



Decentralisation of HIV/TB care in Shiselweni region of Swaziland

Making a difference

SUMMARY EVALUATION REPORT

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MANAGED BY THE VIENNA EVALUATION UNIT

Foreword

The present paper is a summary of four independent studies:

- literature research¹ on the decentralisation models and experiences in the resource-limited African context
- study of perception of different stakeholders²: MSF, health care staff, national authorities, international actors, patients and the wider community
- description of the decentralisation model of Shiselweni region and analysis of the programme outcomes in wider public health context³
- cost-effectiveness analysis⁴ of HIV service provision in primary health care clinics (PHCC) versus secondary health care facilities (SHCF)

Two additional papers that have contributed to this paper include the infection control report⁵ about new construction and rehabilitation works as well as the laboratory improvement report⁶ on innovative diagnostic methods.

Acknowledgements

Many heartfelt thanks go to all people who contributed to this work with their thoughts, advices, critics and sometimes just with a supportive smile. The scope of this evaluation is the first of its kind for MSF-CH and the contribution from many people has facilitated accomplishment of this wide-ranging work. Thanks to all interviewees, regardless of their organisational affiliation and workplace – all staff in Shiselweni region, the MSF coordination teams based in Nhlngano and Mbabane, the national and regional representatives of the Ministry of Health of Swaziland, the colleagues and counterparts from other non-governmental organisations, the operational support teams and technical advisors of MSF based in Geneva – for their invaluable insights and great work. I hope that with our efforts we could reward their patience and graceful generosity at least partially. My gratitude goes to all evaluators who have given their best to collect and analyse this vast amount of information on the expense of many sleepless nights. And finally, immense thanks to my colleagues in the Vienna Evaluation Unit, Sabine Kampmüller and Sandra Bauer, for their unconditional and dedicated support.

¹ (Kurniasari and Turashvili 2012)

² (Turashvili, Becher, et al. March 2013)

³ (Turashvili and Kerschberger July 2013)

⁴ (Jouquet and Parker April 2013)

⁵ (Julliot, et al. August 2013)

⁶ (Obregon and Lassovski July 2013)

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The Vienna Evaluation Unit

The Vienna Evaluation unit started its work in 2005, aiming to contribute to learning and accountability in MSF through good quality evaluations. The unit manages different types of evaluations, learning exercises, anthropological studies and organises training workshops for evaluators.

More information is available at: <http://evaluation.msf.at>.

Electronic versions of evaluation reports are available on Tukul: <http://tukul.msf.org>.

Executive summary

The example of Shiselweni demonstrates that in the context of high prevalence of HIV/TB infections and limited resources available decentralisation of HIV and TB care from regional and district hospitals to primary health care clinics and community level is *the* way to improve access, coverage, effectiveness and efficiency of service delivery. It also improves satisfaction and acceptance of health service providers, direct beneficiaries and the wider community.

The key to a successful decentralisation is the improved capacity of human resources for health, with a strong and well implemented task-shifting component. Inclusion of lay people and namely people living with HIV/AIDS and TB in the service provision through task-shifting improves the acceptance of medical services by the affected population. It also decreases stigma as a principle access barrier and improves the self-esteem and recognition of the affected populations in the community. Intensification of infection control measures and adaptation of laboratory services to the needs of expanded health care were instrumental to the Shiselweni model of decentralisation.

Decentralisation of activities at primary health care clinic and community levels has greatly increased access to the diagnostic and curative services for HIV and TB patients. The proportion of people accessing the antiretroviral treatment (from those in need of it) reached 'universal' coverage⁷ in 2012 (versus baseline ART coverage of 17% in 2006).

Increased access was intertwined with improvement of treatment effectiveness over time. Antiretroviral treatment outcomes of annual cohorts at regional level have constantly improved at every follow-up interval (12, 18 and 24 months) with a tendency of the primary health care clinics to show better survival indicators as compared to the secondary health care facilities. TB treatment workload has shifted to the primary health care clinics and showed a clear trend of better treatment outcomes among all drug-sensitive TB patients at both health care levels. Less defined was an improvement in drug-resistant TB treatment outcomes though. Decreasing burden of TB and other HIV-related opportunistic infections (the main health hazard for the country's population) correlates well in time with the reduction of crude mortality in Shiselweni from 2008 to 2012.

Decentralisation is also highly cost-effective from the service provider perspective and allows a better use of resources than at a central level only. However, this study conforms to the earlier findings that decentralisation and task-shifting is not the means to save money but rather an opportunity to invest money in the health of the population with better outcomes.

In conclusion, decentralised health care with task shifting in Shiselweni has strengthened human resources for health, empowered PLWHA and the wider community. It resulted in improved access and better direct treatment outcomes. Through lowered burden of the opportunistic infections it might have contributed to the overall reduction of mortality in the region. Decentralization is an efficient way of using scarce resources; therefore it requires strong commitment from all stakeholders, in terms of adequate policies, practices and effective funding mechanisms.

⁷ 80% of population in need of ART are on treatment (WHO definition).

Abbreviations

ART	antiretroviral treatment
ARV/s	antiretroviral drug/s
CTC	community testing counsellors
CTS	community treatment supporters
DR-TB	drug-resistant tuberculosis
DST	drug sensitivity test
DS-TB	drug-sensitive tuberculosis
GDP	gross domestic product
HRH	human resources for health
HTC	HIV testing counsellors
ICER	incremental cost-effectiveness ratio
MDR-TB	multidrug-resistant tuberculosis
MoH	Ministry of Health
MSF	Médecins Sans Frontières
MSF-CH	Médecins Sans Frontières Switzerland
MTB	mycobacterium tuberculosis
NGO	non-governmental organisation
NTSF	National Task-Shifting Framework
OCG	Operational Centre Geneva
OI	opportunistic infection/s
PHCC	primary health care clinics
PIMA	CD4 point-of-care machine
PLWHA	people living with HIV and AIDS
PMTCT B+	prevention of mother-to-child transmission (WHO regimen with ART for all HIV-positive women)
PMTCT	prevention of mother-to-child transmission
POC	point-of-care
PSEC	patient support education and communication
SHCF	secondary health care facility/ies
VCT	voluntary counselling and testing
XDR-TB	extremely drug-resistant tuberculosis
Xpert®MTB/RIF	GeneXpert®MTB/RIF assay

1 Introduction

1.1 Background

The rise of the HIV/TB burden and the demand for equity of care require a scaling-up of the provision of HIV and TB services to decentralised care at grass root levels worldwide.⁸

Today, evidence emerges that antiretroviral treatment (ART) not only saves lives and alleviates suffering but also works as prevention and can slow down the epidemic.

The decentralisation concept has been used to deliver HIV care, subsequently broadened to HIV/TB care as co-epidemic diseases, to increase the scaling-up, coverage and impact especially in resource-limited settings.⁹ The problems behind the concept of decentralisation have also been realised, such as increased demand for already limited resources (e.g. quantity and quality of human resources, laboratory capacity), financial burden and lack of accountability, lack of community participation, political conflict between different levels of organisations as well as sustainability.¹⁰

1.2 MSF in Shiselweni, Swaziland

Five years after the initiation of an HIV/TB decentralisation and integration project in Swaziland, MSF Switzerland (MSF-CH) took the opportunity to retrospectively analyse its programme experience and data to explain lessons learned, including successes and failures, to the entire MSF movement, national authorities and international community.

Swaziland, with a population of 1.018 million people, is a small, mountainous country landlocked by South Africa and Mozambique and one of three monarchies in Africa. Despite its status as one of the 'healthier' countries in sub-Saharan Africa, the kingdom is only in 142nd place according to the human development index¹¹ of 2009 and an estimated 81% of the population live on less than US\$2 per day. The economy is highly dependent on that of South Africa and since the end of the 1990s economic growth has decreased to less than 0.4% in 2009.¹² The country has the highest HIV prevalence among adults aged 15 to 49 years worldwide. It reached about 26% in 2004 and levelled off there.¹³ Swaziland also has one of the highest tuberculosis incidence rates estimated at 1198 TB cases/100 000/year.¹⁴ The co-epidemic has substantially contributed to a halving of life expectancy within two decades – from 60 years in the 1990s to 31 in 2007.¹⁵

⁸ (MSF 2011)

⁹ (Fraser 2007)

¹⁰ (Rasson und Group. 2011), (Fraser 2007)

¹¹ (UNDP 2009)

¹² (UNDP 2009)

¹³ (UNAIDS 2010)

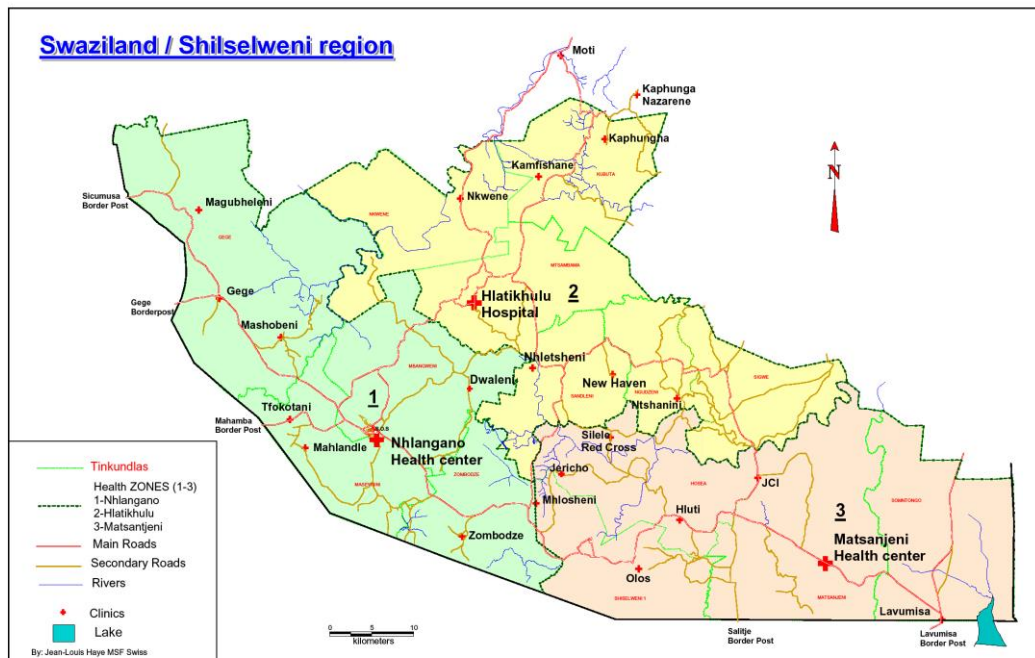
¹⁴ (WHO 2007)

