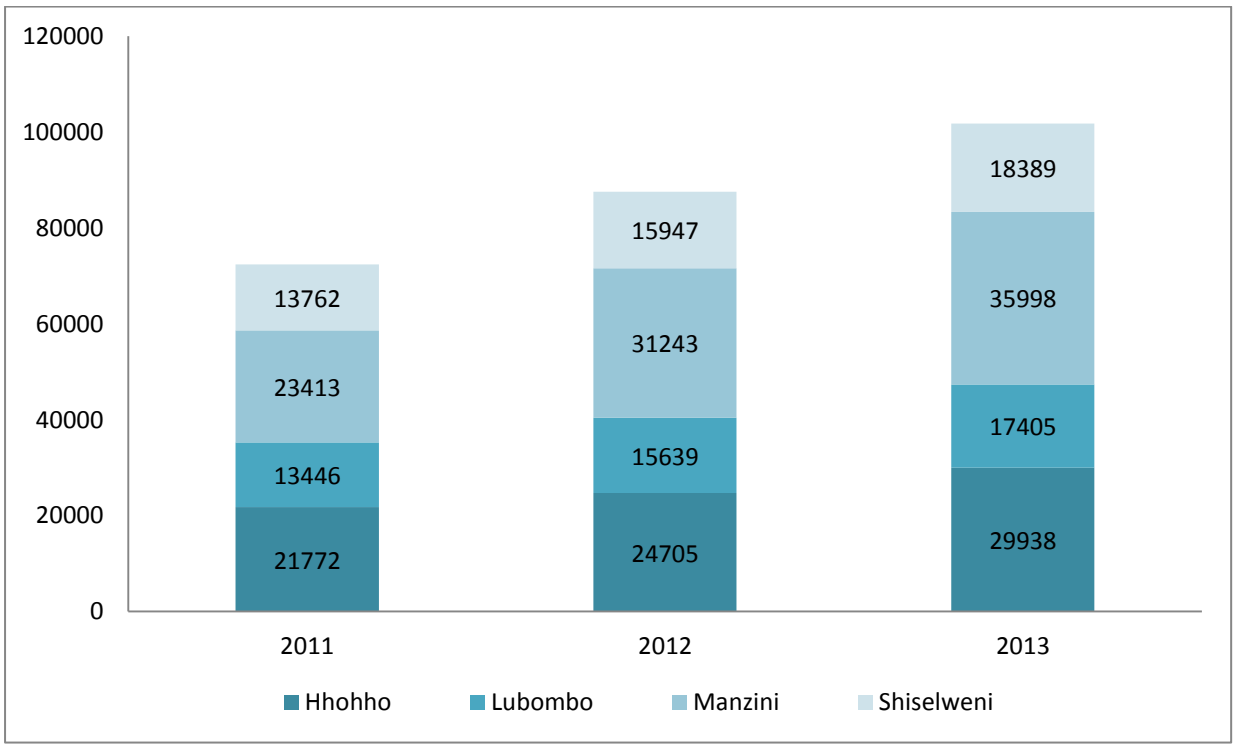
This section presents the number of patients currently on ART (Active patients). These are patients who have been retained in care and continue to receive ART services. The number of people currently active on ART should have a direct relationship with the consumption of ARVs in the country and also a reflection of the program's ability to retain patients in care. By the end of 2013 101, 730 patients were actively on ART (table 15). Children made up 7.8% of the population currently on ART. The Manzini region recorded the highest number of patients actively on ART from 2011 to 2013 compared to the other regions.

Table 19: Number people actively on ART by region and age group from 2011 to 2013 in Swaziland

Region	age group in years	2011	2012	2013
Hhohho	(<15)	2201	2409	2639
	(15+)	19571	22296	27299
Lubombo	(<15)	1490	1590	1671
	(15+)	11956	14049	15734
Manzini	(<15)	1782	2185	2241
	(15+)	21631	2905	33757
Shiselweni	(<15)	1085	1247	1392
	(15+)	12677	14700	16997
Sub Total	(<15)	**6567**	**7431**	**7943**
	(15+)	**65835**	**80103**	**93787**
Grand Total		**72402**	**87534**	**101730**

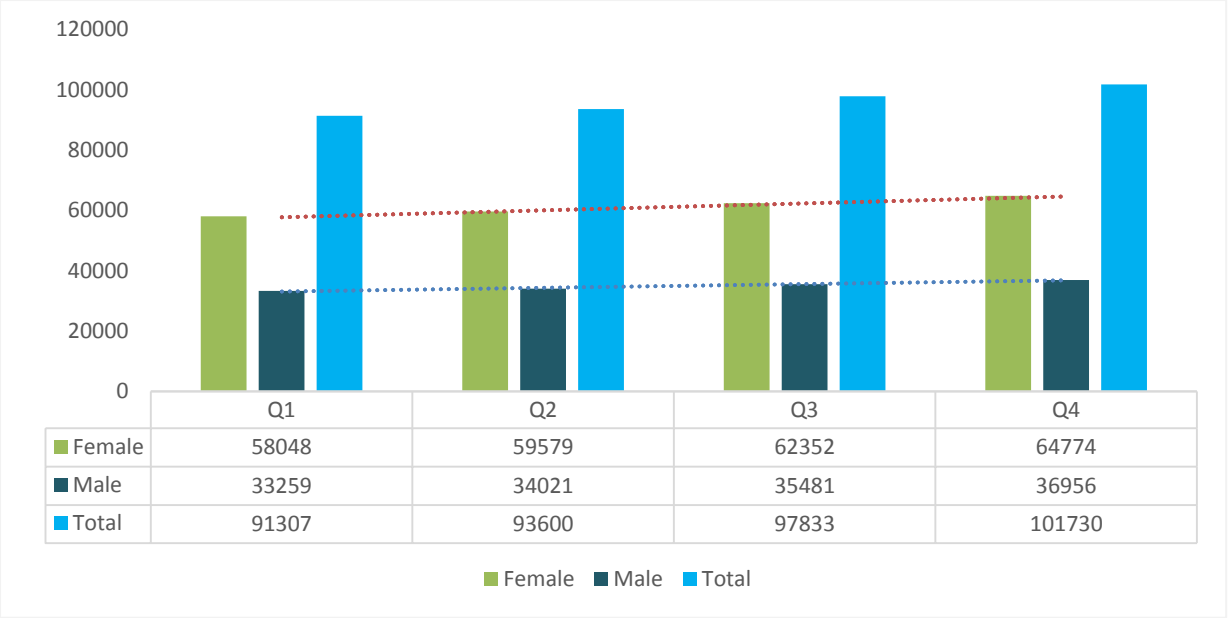
The figure 8 is a graphical illustration on the number of patients actively on ART across the four regions in 2013. The data presented on figure 8 suggest an upward trend of people currently on ART in all the regions with Manzini region recording the highest number of patients actively on ART..