¹⁵ (UNAIDS 2010)

After a four-month assessment, MSF-CH signed a memorandum of understanding with the Ministry of Health and Social Welfare in November 2007 to start providing HIV and TB care, including drug-resistant tuberculosis (DR-TB), throughout Shiselweni region of Swaziland. The region was considered as the poorest and most remote part of the country, challenged among others by poor health infrastructure and overall health outcomes.

According to the assessment, the following factors that needed to be countered immediately were identified: chronic staff shortages, absence of integration of HIV/TB services, largely centralised service and an inadequate capacity to provide HIV/TB care at primary clinics. Given the mountainous landscape, scattered populations and high transport costs, care was in practice inaccessible for the majority of Swazis living in rural areas.

Figure 1: map of Shiselweni region, Swaziland



1.3 Methodology

Beginning of 2012, the Vienna Evaluation Unit was commissioned with the task to conduct a comprehensive evaluation of the MSF-CH project in Swaziland. The main objective was to evaluate appropriateness, effectiveness and efficiency of a decentralisation model of HIV/AIDS & TB care in the period from 2008 to 2012.¹⁶

The purpose of the evaluation is

- to capitalise on the experience within MSF in order to inform similar projects elsewhere,

¹⁶ For terms of reference see 4.1.

- to share the experience with MSF partners in Swaziland and possibly promote its replication in the country and
- to share the experience of MSF/MoH widely through publication/s.

Given the large scale of the overall evaluation as well as the challenges faced by the data collection and monitoring systems, the evaluation was conducted stepwise. The following works were instrumental to this report.

1. The **main objective** of the literature review was to explore the processes of HIV/TB decentralisation¹⁷ in Africa by understanding different strategies in various countries, the challenges they face and the consequences to which they have led, and the role of task shifting in decentralisation. The review also aimed to assess the future perspectives of HIV/TB care and decentralisation in the resource-poor context. It reviewed 98 published papers and used the methodology of purposeful sampling.
2. The report on the decentralisation model of Shiselweni and its outcomes combines two parts. The main objectives were 1) to describe the strategies and activities employed by the HIV/TB decentralisation model of Shiselweni with a special focus on human resources for health (HRH) and task shifting; 2) to analyse and show health outcomes of the beneficiaries of the programme in wider public health perspective. The methodology is based on a project-related document review, the interviews and an analysis of routinely collected individual patient data.
3. The main objective of the perception study was to comprehend the acceptance of the HIV/TB decentralised programme in Shiselweni by all key stakeholders who had been involved in delivering health care or were benefiting from it. A detailed protocol was developed and approved by the ethics review boards of Swaziland and MSF. A total of 118 interview sessions were conducted.
4. The main objective of the cost-effectiveness study was to measure the cost-effectiveness of a decentralised approach (at PHCC level) versus a centralised approach (at SHCF level) in the Shiselweni region of Swaziland. Investigators employed a service-provider perspective of cost-analysis to answer the study question. Only patients on ART from Nhlangano zone were included. The estimates for both cost and effectiveness are based on a retrospective study of data routinely collected by the MoH and MSF.

The two additional reports responding to the ToR, laboratory report and infrastructure report, were compiled in the people who worked hands-on in implementing the innovative approaches.

The precise methodologies of the different elements are described in the respective reports.

¹⁷ Decentralisation strategies in this review include different approaches, which allow provision of medical services closer to patients in health centres or health posts or in the community.

2 Findings

2.1 Decentralisation model implemented in Shiselweni

In the resource-limited setting of Shiselweni region in Swaziland MSF-CH employed the following main strategies in order to achieve the goals of decentralised and integrated HIV/TB care:

- Pushing for decentralised services at the PHCC and community level and their integration with primary health care
- Strengthening human resources for health by ensuring effective task shifting to lower cadres and involving people living with HIV/AIDS (PLWHA) in service provision
- Bringing integrated HIV and TB services closer to people at primary health care clinics and community levels
- Ensuring point-of-care laboratory services
- Improving infrastructure and patient-flow to accommodate increased workload and effective infection control measures

This is quite a comprehensive approach which comprises the main priority lines contributing to the successful decentralisation practice as identified in the literature.

The HIV/TB care decentralisation strategies in Africa have been shaped by the following conditions (Kurniasari and Turashvili 2012):

1. The level of decentralised ART initiation and management
2. Supportive country policy and practice
3. Human resources for health and implementation of task shifting
4. Integration of HIV and TB care into existing health services
5. Adaptation of ART protocols and laboratory testing strategies
6. Optimisation of organisation of treatment and care

The particular strengths of Shiselweni model, as perceived and suggested by different stakeholders in 2012, are listed below and may be interesting for replication in Swaziland:

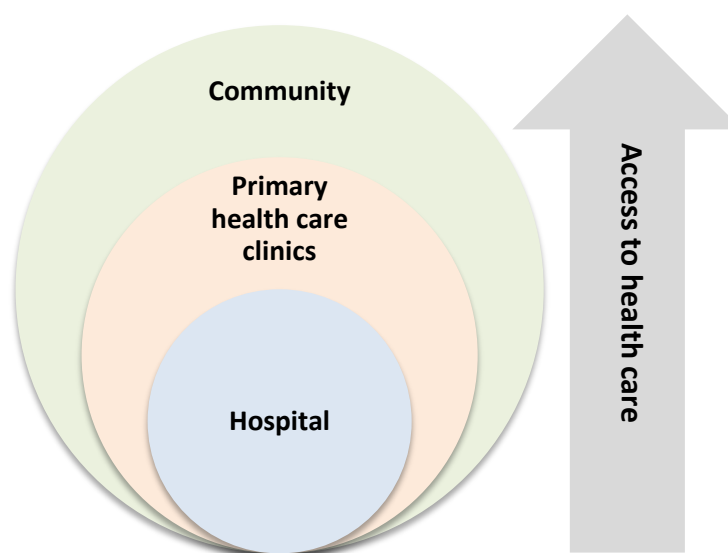
- Nurse-led ART and TB care at all health facilities
- Well-organised task shifting to new cadres
- Strong patient support, education and counselling by expert clients
- Strong HIV and TB integration with a relevant focus on (MDR) TB
- Decentralisation of laboratories by installing mini-laboratories at clinics and ensuring sample transportation to upgraded reference laboratories

- Piloting of innovations and operational research
- Community component, ensuring the link between health facilities and the community

2.2 The degree of decentralisation determines access

Due to the concerted efforts of MSF-CH and the regional and central authorities, impressive results have been achieved at the end of the five-year period of the HIV/TB decentralisation programme. Treatment and care for HIV/AIDS and drug-sensitive tuberculosis (DS-TB) are fully decentralised to 22 primary health care clinics of the region. These two programmes are integrated with other departments of the primary care, guaranteeing a provision of so needed 'point of care services' for patients. Most of the HIV and TB services are available at community level, except ART provision. Access to DR-TB diagnosis and treatment in the region has dramatically increased by implementation of improved diagnostic technologies, such as Xpert®MTB/RIF and decentralisation of care at clinic and community levels.

Figure 2: level of decentralisation linked to access to health care

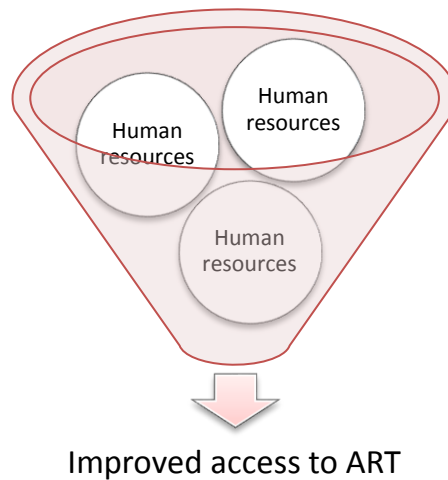


Another improvement in DR-TB treatment is linked to the construction of a new DR-TB ward in Nhlangano. Laboratory care is fully decentralised and integrated into the clinics via mini-labs and sample-transport system. Continuity in drug and medical supply is achieved and the medical facilities are equipped with adequate ventilation, space and waste management systems. Also, evidence documented in the literature clearly supports the need of well-implemented decentralised programmes of HIV/TB.

2.3 Human resources for health and task-shifting

The allocation of additional medical professional cadres was not adjusted to the increased workload. Well-designed and implemented task-shifting to the nurses and newly created lay cadres was instrumental to the successful implantation of the decentralisation.

Figure 3: access to ART is highly dependent on adjusted human resources for health



At the beginning of decentralisation, task shifting started in Shiselweni in a step-by-step approach. As of today, MSF eventually implemented three levels of task shifting to decentralise HIV/TB care from SHCF down to the 22 PHCC of Shiselweni region (among them 18 MoH clinics):

1. From doctors to nurses
2. From nurses to lay people (mainly PLWHA)
3. From nurses to community members, i.e. community treatment supporters (CTS) and PLWHA

Tasks that were shifted from doctors to nurses first include ART refill and patient follow-up, then TB and ART initiation, DS-TB management and OI management (integrated management of adolescent and adult illness, WHO training course IMAI). Today, all the nurses have skills to fully manage ART and DS-TB at PHCC level.



With the arrival of the HIV/TB epidemic, the clinic nurses found themselves to be overloaded and inadequately equipped to effectively support patients in their roles. Task shifting from nurses to lay people was organised. Expat clients were deployed first in the clinics and later in the community. Eventually, tasks from nurses were successfully shifted to the following cadres: expert clients, phlebotomists, pharmacy assistants and CTS. People PLWHA were given a priority in the selection of lay cadres in order to guarantee their empowerment, proximity to the community and reduction of stigma.

Informal and on-the-job trainings in Shiselweni have enabled an early kick-off of the task shifting among different layers of cadres. However, formal training and accreditation proved to be equally important for an official recognition by the MoH and a future absorption of these cadres. Supportive supervision methods, mostly implemented by MSF

The importance of well-planned and implemented task-shifting is highlighted in the literature (Kurniasari and Turashvili 2012):

- Task shifting and inclusion of lower medical cadres in ART provision is one of the most important strategies to cope with human resources for health crises in resource-poor settings.
- Countries embarking on public health scale-up of ART with task shifting should include a strong training programme for new roles and cadres to ensure successful task shifting.

have been identified as adequate and effective; however more inclusion of the MoH staff in the supervisory teams was indicated as highly desired.

2.3.1 Task-shifting policy in Swaziland

Task shifting is now widely accepted as feasible and indispensable for the decentralisation of HIV/TB care in Swaziland, a country with limited human resources for health. Initial resistance was overcome by demonstration of its feasibility and impact. Advocacy from MSF side in alliance with other implementing partners was instrumental in the lobbying process. This led to the development of the National Task-Shifting Framework (NTSF), a crucial policy document for the country of Swaziland. This document reflects newly acquainted roles and tasks of health cadres but is still waiting for its official endorsement.

The significance of a task-shifting policy according to the literature review (Kurniasari and Turashvili 2012):

- Enabling a country-wide policy environment was key to successful decentralisation and scale-up.
- In each country health policies should consider a balance of the local human resource capacity and the burden of HIV/TB epidemic in order to ensure equality and access to populations.
- A national policy of task-shifting is a crucial enabling environment for health staff to perform quality services. It includes clear job descriptions, training, supportive supervision, certification and regular job assessments.

2.4 Laboratory innovations

MSF implemented innovative diagnostic approaches to capacitate the primary health care clinics with point-of-care laboratory technologies on the one hand, and on the other hand it has created the capacity of a regional referral laboratory in Nhlanagano.

From 2010 onwards, PHCC were equipped with a mini-laboratory comprising point-of-care



(POC) technology, which could be operated by the trained lay personnel with minimum supervisory support¹⁸:

- CD4 point-of-care instrument (PIMA)
- Biochemistry POC (Reflotron®Plus for tests of creatinine, glucose, potassium and ALAT)
- Haematology POC (HemoCue 201)

Improving diagnostics at the regional level included implementation of the Viral load testing in the Nhlngano referral laboratory and the first automated analysers for TB diagnostics and resistance detection (Xpert®MTB/RIF) in the region. An effective sample transportation system from the PHCCs to the reference laboratories provided access and timeliness of diagnosis to rural populations.



More recently the ‘thin layer agar method’ was piloted in the Nhlngano TB laboratory followed by its consequent validation. This method enabled the population of the region to access a culture of MTB and a drug sensitivity test (DST) in significantly shorter time than previously.

Laboratory testing strategies advised in the literature review (Kurniasari and Turashvili 2012):

- An early initiation of ART based on higher CD4 cell count criteria can be cost-effective in most resource-limited settings.
- Inclusion of viral load in the monitoring process is more effective than CD4 count only. It is important to consider a routine access to viral load to support early identification of patients who are in need of second- and third-line drugs.
- A new molecular TB test, Xpert®MTB/RIF, is a marked improvement in TB diagnostic as it increases the identification of smear-negative TB, identifies rifampicin resistance and reduces the time of investigation.
- To support decentralised treatment, new simplified and point-of-care tests are needed for CD4 count, viral load and TB diagnosis.

2.5 Infection control mechanisms

Reinforced infection control mechanisms ensured transmission control in the health facilities for patients and health workers. The strategy included to improve infrastructure at all three levels of health care provision – on secondary health care level in Nhlngano health centre, comprising an extremely drug-resistant tuberculosis (XDR-TB) ward, a

¹⁸ (Obregon and Lassovski July 2013)

multidrug-resistant tuberculosis ward (MDR-TB) ward and a TB microbiology laboratory, on primary health care level in the clinics of Shiselweni region and on community level in DR-TB patients' homes.

2.5.1 Secondary health care level

The XDR/MDR-TB ward was built nearby the existing Health Centre in Nhlangano. It comprises thirteen small or medium sized buildings and is comprised of an inpatient department (for 30 patients) and an outpatient department (OPD). A sustainable design integrates the exclusive use of natural ventilation (cross-ventilation).

Infection control is also achieved by organisation of the patient flow according to the risk level. A new incinerator is fully operational since the end of 2012 to deal with the increased quantity of waste.

2.5.2 Primary health care clinic level

Numerous infrastructural improvements at clinic level included: building of external waiting areas in each of them to accommodate patients outside, building of extra consultation rooms adjacent to the clinics equipped with accelerated flow of air from outside, construction of Health Care Waste Management (HCWM) etc.

2.5.3 Community level

In order to decrease DR-TB transmission in the community, it was decided to work with the community members on the installation of windows and doors for the improvement of ventilation at patients' homes. This strategy proved to be useful as it allowed a quick improvement of the ventilation after the diagnosis of MDR-TB among patients.

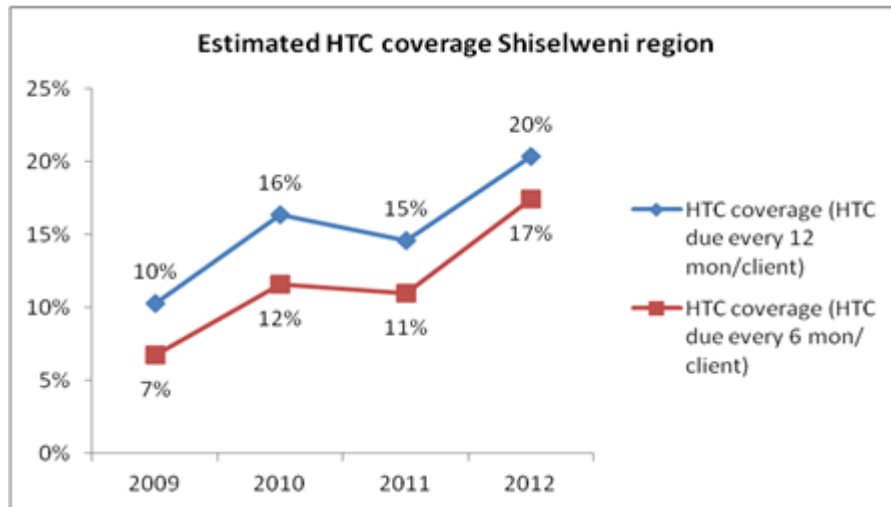
2.6 Increased access and universal coverage in Shiselweni

Decentralisation of activities has greatly increased access to HIV testing and counselling serviced (HTC) over the investigated period. The amount of sessions has increased from the base-line 17 543 sessions in 2009 up to 40 721 – in 2013¹⁹ and this way the estimated coverage of this service in the region has more than doubled²⁰.

¹⁹ 2013 figure is an estimation based on the first quarter data.

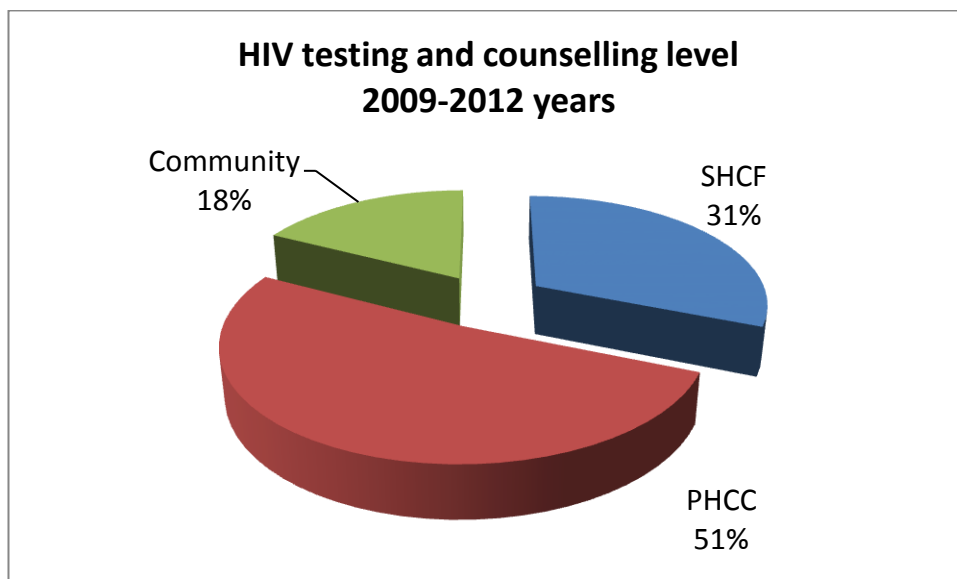
²⁰ Assumptions were based on Shiselweni midyear populations for inhabitants aged > 15 years. Patients on ART and estimated to know their HIV status obtained from the 2011 Swaziland HIV Incidence Measurement Survey (SHIMS)²⁰ were used to calculate the population eligible for testing. The proportion of patients tested (HTC) were calculated and adjusted for new-testers and re-testers.