Figure 16: Number of patients actively on ART by region from 2011 to 2013



The Figure 16 shows number of patients on ART stratified by sex over the four quarters of 2013.The data presented in figure 9 shows an upward trend on both males and females actively on ART since the beginning of the year, from 58048 in Q1 to 64774 in Q2 for females and from 33259 in Q1 to 36956 males, respectively.

Figure 17: Number of HIV infected people currently on ART by sex and quarter in 2013

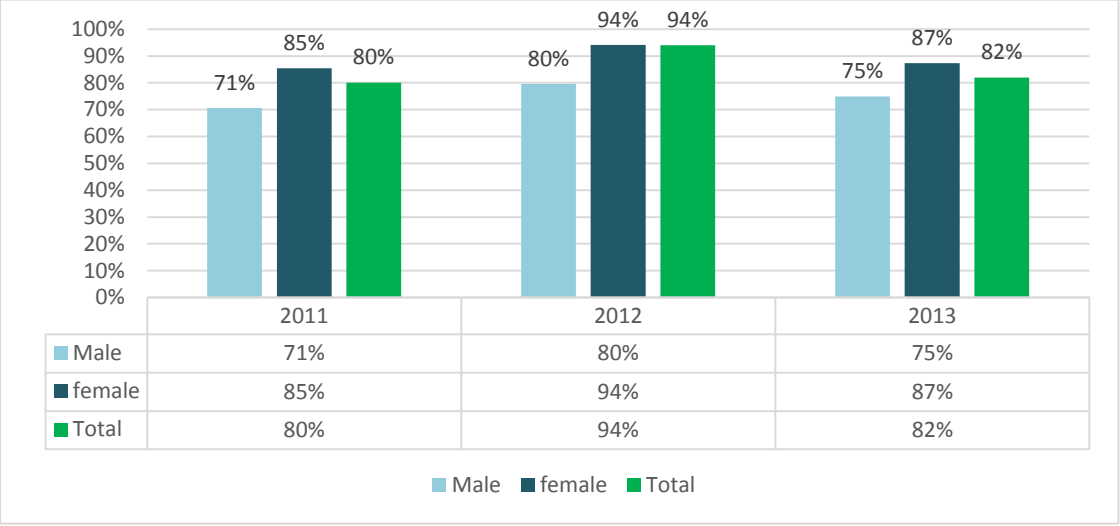


	Q1	Q2	Q3	Q4
Female	58048	59579	62352	64774
Male	33259	34021	35481	36956
Total	91307	93600	97833	101730

3.3.6.1 ART coverage

Mahy et al define ART coverage as the number of individuals receiving ART at a point in time divided by the number of individuals who are eligible to receive treatment at the same point in time (including those who are already receiving ART)[1]. The United Nations General Assembly Special Session on HIV and AIDS (UNGASS) also recommends this measure to measure access to ART services. We adopted the same measure to assess coverage of the national ART program. The SPECTRUM was used estimate the number of HIV infected people (>=15 years) in need of ART at the start of each year from 2011 to 2013.

Figure 18: Percentage of HIV infected people receiving ART among those in need by sex from 2011 to 2013



	2011	2012	2013
Male	71%	80%	75%
female	85%	94%	87%
Total	80%	94%	82%

Figure 18 presents ART coverage in percentage stratified by sex over a period of three years (2011-2013). As presented in figure 10, the ART coverage slightly dropped in 2013. This is due, firstly, to an improvement in the estimation of the population in need of ART. There were significant improvements made to the information and assumptions used in SPECTRUM that allowed for better estimates of the number of PLHIV and the number in need of ART. Also, the biggest change was that we were able to include data from SHIMS to help fine tune the estimates. Secondly, the drop in the coverage could also be attributed to the change in the threshold for ART initiation from CD4 cell count <=350 cell/mm^3 to <=500 cells/ mm^3. This also suggests that the coverage rate sensitive to change in ART eligibility criteria since an increase in ART initiation threshold will increase the population eligible for ART, in turn increasing the denominator and lowering the numerator the

measure (coverage rate). As a result, the ART program seems to have decreased coverage even if it is currently enrolling eligible adult patients at a high rate. However, ART coverage rate in eligible children remain low at 75%.