Figure 4



The periphery, including primary health care clinic and community levels, played a decisive role catering for more than two-thirds of all HIV testing & counselling sessions performed in Shiselweni region.

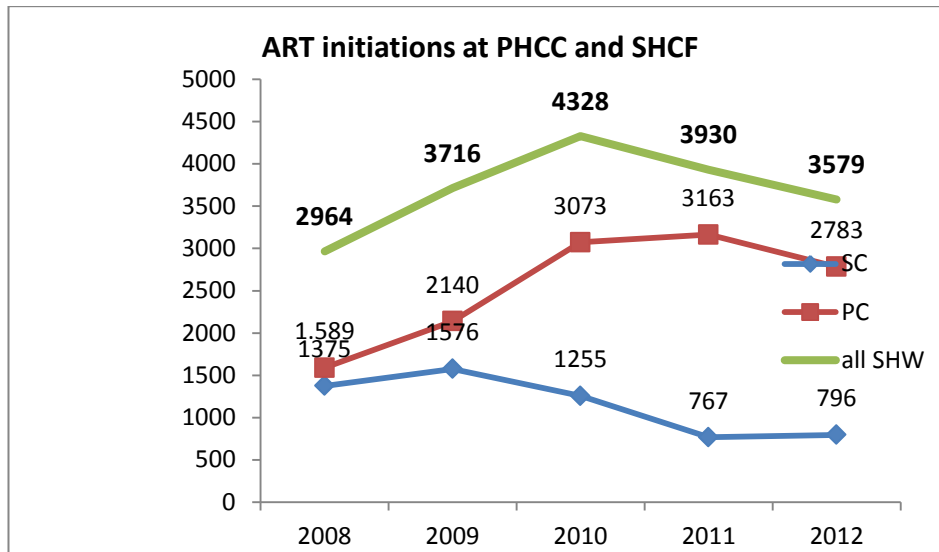
Figure 5



The total number of ART initiations in Shiselweni constantly increased from 2008 to 2010 reaching a 'universal' coverage²¹ in 2012 (vs 17% in 2006). Throughout the period, the PHCC took a proportionally bigger burden of the regional case load through decentralisation. While new ART initiations in the PHCC level accounted for 54% in 2008, they reached 78% in 2012.

²¹ 80% of population in ART need on treatment (WHO definition)

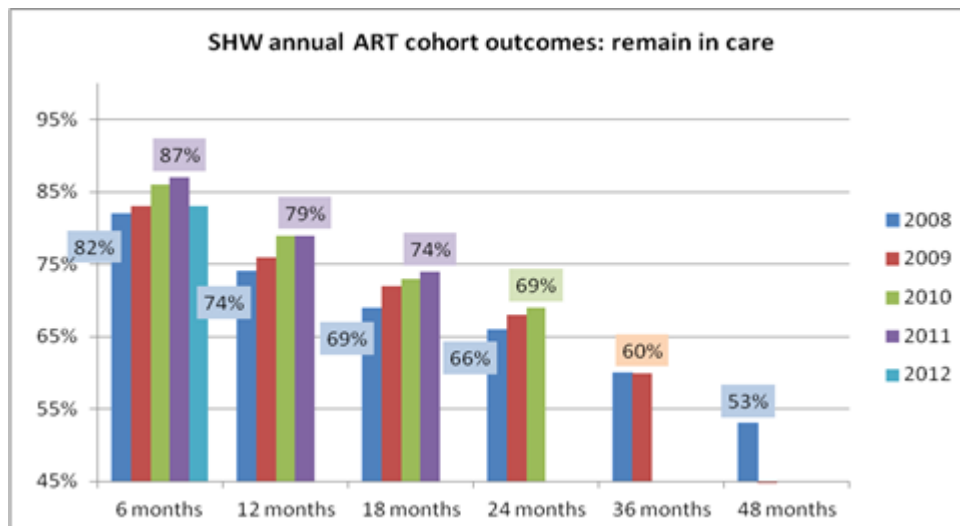
Figure 6:



2.7 Improved treatment outcomes

Treatment outcomes of annual ART initiation cohorts have constantly improved over time at every follow-up interval. It is impressive that despite the task delegation to lower cadres and involvement of lay people in a professional health provision the overall indicators at the regional level have improved.

Figure 7:

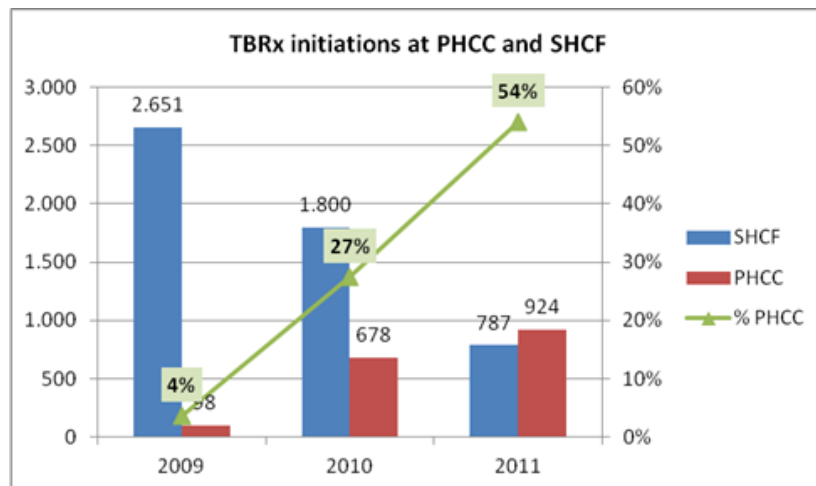


The ART cohort treatment outcomes at decentralised primary health care clinic level are better than at the level of secondary health care facilities. Decentralisation of ART services at primary health care clinic level shows successful treatment outcomes despite the delegation of new tasks to lower cadres by task shifting and inclusion of lay people and PLWHA in the provision of professional health care. These outcomes, in combination with

the increased coverage and reaching out to less sick people, show a great success of the HIV decentralisation programme in Shiselweni region of Swaziland.

Huge efforts of decentralisation of TB services in the years 2009 and 2010 have shown their effect on the shift of TB treatment initiation: since 2011 more than half of all treatment initiations are recorded at primary health care clinics. In general, there is a trend of improvement of outcomes for both bacteriologically confirmed and unconfirmed DS-TB patients over time at both health care levels.

Figure 8: TB treatment



Decentralised programme outcomes documented in the literature show similar results:

- The evidence from various areas supports the general conclusion that good health outcomes can be achieved by task shifting to nurses and to lay people.
- Well-organised task shifting has shown better retention rates in care at decentralised levels.
- Well-implemented task shifting offers high quality care to more patients than physician-centred models.

2.8 Wider improvements in public health

The observed reduction of crude mortality in Shiselweni from 2008 to 2012 may be related to the decreasing burden of opportunistic infections (especially TB incidence), which are the main reason for morbidity and mortality in populations of the country suffering from a high HIV/TB prevalence.

Figure 9: Morbidity in Shiselweni region

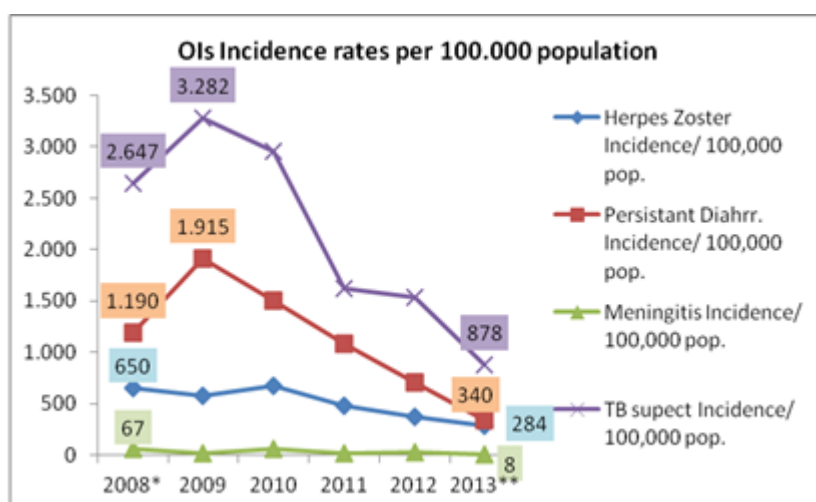
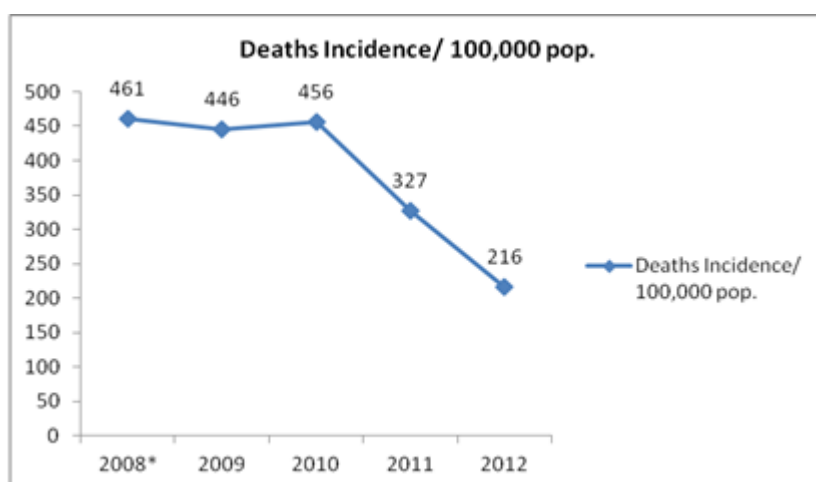


Figure 10: Crude mortality in Shiselweni region



All aspects mentioned above show that the decentralisation of HIV and TB care in the resource-limited setting of Shiselweni increased access to testing and counselling as well as TB case findings. It improved treatment outcomes of ART and TB patients and had a wider public health impact by reducing overall morbidity and mortality. Decentralised health care with task shifting strengthened human resources for health, empowered PLWHA and the wider community. Thereby it increased the well-being of the overall society.

2.9 Availability of acceptable and affordable treatment

Decentralisation has substantially increased the **availability**²² of and therefore access to HIV and TB services. Having services physically accessible at clinics reduced distance and transport cost and is highly appreciated by respondents since long distance, travel and time

²² **Availability:** physical access, distance, travel time, cost for transport, delay in health service provision, limited services e.g. only one ARV consultation day per week; **acceptability:** cultural access, perceived staff attitude, facility cleanliness, waiting time/queues, perceived staff skills, community judgement and stigma; **affordability:** expenses for health care, other costs. Adapted from (Cleary and et al 2012)

costs were major barriers for accessing care before decentralisation. However, people living in very remote areas still have to cope with access difficulties due to mountainous terrain of the region. **Affordability** for service-costs has shown slight differences between different facilities. If small user fees at clinics are not an obstacle for any, higher fees at central level or in private clinics (charged for non-ARV/TB care and medicines) still seem to deter some patients from the poorer part of the population. Overall the **acceptability** of HIV/TB services at clinic level is very high.

The literature review highlights the role of decentralisation and task-shifting in improved acceptability (Kurniasari and Turashvili 2012):

- Patients' perception studies show that despite limited resources the decentralisation of ART delivery can improve perceived quality of care, providing a positive impact on HIV infected patients' well-being.
- Most health workers confirm that task shifting can enhance the quality of patient care. Lay counsellors have a deep sense of commitment to their role in health care provision and view themselves as professionals providing a critical service.
- Programmes with well implemented task-shifting also demonstrated better social acceptability and contribute to lowered stigma.

Quality of care is perceived as very good at clinics and as mixed at central facilities. Waiting time at clinics is now less than it used to be at central facilities before decentralisation. It also significantly decreased overtime at central health facilities. Integration of HIV/TB care into primary health care has increased the level of privacy at the clinics. This is not the case at central health facilities where HIV care is provided at special ART clinics. There is a general agreement that decentralisation and the integration of HIV/TB care into primary health care has had a positive impact on the quality of care. Similarly informants agree that decentralisation has substantially contributed to increased coverage of early diagnosis and treatment, improved treatment outcomes and enabled better retention in HIV care.

Study participants concluded that the decentralisation of HIV/TB services also positively impacted on prevention by improved TB control, prevention of mother-to-child transmission services, HIV testing and condom availability.

Community-based activities were similarly highlighted as a particular strength of the Shiselweni model.

2.10 Increased motivation for staff

The medical professionals at the central level can observe decreased **workload** compared to earlier days of ART and TB treatment provision. Nurses of the clinics differ in their perception of the changes in their workload.

All cadres of health workers feel empowered by successful outcomes of their work after decentralisation; their **motivation and work satisfaction** is very high. Confidence in the adequate skills of clinic-staff based on the successful health outcomes of patients was expressed not only by the clinic staff, but also by their supervisors from MoH and MSF.

The skills of the former lay cadres are valued by their professional colleagues and they are now seen as specialists in their area e.g. expert clients who work as counsellors are perceived as being crucial in their role. Involving people living with HIV/AIDS in health care provision is seen as a major key for success of acceptability of HIV testing and treatment, adherence and patient empowerment. They encourage disclosure which leads to reduction of stigma and are perceived as role-models in the community.

Interdisciplinary **team relationship** after decentralisation and integration of HIV/TB services accompanied by task shifting is largely perceived as positive, especially at clinic level.

A strong focus on **staff health care** including infection control measures at the work place, as provided by MSF, is highlighted as very important and relevant in this context of high HIV prevalence among staff, as is prevention of counsellor burnout.

IMPORTANT!

When it comes to prioritising between different determinants **to choose a health facility**, availability (shorter distance, shorter time and lower cost for travel) seems to be the number one determinant for the majority of patients.

Acceptability issues, e.g. the fear of being recognised by community members at the local clinic or the perception of better quality of care at another place, were the reasons for a smaller number of patients (from a better-off layer of society) to select a more distant facility.

2.11 Decentralisation is highly cost-effective

For the health service providers the PHCC approach was weakly dominating the SHC approach i.e. that the care given in PHCC was a preferred and advisable approach.

According to WHO standards, the decentralised antiretroviral (ARV) programme run in primary health care clinics in Nhlanguano health zone is highly cost-effective from a service provider perspective than the one run at the ARV centre in the secondary health care facility. This was expressed in the incremental cost-effectiveness ratio (ICER) of \$652 per life year saved in the PHCC versus SHCF which is much smaller than the gross domestic product (GDP) per capita in Swaziland (\$5300).²³

According to this approach, intervention in PHCC clinics is highly cost-effective as WHO compares the cost-effectiveness ratio of a new intervention with the GDP of a country in order to categorize the cost-effectiveness.²⁴

Importantly, inclusion of the costs for patients (patient perspective) in the analysis will increase the cost-effectiveness of the PHCC vs SHCF (and decrease the ICER of this study). The perception study shows that patients from rural communities saved costs for

²³ (mundi 2013)

²⁴ ICER of highly cost-effective intervention is less than GDP per capita; ICER of cost-effective interventions is between one and three times GDP per capita; of not cost-effective – more than three times GDP per capita (WHO, Choosing interventions that are Cost-effective (WHO-CHOICE): cost-effectiveness thresholds 2013).

transport, plus saved time for commuting which they could dedicate to an alternative work as a result of improved availability of services after the decentralisation to the PHCC.

However, decentralisation process and task-shifting requires more investment in the health of population and is not the means to save money for health care. This is clearly indicated in the available literature on the example of task-shifting.

The literature review about cost-effectiveness and improved access through decentralisation and task-shifting:

- Well-implemented task-shifting offers cost-effective care to more patients than physician-centred models.
- Task shifting may allow for a more cost-effective use of clinical resources but it is primarily a means of **extending access** to quality care to a greater number of people. Therefore, task shifting should not be considered as a means of simply saving money and will require strong government leadership to ensure adequate financing.

2.11.1 Effective care at primary health care clinic level

This study shows that the health services provided in the PHC clinics are more effective than in the SHCF. The proportion of patients remained on ART after 12 months from their enrolment in treatment in PHCC was 88% vs. 76% in the SHCF. This was the result of analysis between the two levels of health-facility after adjusting it to the known potential confounding factors such as: age, sex and CD4 at the time of ART initiation. There was no difference in the proportion of patients who died within 12 months of the initiation at these two levels.

While using a different time line and methodology, the cost-effectiveness study conforms to the results of the outcome-analysis study and is reflected in the perceptions of different stakeholders as described in the perception study.

2.11.2 Space for cost-saving

According to the analysis of costs there is a space for cost-saving. The cost of treatment (for the service providers) per ART patient a year was slightly higher in PHCC (\$311) than in SHCF (\$233). **The main difference is resulting from more human resources for health** (twice as much cost) in the clinics as compared to the secondary health care facility. This hold true for both components of the costs: supervision staff and direct staff costs for consultations.

The analysis of the ratio of consultations per staff shows that higher costs are rather related to a lower number of patients coming to the PHCC daily (rather than from staff spending too much time with ART patients). Therefore, the same level of quality of care could be reached with optimised human resources.

The lab monitoring cost is almost the same in the two kinds of facilities despite the fact that the technology used and the level of cadres performing the tests are very different. The transport cost is higher in primary health care clinics but it is not making a big difference.

Optimising the use of human resources for health in the PHCC (direct staff and supervision) is therefore a primordial priority for increasing the efficiency of an ARV programme in Shiselweni.

2.12 Speed of implementation versus engagement of authorities

Different opinions were expressed about MSF's high speed of implementing programme activities and for its hands-on approach. On the one side, it is perceived that MSF's rapid roll-out of decentralisation has largely benefited patients and contributed to the demonstration of the feasibility of new strategies and higher standards of care. Many participants concluded that less would have been achieved, if MSF had not played a 'front wheel' role. On the other hand, MSF was initially perceived by MoH as using an emergency approach that was inappropriate for chronic disease control. This perception and the lack of joint planning at regional level contributed to initial resistance. It allegedly delayed the development of a more productive early collaboration between MoH and MSF. It was, however, positively remarked that a shift in MSF's collaboration with MoH towards much more dialogue and integration resulted in a more fruitful partnership. Besides, it seems that the impressive results of decentralisation have also made MoH more receptive for MSF proposed strategies. Thus, MSF has acted as a catalyser for change not only at field

The evidence documented in the literature points out the need of finding a balance between both approaches (Kurniasari and Turashvili 2012):

- Early engagement of national authorities in decentralisation and task shifting reinforces local leadership and coordination among different actors.
- Meanwhile, innovative approaches and 'temporary pilot solutions' should be thought of for immediate alleviation as the legal political changes might take years.

but also at policy level.