3.3.7 Retention in Care

Data on retention was extracted from the ART Patient Management Information System.) For this report, "retention in care" refers to patients known to be alive and receiving highly active ART at the end of 2013. Therefore our "attrition" includes death, loss to follow-up and stopping ARV medications while remaining in care x. Patients transferred to another ART facility where not regarded as attrition—patients who were transferred to another facility are assumed to be retained in care since we are measuring national program retention not site specific retention. Patients are defined to be Lost to follow-up if they were more than 3 months (90 days) late for their scheduled consultation/medication pickup visit or unscheduled visit. Refer to annex xx for a detailed analysis procedure for retention in care. In this report we report patient retention at months 6, 12, 24, 36, 48, 60, and 72. The following data elements, therefore, informed the calculation of retention rate in this context. ART start date

Baseline ART regimen (although the procedure was not conservative for patients with missing record on baseline ART as long is there was ART start date and follow-up records on prescribed ART medication)

- Patient's last scheduled visit
- Patient's last appointment date
- Patient's last unscheduled visit
- Deceased data
- Transfer out date
- Treatment stopped data
- Treatment restart date
- LTFU date

Table 20: Patients' retention rates at 6, 12, 24, 36, 48, 60, and 72 months after ART initiation by age and cohort

Cohort	6 mo		12 mo		24 mo		36 mo		48 mo		60 mo		72 mo	
	(<15)	(>=15)	(<15)	(>=15)	(<15)	(>=15)	(<15)	(>=15)	(<15)	(>=15)	(<15)	(>=15)	(<15)	(>=15)
2007	81%	82%	73%	76%	67%	70%	63%	64%	58%	59%	54%	54%	51%	49%
2008	88%	85%	82%	78%	75%	71%	68%	65%	62%	59%	57%	53%		
2009	87%	85%	81%	78%	74%	71%	68%	64%	63%	58%				
2010	87%	86%	80%	80%	73%	71%	65%	62%						
2011	89%	88%	82%	80%	69%	69%								
2012	84%	87%	76%	77%										
2013	85%	86%												

Table 20 presents retention rates at 6, 12, 24, 36, 48, 60 and 72 by annualised cohort and age group. As presented in the table, retention rates peaked between 2010 and 2011 but appear to be declining since then. For instance, retention in care among children (<15 years) decline from 89% in 2011 to 85% in 2013 and among adults it dropped from 88% in 2011 to 86% in 2013, respectively, at 6 months after ART initiation. This could be of concern to the ART program as it suggests that more patients are lost to follow up. Therefore, accelerated efforts to strengthen defaulter tracing mechanisms will continue to be a priority for the program. However, the drop in retention rate could also be explained by improved and conservative analysis procedure for retention.

3.3.8 Clinical characteristics of people starting ART

3.3.8.1 Baseline CD4 count at initiation

Numerous studies have demonstrated that the baseline CD4 count serves as a significant prognostic indicator for treatment outcome. Therefore it is very useful to describe this biomarker for people initiating on ART. Due to data inadequate the baseline CD4 was only reviewed and analysed for adults (>=15 years).

Table 21: Proportion of patients by sex and baseline CD4 classification

Gender	CD4+ Category				
	<=50	51-200	201-350	351-500	>500
	# (%)	# (%)	# (%)	# (%)	# (%)
Female	879 (6.84)	3,175 (31.95)	4,414 (44.42)	1,063 (10.7)	407 (4.1)
Male	840 (14.32)	2,471 (42.12)	2,025 (34.52)	406 (6.92)	125 (2.13)
TOTAL	**1,719 (10.88)**	**5,646 (35.72)**	**6,439 (40.74)**	**1,469 (9.29)**	**532 (3.37)**

Table 21 reports number and percentage of patients (>=15 years) stratified by their sex and baseline CD4 classification. The data in the table show that women still make up the majority of patients on ART. As presented in table 17, a larger proportion of women present to health facilities for treatment with CD4 count ranging from 201-350cell/mm^3 while more men present to health facilities with advanced HIV (51-200 CD4 count cell/mm^3. However, women are expected to present early (with high baseline CD4 levels) at facilities with the introduction of the Option B+ program.. As indicated in the table, men generally present late for treatment and this is evidenced by 56.44% presenting with a CD4 less 200 cells/mm^3. Similar trend is observed for men in their median CD4 at ART initiation (