MSF's approach of advocating mostly went through the demonstration of feasibility of innovations by piloting the new approaches and encouraging operational research. Proactive dialogue with the national counterparts and other stakeholders was seen as a very powerful tool in identifying priorities and bringing lessons learned across.

2.13 Remaining challenges in Shiselweni and future perspectives

2.13.1 Excluded groups and groups that are hard to reach

Despite the perceived overall increase in the uptake of testing and treatment services in the region, the coverage of these services among men and youths is perceived as low. Low

diagnostic uptake among men also posed challenges for improved prevention as did an inconsistent use of condoms by all groups.

Paediatric treatment coverage and outcomes are still not satisfactory in the region. Proper monitoring and documentation of the PMTCT programmes is also a pending issue.

2.13.2 Stigma

While stigma and discrimination related to HIV/TB is widely said to have substantially reduced over the past years – due to improved knowledge and availability of ART – it is still seen as a major barrier for early diagnosis, treatment and retention in HIV care, but also for prevention. The fear of stigmatisation and self-stigma hinder disclosure and consequently reduce the use of condoms and the uptake of lifelong ARV treatment by pregnant women. Community leaders are highly respected and influential. Involving them in all community-based HIV/TB activities is therefore perceived as a very relevant strategy to increase acceptance.

Whereas differences in gender norms and use of maternity care make it easier to reach women at health facilities, expectations on the male gender discourage early health seeking behaviour in the modern health sector. This seems to be compounded by men's stronger fear of HIV related stigmatisation and the perceptions of clinics being not male-friendly enough. Men and youths are seen as groups of society that are hard to reach.

Traditional medicine remains the first choice and is used in parallel to modern treatment by many patients despite increased community knowledge and availability of HIV/TB services.

2.13.3 Sustainability issues

Despite the fact that some important preconditions for sustainability are met – among them the political will to sustain the basic decentralised HIV/TB care model, the capacity building of staff and effective laboratory support – great fear is expressed that quality of care could drop and some systems could collapse once MSF's support ended. The major barrier for sustainability identified is the lack of funding, namely funding of human resources but also for laboratory reagents, sample transport, drug supply and supervision that are supported by MSF. MSF's persisting leadership in the regional programme implementation is perceived as another barrier to greater MoH ownership.

Findings from the literature review (Kurniasari and Turashvili 2012):

→ Good preparation and integration with the national systems is important for the successful implementation and sustainability of decentralisation.

2.13.4 Support to secondary health facilities

MSF's choice to focus support on clinic level seems to have been justified given the huge unmet needs in terms of access to HIV/TB care in the periphery. However, study findings suggest that central health facilities have been lacking some support with the consequence that they now seem to fall behind the clinics in some aspects.

2.13.5 Main problems documented in the literature

- Most of the countries face policy barriers in terms of decentralisation and integration of antiretroviral therapy and TB treatment. Delayed or failed adoption of decentralisation policies and ineffective task shifting results in overlapped responsibilities and failure to deliver quality health care, including HIV/TB care.
- Practical implementation of the national policies that support HIV/TB integration into other health services is equally challenging.
- The scarcity of human resources for health is the key bottleneck for scaling up and decentralising HIV and TB care.
- The problems related to drug provisions include insufficient supply of drugs (ART and drugs for opportunistic infections) and saturation of drug dispensing capacity at health centre level.
- Unreliability of continued funding has stalled the admission of new patients to treatment and put the supply of ARVs at risk in the medium- and long-term in resource-limited countries.
- Due to the lack of adequate drug formulation options, children continue to be neglected when it comes to ART; this is especially tangible in decentralised and resource-poor settings.

2.14 Perspectives of decentralisation and scale-up

The priorities highlighted for future scale-up of HIV and TB care in Shiselweni include

- PMTCT B+ followed by the 'universal treatment', which among other benefits will offer a prevention of new infections,
- community-based ARV distribution and
- development of more male-friendly strategies.

Regarding community-based ARV distribution, doubts were expressed about the suitability of ART group models from neighbouring countries. On the policy side, the main priorities mentioned comprise the official recognition and implementation of the NTSF, testing policies for minors that allow HIV testing without parents' consent and routine HIV testing at health facilities as well as the legalisation of TB home injections by lay CTS.

For better organisation of care the literature review suggests the following (Kurniasari and Turashvili 2012):

- It is documented that greater spending on prevention would not only prevent more than half of the new infections but would also produce a net financial saving as future costs for treatment and care would be averted.
- Community- and patient-centred approaches as well as improved education of individuals and the community increase the demand of HIV services and reduce social barriers to entry into care.
- At each HIV programme stage, effectiveness needs to be improved in order to increase the overall outcomes and to improve coverage. Barriers to ART access comprise insufficient access to HIV tests, difficulties to refer patients from testing to ART initiation and delays between diagnosis and access to HIV care; but also the lack of information about treatment, perceived high cost of ART, stigma associated with HIV/AIDS, long distance from home to the health facility, lack of coordination across services and the limited involvement of the community in the planning process.

3 Recommendations

3.1 The Shiselweni project

1. Address HIV/TB related stigma with the focus on groups that are hard to reach

- Include community leaders in planning and implementing community-based activities to fully exploit their influence on populations for acceptance of services and stigma reduction.
- Encourage disclosure as a vehicle for reduced stigma and discrimination.
- Strengthen and adapt services for men in their environment and working places.
 - using male staff, male expert clients, male health workers and
 - piloting different opening hours (evenings, weekends).
- Strengthen youth-friendly (outreach) services.
- Monitor target groups' perception and acceptability regularly while piloting new male/youth-friendly strategies.

2. Strengthen curative components of the programme

- Strengthen the early identification and treatment of DR-TB cases as well as their contact tracing.

3. Increase cost-effectiveness of the decentralisation programme

- Reduce supervision costs of the clinics.
- Reduce costs per consultation visit by optimised staffing.

4. Implement community-based ARV distribution model

- Establish more decentralised points for regular ARV distribution closer to remote communities; schools and Gogo centres could be used for this purpose.
- Integrate ARVs into mobile clinics.
- Pilot community ART groups, for example small size ART groups in remote areas.
- Monitor target groups' perception and acceptability regularly while piloting different community-based ARV distribution models.

5. Strengthen MSF support to the regional level and secondary health care facilities in Shiselweni

- Strengthen support to the regional health authorities in terms of their management capacity and supervision to primary health care clinics.
- Strengthen support to the secondary health care facilities of Shiselweni in clinical ART management and task-shifting, integration of TB and HIV services.

6. Increase sustainability of the current Shiselweni HIV/TB programme

- Empower regional MoH counterparts by training in management and coordination.
- Ensure systematic joint programme planning, monitoring and supervision activities etc. to foster MoH ownership and allow long-term preparation for handover of programme components.
- Explore alternative funding possibilities and identify implementing agencies to take over components currently supported by MSF.
- Systematically assess the workload of the clinics compared to international/national standards to optimise the amount of staff.

7. Address policy issues

- Advocate for full implementation of the National Task-Shifting Framework.
- Develop an updated HIV testing policy for minors that will increase access to HIV testing for them.
- Advocate for an acceptable and feasible solution to ensure community-based MDR-TB treatment.

3.2 Swaziland country level

Replicate the best practice components of HIV/TB decentralisation in Shiselweni at national level

- Nurse-led ART and TB at all health facilities and well-organised task-shifting to new cadres
- Strong patient support, education and counselling by expert clients
- Strong HIV and TB integration into general health care and a relevant focus on (MDR) TB
- Strong community component, ensuring link between health facilities and community
- Decentralisation of laboratory by mini-laboratories for all clinics and sample transportation system to reference laboratories
- Piloting of innovations and operational research

3.3 Contexts with high HIV/TB co-infections and limited resources

Documented literature suggests to actively promote decentralisation of HIV/AIDS and TB care in high prevalence settings with limited resources as a successful strategy (Kurniasari and Turashvili 2012):

- Ensure a supportive regulatory environment for decentralisation and task-shifting: coordination and consultation with different regulatory and executive bodies.
- Address shortages of human resources for health by
 - building health care providers' capacity by improved human resources recruitment and retention, task-shifting, training and supportive supervision, implementation of simplified and standardised treatment approaches and by
 - strengthening the district health management capacity.
- Strengthen the focus on preventive activities while increasing enrolment and retention in curative chain of care.
- Invest in paediatric treatment: improve drug availability and access to ART in resource-poor settings.
- Expand access to essential drugs as a part of strengthened primary health care. The saturation of drug dispensing at health centre level could be addressed by involving communities in dispensing ART.
- Ensure enough finances for further scale-up of ART:
 - Continue lobbying for fulfilling commitments by the donor organisations.
 - Reduce dependency on donors by mobilising internal resources and ensuring affordable generic versions of drugs.
- Address stigma and include infected people in health care provision for further roll-out of HIV and TB programmes.
- Ensure adequate infrastructure to boost health care givers' motivation and increase community confidence in decentralised care.

3.4 Long-term MSF HIV/TB programmes worldwide

Invest in more cooperative implementation of HIV/TB programmes

- Invest in bottom-up, joint programme planning with counterparts in the context of longer-term programmes.
- Find the right time to shift from a (rapid) MSF implementing approach to a more sustainable approach with stronger MoH ownership.
- Ensure supervision and monitoring systems of high efficiency jointly with the MoH.