Figure 19: Trend analysis of baseline median CD4 count over time by sex

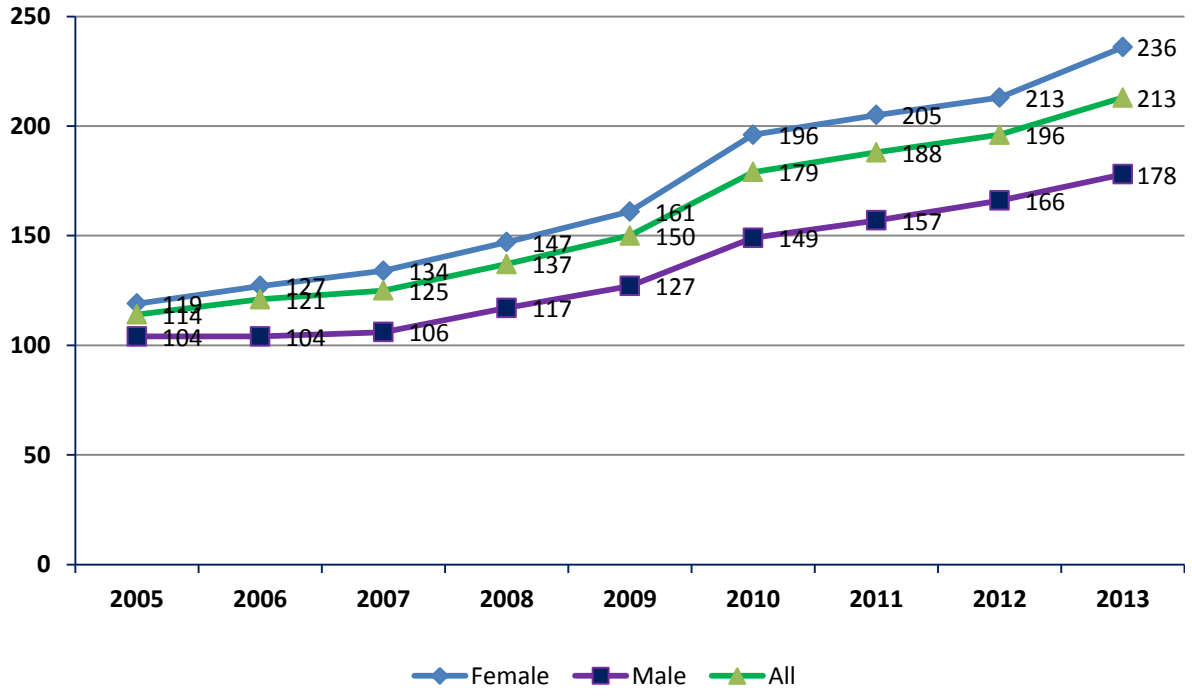


Figure 19 is a line graph presenting a trend analysis of median CD4 for patients (>=15 years) at baseline stratified by sex. The data presented in figure 11 indicate a steady increase of baseline CD4 for patients overtime with men presenting with advanced HIV compared to women.

3.3.8.2 WHO clinical stage at initiation

Table 22: Frequency distribution of patients by sex and WHO clinical stage

Gender	WHO clinical stage			
	I	II	III	IV
	# (%)	# (%)	# (%)	# (%)
Female	4,888 (44.420	3,089 (28.07)	2,246 (20.41)	459 (4.17)
Male	2,020 (30.23)	1,935 (28.95)	2,084 (31.18)	414 (6.19)
TOTAL	6,908 (39.06)	5,024 (28.41)	4,330 (24.48)	873 (4.94)

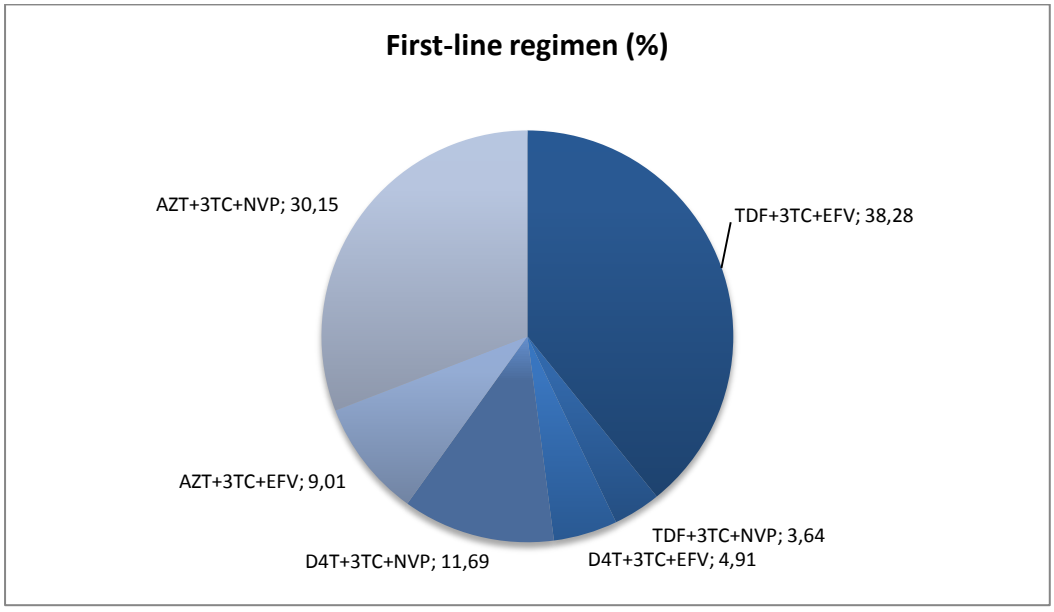
Table 22 present a frequency distribution of patients on ART stratified by sex and their baseline WHO clinical stage. As presented in table 17 majority of patients present late for treatment with WHO clinical stage I or II. The data suggest accelerated efforts for linkage to care of HIV infected people and early initiation on ART.

3.3.9 Regimen distribution (Current ART regimen)

3.3.9.1 Adult regimen

Figure 12 is a pie chart showing a frequency distribution of patients classified by their current first line regimen.

Figure 20: Frequency distribution of patients by current first line regimen



As presented in Figure 20 a high proportion of patients are now on a TDF based regimen. However, we still have a significant number of patients on d4T based regimen. Among the patients on ART, less than 2% of them are on second line regimen.