4 Annex

4.1 Terms of reference

Terms of reference for evaluation of the decentralisation strategy for HIV/TB care in Shiselweni, Swaziland

Commissioned by	Cell 1 MSF-CH
Duration of evaluation	12 months
Time period that is evaluated	from 2008 year to 2012 year
ToR elaborated by	Coordination team Mbabane + Cell1 MSF-CH + MedDep + Vienna Evaluation Unit

1. CONTEXT

The Kingdom of Swaziland is a southern African country, which shares borders with the Republic of South Africa on the north, west and south and with the Republic of Mozambique on the east. The country extends over a landmass of 17, 364 square kilometres. Swaziland is considered the smallest country in the southern hemisphere.

Swaziland is one of the three remaining monarchies in Africa, and the only monarchy where the King wields executive power.

Despite being perceived to be having a reasonable resource base compared to many developing countries, the majority of people (80%) in the country live below the poverty threshold (income of E 128.6 per month or equivalent of \$ 0.7 per day) and the level of unemployment is around 45%.

In line with the economic growth, the health situation of the Swazi population had improved significantly during the eighties and early nineties. However, as the HIV/AIDS and TB epidemics escalated, all these health gains were reversed: The population growth rate is now stagnant (if not in decline). It was estimated at 2% in 2005 compared to 2.8% in 1997 and 3.2% in 1986.

Prior to the demographic impact of the AIDS epidemic, the quality of life of people living in the country had improved significantly from a life expectancy at birth of 44 years in 1966 to 60 years by 1997 with females (63 years) living slightly longer than males (58 years). Current life expectancy at birth is estimated at an average of 39 years, which is at present one of the lowest estimate of life expectancy worldwide. It is estimated that there are 182'792 people HIV positive in SD today.

Swaziland is currently faced with dramatic HIV/AIDS and Tuberculosis (TB) epidemics threatening the existence of present and future generations of Swazi people. 26% of young adults (15-49 yrs) are infected with HIV and will die in the years to come if not treated with ARV. Despite the existing capacity to respond with health care and "impact mitigation", Swaziland risks to become one of the first examples of countries where this "dual" HIV/AIDS-TB epidemic "overwhelms" the existing capacity and destabilizes its population.

HIV/AIDS

Antenatal care sentinel surveillance has recorded a ten-fold increase of the HIV prevalence level among pregnant mothers in only 12 years, from 3.9 % in 1992 up to 42.8 % in 2004 and slightly decreasing down to 39.2 % in 2006, but back up at 42% and 41% in 2008 and 2010 respectively. Similar trends of HIV seroprevalence among antenatal care attendants are recorded in the four regions; in urban as well as rural areas.

The most accurate estimates on HIV prevalence levels were provided by the findings of the 2006/07 Swaziland Demographic and Health Survey (SDHS) which had included a population based survey on HIV prevalence in people > 2 years old from a sample of 5,500 households²⁵:

These updated and more accurate estimates of the HIV prevalence levels are lower than the ones provided by the antenatal care sentinel surveillance. Still, Swaziland remains the country with the highest prevalence levels of HIV infection when compared with the findings of similar population based surveys in the most affected countries in sub-Saharan Africa²⁶.

The SDHS confirmed very high levels of awareness among women as well as men at reproductive age but still insufficient use of condoms and low attendance of HIV testing and counseling services especially among men; 36 % of the surveyed women knew their HIV status from a recent HIV test compared with only 17 % of the surveyed men, with even a bigger difference in the rural areas.

Only in recent years has this advanced HIV epidemic started to show its full dramatic impact on health, survival and the socio-economic development of the Swazi society.

Hospitals are overcrowded with 80 % of hospital admissions due to HIV/AIDS and TB.

- Annual TB notification increased from 210/100,000 to 820 per 100,000 between 1990 and 2004, reaching 1'155/100'000 in 2009, the highest TB case notification rate in the world.
- AIDS/TB related deaths among adults and children are overtaking other causes of death; at present estimated at 16,000 per year (close to 1.4 % of the Swaziland population). The World Bank projects that by 2015 AIDS related deaths will reach about 22,000 per year, ten to eleven times more than the projected 2,000 non-AIDS related deaths.
- The Swazi population is projected to increase only up to 1,58 million by 2015, which is 41 % below the expectation in the absence of AIDS.
- A study by the 3 Ministries of Finance, Economic Planning and Public Service projects that close to 32 % of staff will be lost in 20 years due to AIDS.
- A recent study on subsistence agriculture showed significant decline in area under cultivation at household level, decline of crop yield, diversion of labour to care for the sick, increase in health costs and loss of income.

Tuberculosis

Linked to the catastrophic HIV/AIDS epidemic, Swaziland has been facing a dramatic six-fold increase of TB case notification in the last 15 years. TB notification and the estimated TB incidence rates are now the highest in the world (ahead of Djibouti and South Africa).

DR TB is a consistent threat to the country's population and more specifically the HIV+ population, an indication supported by the results of the DST survey conducted in Sd in 2009-2010. It is established that more 7.7% of all new TB cases are MDR TB cases and that 33.4% of retreated cases are also MDR TB cases. This prevalence level puts SD in the league of most affected countries worldwide.

Health care services

Swaziland has 6 general hospitals (of which 2 are faith-based), one psychiatric hospital in Manzini city and one DR TB hospital outside Manzini, which started be operational in January 2009. The 6 general hospitals have integrated services for TB diagnosis and treatment; HIV testing and counselling; prevention of mother to child transmission of HIV (PMTCT); HIV care and ARV treatment (since early 2003) as well as extensive but often "overloaded" hospitalization capacity (200–450 beds).

²⁵ 82 % coverage for HIV testing among people at reproductive age (15-49 years) surveyed.

²⁶ Ranking according to HIV prevalence level in the reproductive age group: Swaziland (26 %) followed by Botswana (24 %), Lesotho (24 %), Zimbabwe (18 %), South Africa (16 %), Zambia (16 %) and Malawi (12 %).

There are also five governmental health centres, which are small hospitals with a hospitalization capacity of between 30 and 50 beds, laboratory facilities and occasionally X-ray facilities. These 5 health centres have also integrated services for TB diagnosis and treatment; HIV testing and counselling; PMTCT; HIV care and ARV treatment (as of 2005). The small inpatient wards of these health centres are often overcrowded with patients with opportunistic infections due to HIV/AIDS.

More than 177 clinics exist in the country and they are either government (public), mission, NGOs, private or industry based. All these clinics offer primary health care services; most of these have integrated HIV testing and counselling but mainly limited to access for pregnant mothers for basic PMTCT services. WHO option A is presently the preferred option for SD.

The management of the PHC clinics is under the regional health departments. The hospitals and the health centres are managed jointly by the respective facility Matron and the Senior Medical Officer. At the region level there is the Regional Health Management Team (RHMT) composed of the regional matron, facility matrons, SMOs, the Regional TB Coordinators and few other key staffs. The RHMT is chaired by the Regional Health Administrator.

The public health units of the respective hospitals and health centres also organise outreach activities to outreach or community sites (187) of which some belong to the 345 "neighbourhood care points" (NCPs) set up with the help of UNICEF and the National Emergency Response Council on HIV/AIDS (NERCHA).

In this context, the "added value" of MSF to the HIV and TB response in Swaziland is our operational capacity to:

- Push forward decentralisation of HIV and TB services up to the level of clinics and community with promotion through implementation of "one stop TB/HIV point of care"
- Improve management of DR TB including demonstration of better approaches for treatment delivery at community level through treatment supporters.
- Introduce new diagnostic and treatment practices in the country, as well as advocating for new public health approaches, such as Treatment as Prevention
- Mobilise and involve people with HIV/AIDS at all levels.
- Organise formal treatment education and support to treatment adherence.
- Strengthen supervision and support increased capacity as well as quality of HIV and TB services at referral centres level as well as clinics.
- "Network" with non-governmental actors at national and regional level, associations of activists and community support groups.
- Lobby and advocate for the rights of people with HIV and/or TB and their dependents; for an increase of humanitarian assistance; for equity in access to HIV/TB testing, care and treatment; for access to essential medicines and diagnostics; and for access to human resources

2. OVERALL OBJECTIVE and PURPOSE

Main objective is to evaluate a decentralised model of care of HIV/AIDS & TB in the region of Shiselweni, Swaziland in terms of its effectiveness and efficiency (Cost-effectiveness).