3.3.9.2 Paediatric ART

Figure 21: Frequency distribution of paediatrics on ART by first line regimen

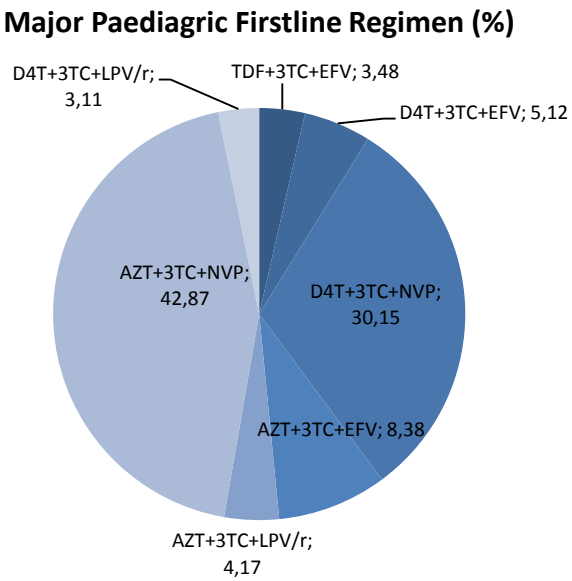


Figure 21 is a pie chart presenting frequency distribution of paediatrics on ART categorised by their first line regimen. As presented in the pie chart, a high proportion (42.87 %) of paediatric patients are on an AZT based regimen. This is expected as AZT fixed dose (FDC) preparation has been used extensively since 2010. D4T based regimen make up a significant proportion (30.15%) of paediatric regimen as they were also available in a fixed dose format and had been the preferred first line regimen prior to the availability of AZT based FDCs.

CHAPTER 4: PROGRAMME ACHIEVEMENTS & CHALLENGES

4.1. HTC

4.1.1. Trainings/ Capacity building

CHTC training

These are certified trainings for health care professionals to improve their capacity for couple HTC service provision, also guided by the national HTC guidelines and SOPs. The training is conducted over 3 days' theory.

4.1.1.2 CIHTC training

This training is designed for lay counsellors who will be employed as HTC counsellors. This is a 6 weeks training, where one week is theory, one week laboratory and four weeks for practicum. The entry requirements for this training are at least a diploma in health science related field and or social sciences, certificate in nursing assistant, has completed form 5 high school education. There are only two training institutions mandated by MoH to conduct trainings i.e. PSI and TASC. For certification HTC counsellors must undergo all of the following: 6 days theory training, 4 weeks supervised practical training, 5 days phlebotomy training, follow up mentoring sessions

4.2. PMTCT

4.2.1. The official launch of the EMTCT framework and its operational plan

In March, 2013 in a final push towards achieving Global Plan goals, Swaziland launched a national strategic framework for the Elimination of New HIV Infections among Children by 2015 and Keeping Their Mothers Alive. The framework was developed by the Government of Swaziland with support from PEPFAR, UNICEF, UNAIDS, WHO, and UNFPA. The launch was attended by Swaziland's Minister of Health, UNAIDS Executive Director-Michel Sidibe and U.S. Ambassador to Swaziland-Makila James.

4.2.2. Family Planning integration into HIV and other MNCH services

The second prong of comprehensive PMTCT services is prevention of unintended pregnancies among women living with HIV. The program developed an SOP to integrate FP services into all HIV care and treatment sites. Trainings and orientation on FP/ART integration have been conducted in all ART clinics in the 11 hospitals and health centres.

4.2.3. Revision of PMTCT Guidelines

Following the release of 2013 WHO recommendations, the PMTCT TWG revised the current PMTCT guidelines and adopted lifelong ART recommendation. These guidelines will be part of the comprehensive National HIV guidelines to be implemented in 2014.

4.2.4. Early infant male circumcision

All the 11 maternities are now providing EIMC services. The EIMC has been integrated in the MNCH platform. In 2013, 28 072 women were counseled on EIMC in ANC

4.2.4. PMTCT Impact Evaluation Report

In 2013 data analysis was done on an evaluation study to assess the impact of the PMTCT program. The report was finalized and shows that MTCT rate at 6 weeks was 2.2%

4.2.5. Option B+ Pilot Studies

The WHO (2013) guidelines recommend that lifelong ART as one of the options for PMTCT. These recommendations came at a time when Swaziland began undertaking Option B+ pilot through MSF in Shiselweni, and ICAP in Manzini and Lubombo. Results from these pilots will help inform the country in implementing lifelong ART for pregnant women.

4.2.6. Male and Community Involvement

The National MTCT Elimination Framework identifies poor community and male involvement as one of the key challenges in PMTCT services uptake in Swaziland. Swaziland has been employing several strategies to intensify the involvement of men and the community at large. This is being done through community dialogues, male dialogues and use of letters to accompany PMTCT clients for clinic visits. In 2013:

- More than 11 616 individuals were reached through community and male dialogues on PMTCT
- A total of 5000 partner invitation letters were printed and distributed for use at all health facilities
- A total of 700 male partners were tested in 2013
- A male health package was derived as part of prong 1 and 2 package and will be implemented to try and increase males services uptake

4.3. ART

4.3.1. Trainings/Capacity building

The table below details out the trainings that were provided throughout 2013. These include trainings coordinated by the national ART office i.e. the Advanced IMAI, Basic IMAI, NARTIS and EID trainings. A lot of the trainings are provided at facility level as part of the mentoring process.

4.3.2. Prevention Interventions

- PMTCT: With the introduction of Option B+, a significant part of the PMTCT program will essentially be ART service provision. The main strategy for PMTCT will be the provision of ART to the mother, to improve her health and further prevent transmission of HIV to the unborn child and later to the infant during breast feeding. Currently, 2 pilots on PMTCT Option B+ are on-going: one in the Shiselweni Region, Nhlangano Health Zone by MSF and the other by ICAP in the Manzini and Lubombo Regions, known as Safe Generations.
- Treatment as Prevention (TaSP): The country is conducting 2 pilots to assess the feasibility and scalability of Treatment as Prevention. These are the Early Access to ART pilot in Nhlangano Health Zone, and the MaxART Immediate Access to ART for All study in the Hhohho region.
- Condoms: All health facilities providing ART services are expected to provide condoms for their clients coming in for HIV care and treatment. It is also part of the package of services to discuss condom use with the client during their clinic visits.
- The positive health and dignity prevention strategy is incorporated into ART service delivery to improve the clients capacity to deal with their situation of being HIV positive.

4.3.3. Guideline Development Process

The development of new guidelines started in May 2013. It was anticipated the WHO will release new guidelines in June 2013 and the suggested changes were already anticipated. The treatment and care TWG commissioned small teams to start working on the development of new guidelines. The teams were: HTC guidelines, Adult ART guidelines, Paediatric guidelines and PMTCT guidelines teams. These teams met regularly and developed the different sections of the guidelines. SNAP-ART coordinated all the teams and was charged with ensuring that a single comprehensive document was produced. A graphic designer has been engaged to work on the final draft of the guidelines.

4.3.4. Curriculum Development

The program has been working with relevant programs such as SRH on the development of curricula to standardize all HIV related trainings in the country. There are two curricula being developed and currently in their finalization stage:

4.3.3.1 Integrated HIV curriculum

The integrated HIV curriculum will replace the Basic IMAI for nurses, Basic PMTCT training, Basic HTC training and Basic TB/HIV training. These trainings a will be combined into a single week long training to reduce costs, time spent at trainings by healthcare workers and costs. Programs will then do refresher/ advanced training on different aspects of program areas to build on this basic training in HIV. The process is now at an advanced stage as the objectives had been agreed on and a consultant has been engaged to put the document together based on the objectives set by the team.

4.3.3.2 NARTIS curriculum

The NARTIS curriculum has been finalized. It includes, a participant's manual, a facilitators guide and standardized slides for all the presentations. The program is now preparing a trainer of trainers (TOT) training to validate the curriculum and train regional trainers. The future plan is to have regional trainings run independently through Regional Trainers, unlike the current system which relies heavily on the National program staff to run the trainings. There were 111 nurses trained on NARTIS in 2013

5. CONCLUSIONS

The following section presents major achievements made in 2013 for HIV, PMTCT and ART services. Overall, service coverage has increased over the years with HTC services availability increasing from 51.2 % in 2008 to 77.4% in 2010 and is currently at 80.8%. According to SAM 2013, PMTCT services are provided in 12 more facilities compared to SAM 2010 where 150 facilities were offering PMTCT services, currently there are 162 facilities. In 2013 a total 133 facilities provided ART services, this is an increase from 70 facilities in 200 and 114 facilities in 2010.

In conclusion the 2013 report highlights

- A total of 347,966 antibody and DNA PCR tests done in 2013 indicating a 37.7% increase from the previous year.
- The report shows a decrease in the positivity rate of antibody tests done in 2013 at 9.7% and the previous year 2012 at 14.3%. There is high percentage of positive tests among 35-44 years males in 2013 which is in line with SHIMS 2011 report which shows an incidence peak for men at ages 30-34. Young people have differing positivity rates among the ages 15-24 (3.5% males and 8.5% females)
- The report also highlights an increase in provider initiated HTC at 58.5% in 2013 compared to client initiated HTC at 41.5%.
- 99% of pregnant woman were tested in 2013 which shows an increase as compared to 90.7% in 2012.
- HIV prevalence among ANC clients has increased from 34.4% in 2012 to 38.4% in 2013.
- All women eligible for retesting; 2.1% were HIV positive at ANC and 9.3% at labour and delivery.
- There were 2270 women eligible for ART, only 1640 (72%) were initiated.
- 95% of exposed infants received INVP.
- There has been an increase in the number of exposed infants taken for DNA PCR from 74% in 2012 to 80% in 2013. Three percent of exposed infants tested HIV positive.
- 83% of eligible patients were initiated on ART. This translates to about 15300 initiations over the last year.
- There has been an increase in the number of people on ART from 87,534 in 2012 to 101,730 in 2013.
- Clients retained to care has dropped over the years, in 2013 retention rate at 6 months was 86% a decrease from 87% in 2012 and 92% in 2011. Retention rate at 12 months was 77%, 24 months was 69% , 36 months was 64%, 48 months was 59% and 60 months was 54%
- The majority of initiations occur when CD4 count is between 201- 350, the majority are women. The second highest occurs between CD4 count 51- 200, the majority here are men.
- HTC uptake by TB patients has increase from 86% in 2010 to 96% in 2013. 74% of TB patients were HIV positive and 75% enrolled into ART.

6. RECOMMENDATIONS

HIV services in Swaziland are on the right track, however, to strengthen HIV service provision for 2014, the following recommendations should be considered:

- Implement SBCC interventions that target the key populations. From the 2013 report there is a need to engage young women between the ages of 15-24, and men 35-44 on reduction of risky behavior that puts them at disproportionate risk
- Implement the HIV curriculum
- Support provider initiated testing, and conduct research on the possible increase
- Engagement and involvement of private for profit health facilities in PMTCT and ensure they report services provided
- Implementation and roll-out of the revised PMTCT guidelines recommending ART for life for all HIV positive pregnant and lactating women
- Intensifying early provision of ART for HIV positive infants
- Conduct research on risk behaviors that lead to raise in sero-conversation rates of infants after 6-8 weeks
- Implementing and strengthening measures to improve adherence to PMTCT services with focus on early ANC and Post natal follow-up of mother-infant pairs up to 2 years
- NARTIS training be scaled up with a focus on region implementation using the TOTs
- Conduct research on ART retention rates; focusing on possible reasons for drop in retention rates

ANNEXURES

ANNEXURE 1: ART Data Management and Analysis Plan

Data Management

Data collection and entry

ART service data presented in this report was collected and documented in the patients' chronic file (chart) by health care providers in all health care facilities providing HIV and AIDS care and treatment services in Swaziland. Data were entered into a distributed National ART Patient Management Information System (APMIS) deployed in health facilities that are providing ART services. Once entered into the system, data were then sourced by MoH Database Administration Officer in a form of database back –ups using mobile data device. In health facilities where the APMIS is not yet deployed, data were aggregated and captured into monthly summary sheets. The monthly summary reports were submitted to the national M&E unit for collation and merging with data extracted from the APMIS.

Data Extraction Transformation and Staging

The different database back-up files from health facilities were handed over to IHM Data Management (DM) and Data Quality (DQ) team that provide technical assistance (TA) to MoH in restoring the different db files into a single MS server platform. The IHM DM and DQ team ran Extraction Transformation Staging and Loading (ETSL) procedures that facilitated merging of all databases into single staging area (database table) with all the required data variables for data analysis.

Data Quality procedure

Data in the staging area were loaded into Data Quality analysis tool (Talend Data Quality Tool version 5.1) for profiling and pin-pointing of data defects. Where possible, data defects were cleaned by the team using the same DQ tool. However, the team faced challenges in situations where some data values required to be cleaned from source. Cleaning data from source required visiting all health facilities to clean all identified data errors from source documents through consultation with frontline data collectors (Healthcare workers). The exercise of cleaning data from source proved to be quite cumbersome and resource heavy, and IHM had not budgeted for this activity during FY12-13. As a result, although data was automatically profiled and cleaned, some few data defects could not be addressed by the DQ team on the fly.

Data analysis

Preparation

The cleaned longitudinal data set was then exported from the MS server into Excel, text and CSV data format. The Excel data format was then handed over by IHM team to the ART analysis team (a team of experts from MoH SID, ART program, SNAP and all relevant IPs) during the analysis workshop.

Statistical software

The data was imported to STATA version 12. Statistical analyses will be performed using STATA 12 software and some frequency tabulation was done in MS excel, particularly for the data which came from health facilities as summaries.

Variables generation, recoding & encoding

The variable region was generated and recoded based on location of health facilities. Cleaning of health facility name and institution name was done to remove duplicates and inconsistencies in terms of naming of

data values. Variables on facility type and ownership were generated and coded based on facility name. Continuous variables like CD4 count and age were recoded into CD4 group and age-group, respectively. All date variables were formatted into STATA compatible date formats. For retention analysis, the time points (6, 12, 24, 36, 48, 60, 72) in months were generated based on initiation date for patients, and where there inconsistencies in terms of outcome determination they were tagged and excluded for analysis. The retention outcome variable was generated and recoded into four data values (1=RIC, 2=dead, 3=stopped treatment, 4=LTFU).

ART coverage

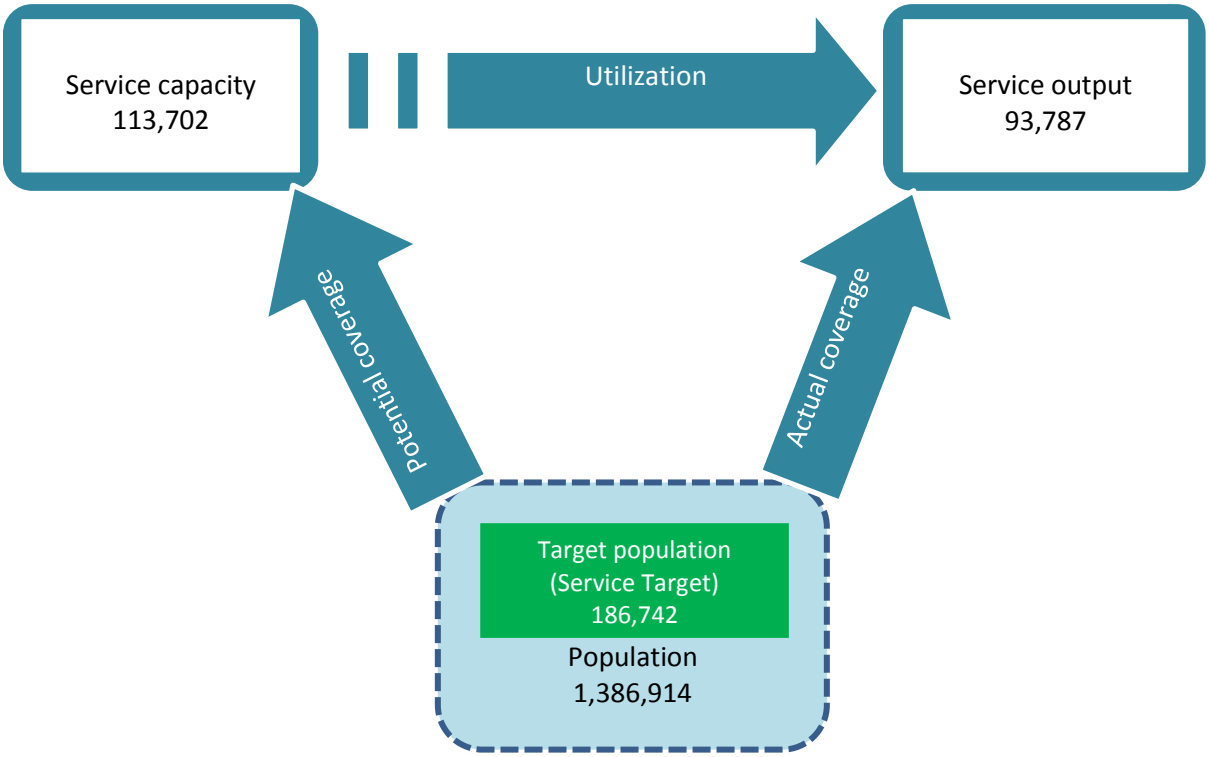


Figure 22: Schematic design of ART service coverage and utilization adapted from WHO, 1978

Mahy et al define ART coverage as the number of individuals receiving ART at a point in time divided by the number of individuals who are eligible to receive treatment at the same point in time (including those who are already receiving ART)[1]. The United Nations General Assembly Special Session on HIV and AIDS (UNGASS) also recommends this measure to measure access to ART services. WHO refers to such coverage as the provision-specific coverage (the target population for whom certain criteria related to service provision have been met) [2]. In this report the criteria that we adopted to calculate the program potential coverage (the denominator) was the CD4 eligibility criteria (CD4 count ≤500 cells/mm^3 for adults). The SPECTRUM for 2013 was used estimate the number of HIV infected people (>=15 years) in need of ART at the start of each year from 2011 to 2013. Below is the calculation for ART coverage rate for year 2013.

Coverage rate = (Number of Patient receiving ART/number eligible for ART)

Where:

Service target ***= Estimated number of HIV-infected people (>=15 years)***

Service capacity ***= Estimated number of PLHIV in need of ART***

Service output ***= Number of PLHIV actively receiving ART***

= ((93,787/113,702)*100%)

= 82.5%

Retention in care

Fox and Rosen define retention in care as the proportion of patients known to be alive and receiving ART [3, 4]. Elvin et al further operationalise retention into two classifications (clinic specific retention and program retention) [5]. For this report, "retention in care" refers to patients known to be alive and receiving highly active ART at the end of 2013 in the national ART program. Therefore our "attrition" includes patients who died, were lost to follow-up or stopped ARV medications. Patients transferred to another ART facility where not regarded as part of attrition. In fact, patients who were transferred to another facility are assumed to be retained in care since we were measuring program retention not site specific retention. Patients are defined to be Lost to follow-up if they were more than 3 months (90 days) late for their scheduled consultation/medication pickup visit or unscheduled visit. Unlike in other programs or retention studies where they reported retention up to 36 months, we report patient retention at months 6, 12, 24, 36, 48, 60, and 72.

Data on retention was extracted from the ART Patient Management Information System (APMIS). The following data elements, therefore, informed the calculation of retention rate in this context.

Variable	Definition	Data value
ART start date	Date when patient was initiated on ART	dd/mm/yyyy
Baseline ART regimen	The full ARV regimen on which a patient was initiated as a first line ARV treatment (although the procedure was not conservative for patients with missing record on baseline ART as long as there was ART start date and follow-up records on prescribed ART medication)	AZT+3TC+ABC AZT+3TC+EFV AZT+3TC+NVP D4T+3TC+EFV D4T+3TC+NVP TDF+3TC+EFV TDF+3TC+NVP ABC+3TC+LPV/r ABC+DDI+LPV/r AZT+3TC+LPV/r D4T+3TC+LPV/r TDF+3TC+LPV/r TDF+ABC+LPV/r
last scheduled visit	The date recorded on the last honoured visit as per scheduled appointment	dd/mm/yyyy
last appointment date	The last scheduled appointment date	dd/mm/yyyy
last unscheduled visit date	The date recorded on the last unscheduled visit	dd/mm/yyyy
Deceased date	Date when patient died	dd/mm/yyyy
Transfer out date	The date when patient was transferred out to another health facility	dd/mm/yyyy
Treatment stopped date	The date when patient stopped treatment	dd/mm/yyyy
Treatment restart date	The date when patient restarted treatment.	dd/mm/yyyy

We calculated retention proportions at each time point (t) as follows:

$$RT_t(\%)=(I_0 - D_t - LTFU_t - ST_t) / (I_0)$$

Where:

I_0: ***All patients initiated on ART***

D_t: ***All patients who died by time***

$LTFU_t$: ***All patients lost to follow-up by time***

ST_t: ***All patients who stopped treatment by time***

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ANNEX 2: TRAINING IN 2013

Training conducted in 2013 by AREA:

Major training type	Specific training type	Total
ART treatment	ART (introduction-refresher)	242
	Early Infant Diagnosis (DNA PCR)	5
	FP/HIV integration	49
	OI Management	203
	Palliative Care	472
	Patient Monitoring	65
	Paediatric ART	101
	Pre ART	571
	Prevention with positives training	387
	WHO Clinical Staging	42
Care support	Linkages To Care	368
	patient follow up training	142
	Adherence assessment	105
	APS Package	951
Communications	ART Communications	81
	Community Dialogue Facilitators Training	17
Health systems strengthening	Clinical mentorship training	58
	Good Clinical Practice	25
	HTC Training	1
	IMAI Training	117
	NARTIS Training	111
	Preceptorship	86
	Strategic Planning	347
	Leadership and Management	92
	MDT (introduction/Refresher)	40
Strategic information	Data Management training	256
	Monitoring and Evaluation	80
	QI Introduction/refresher	287
	NASAR Participation	92
	RESAR Participation	188
	RDQA Participation	75
TB/HIV	Isonized Preventive Therapy	129
	Pediatic TB/HIV	115
	TB/HIV	253