Purpose of this evaluation is to evaluate quantitative and qualitative aspects of the decentralised model of care for HIV/AIDS & TB patients in Shiselweni region during 2008 → Q2 of 2012 in order to:

1. capitalise the experience within MSF in order to inform similar projects elsewhere
2. share the experience with MSF partners in Swaziland and possibly (if successful) promote its replication in the country
3. Share the experience (shared MSF/MoH) widely through publication/s

3. KEY EVALUATION QUESTIONS

1. Describe the decentralization model used in Shiselweni project. What was the **role of the Human Resources adjustment and task shifting** in the decentralisation in Shiselweni? Describe these in terms of:
 - National Task-Shifting Framework
 - Introduction of new cadre to the primary health clinic team (pharmacy assistants, phlebotomists, expert clients)
 - Completion of the PHC team (additional nurses)
 - Introduction of new tasks to the PHC team (initiation of TB and ART, NARTIS), CTS
2. Describe the role of **Infrastructural and Logistic inputs** to the decentralization in Shiselweni:
 - Renovations/rehabilitations in PHCs (sputum cabinets, waiting areas, drug storage room, minilabs)
 - TB ward
 - Infection control measures/waste management
 - Transportation of samples to regional laboratories
 - Shipment of sputum samples to supranational laboratories
3. Describe the role of **New technologies/approaches** to the decentralization in Shiselweni:
 - Point-of-care CD4s
 - Point of care biochemistry tests
 - Rapid diagnostic tests in PHCs
 - Fluorescence microscopy
 - Xpert®MTB/RIF
 - Thin layer agar
 - Viral load testing/EID
 - TB injections at home...as approach?
4. Which quality of care (including access to care) was achieved according to the **quantitative indicators**: on outcome (quantity of HIV and/or TB patients detected and enrolled, IPT, cure, referred, defaulters, retention in care, deaths for both diseases; success rates and relapses for TB treatment, number of DRTB patients) and output (VCT uptake, average CD4 upon HIV diagnosis and initiation of ART, % of AB prophylaxis, time to ART, time to TB treatment, % of OI)? Comparison to be done:
 - According to the time line
 - According to the level: Hospital, Health centre, clinic, community or home based
 - Stratify according to gender, age, initial staging, place of origin...
 - Stratify according to HIV or TB alone, or co-infections, PMTCT.....

What were problems, consequences and solutions? How much scale up was possible?
5. What is the **perception** of quality of care and level of **acceptability** of the stake holders (authorities, medical staff, patients and community) of the HIV/TB decentralised model of care in Shiselweni?
 - On access/feasibility (e.g. saved time and money)
 - On acceptability (e.g. satisfaction with care, closeness to the community, reasons for defaulting etc.)
 - On successes and failures (continuity of care, impact on other health care providers etc.)
 - Change in stigma

What were problems to scaling-up? Consequences and solutions? Future perspectives?

6. How do **resources and costs** compare to the **outcomes** in the centralised and decentralised approaches? A perspective of the health care-provider will be adopted:
- Calculating and comparing costs per Patient/year at the central and decentralised level
 - Costs shall include HR (Training and supervision), drugs and supply.

4. EXPECTED RESULTS and INTENDED USE OF THE EVALUATION

- Documentation of a decentralised model of care
 - Quantitative and qualitative study comparing centralised and decentralised approach.
 - Description and evaluation of task shifting
 - Description of advantage and disadvantages of the decentralised model of care components.
 - Lessons learned and traps to avoid
- Recommendations for improvement of the decentralization model used in Shiselweni
- Documentation for advocacy at national, regional and international level.
- Material for the production of protocols, guidelines or tools.
- Information for the conception and preparation of the Test and Treat strategy
- Identification of additional research questions if applicable.
- Documents produced:
 - Evaluation report internal to MSF
 - Evaluation report for the MoH and other external partners
- Presentation in GVA for the cell, medical and ops departments.

5. PRACTICAL IMPLEMENTATION OF THE EVALUATION

Literature research is on-going.

Field visit of the evaluators' team is on 1st of October (Coordination team to confirm that all 4 evaluators can come together).

Perception and task-shifting: See: Study Protocol for ERB and ToR on Perception.

Purposeful sampling of the clinics will be used to collect and analyse primary data: Interview with staff, beneficiaries and other stakeholders, observation.

Cost-effectiveness – See the ToR

Retrospective Epidemiological analysis: will include possibly all clinics and mother facilities. Methodology to be designed once an epidemiologist is identified.

6. TOOLS AND METHODOLOGY PROPOSED (if any)

- Literature research on decentralisation strategies for HIV/TB (including particularly on task shifting)
- Review of reports and other relevant project-related documents
- Briefings and individual interviews with key people at MSF HQ, coordination, field (medical staff, community workers...)
- Meetings and interviews with key actors at MoH central and regional level, other counterparts

- Group Interviews and focus group discussions (e.g. community workers, expert patients, patients and community members)
- Review of data base and individual medical files (MSF and MoH data) from the purposefully sampled clinics where decentralisation took place.
- Analysis of the data from the data-monitoring system.
- Random sampling of medical records (includes framing of the patient-groups, random sampling, identifying and collecting data and analysing) - might be considered.
- Review of records (lab, pharmacy, opd....) and supply orders
- Observation of medical practices
- Identification, measuring and costing of resources and outputs/effects

7. DOCUMENTATION FOR READING

- Annual reports covering the period 2008 → 2011
- Decentralisation intermediate report 2008-2010

8. JOB PROFILE/S of EVALUATOR/S

Coordinator of the overall evaluation – Mzia Turashvili Evaluation unit

Literature review – a consultant (Miladi Kurniasari)

The perception study – a researcher on a general perception (Heidi Becher) and a researcher focused on task-shifting (Sarah Lachat), national researchers

An epidemiologist – Bernhard Kerschberger

Health economist – a consultant (Guillaume Jouquet)

Technical reports on laboratory and logistics: people from the field (lab technician and logistic coordinator)

Others as required

4.3 List of interviewees

Ministry of Health and National Government

1.	Dr Okello VELEPHI (female)	SNAP (Swazi National ART programme) coordinator
2.	Nompilo GWEBU (female)	SNAP expert clients national coordinator
3.	Sharon NIEVES (female)	NERCHA regional coordinator Shiselweni
4.	Matron MANAANA (male)	Shiselweni regional HIV coordinator
5.	Nomthandazo MAPHALALA	Health zone supervisor of patient support, education and counselling unit
6.	Sister Pureen MADHLOPA (female)	Shiselweni zone supervisor - Hlatikhulu
7.	Dr Shabango DLAMINI (male)	Hospital director, senior medical officer - Hlatikulu hospital
8.	Dr Munyaradzi Pasipamire (male)	ART clinic doctor - Hlatikulu hospital
9.	Mr Themba (male)	TB national programme director

MSF

10.	Aymeric PEGUILLAN (male)	Former head of mission Swaziland
11.	Josephine MASIKINI (male)	Former task shifting officer Swaziland
12.	Dr Hermann REUTER (male)	Former medical doctor Swaziland
13.	Dr Andrej SLAWUCKIJ (male)	Former programme manager, Cell 1
14.	Dr Micaela SERAFINI (female)	Medical reference, Cell 1
15.	Annette RAVAUD (female)	Referent nursing PSEC and health promotion
16.	Aude THOREL (female)	Former human resources officer, Cell 1
17.	Fred MANSON (male)	Human resources officer, Cell 1
18.	Elias PAVLOPULOS (male)	Head of mission
19.	Dr Hayk KARAKOZIAN (male)	Medical coordinator
20.	Dr Bernhard KERSHBERGER (male)	Deputy medical coordinator
21.	Gilberto SAMPASA (male)	Human resources coordinator
22.	Yannick JULLIOT (male)	Logistic coordinator
23.	Joanne CYR (female)	PSEC advisor
24.	Peterjan WOODA (male)	Field coordinator
25.	Dr Calorine MEKIEDJE (female)	HIV/TB coordinator
26.	Dr Dodho MUNYARADZI (male)	Medical doctor
27.	Beatrice VAZQUEZ (female)	TB coordinator
28.	Maryvonne LECOQ LASSOVSKI (female)	Laboratory supervisor
29.	Tengentile HLOPE (female)	Regional PSEC coordinator
30.	Oliver KIER (male)	Deputy field coordinator, health zone Nhlanguano
31.	Trine MAROTT (female)	Deputy field coordinator, health zone Matsanjeni
32.	Nkanyiso GAMBU (male)	Nurse supervisor, Hlatikulu health zone
33.	Fexon NCUBE (male)	Nurse supervisor, Matsanjeni health zone
34.	Mxolisi DLAMINI (male)	TB psychosocial officer
35.	Bekuzulu Khumalo (male) Esther Kuveya, (female)	Pharmacy supervisors, Hlatikulu and Nhlanguano zone (group of 2 people)

Partners

36.	Alisson END (female)	CHAI, country director
37.	Peter PREKO (male)	CDC/PEPFAR, former ICAP
38.	Dr KEFAS (male)	WHO, medical officer responsible for TB

39.	Victoria MASUKU (female)	PSI,HIV system strengthening director
40.	Dr Pilard USTERO (female)	Baylor College of Medicine Children's Foundation Swaziland – Texas Baylor College of Medicine
41.	Mnedezi ZWANE (male)	Swannepha, regional coordinator, Shiselweni
42.	Sipiwe HLOPE (female)	Swapol, director
43.	Cebile DLAMINI (female)	Swapol, programme coordinator
44.	Keus KEES (male)	MSF OCA, project coordinator
45.	Dr Mahdi (male)	EGPAF, country director

Community expert clients (EC) and CTS

46.	Community EC in Lamuvisa (male)
47.	Community EC in Mahlandle (female)
48.	Community EC in Mashobeni (female)
49.	Community EC in Nkwene (female)
50.	Community EC in Olos (female)
51.	Community EC in Nhletsheni (2 people, Female and Male)
52.	Community treatment supporter in Mashobeni (female)

Community leaders

53.	Community leader 1 in Mashobeni (male)
54.	Community leader 2 in Mashobeni (male)
55.	Community leader in Induna Matsanjani (male)
56.	Community leader in Induna Nkwene (male)
57.	Community leader in Mahlandle (male)
58.	Community leader in Nhletsheni (male)
59.	Community leader in Bukhopo Matsanjani (female)
60.	Community leader in Olos (group of two, both male)

M2M counsellors

61.	M2M counsellor in Mashobeni (female)
62.	M2M supervisor in Mahlandle (female)

Expert clients

63.	EC in Hlatikuku, TB clinic , was interviewed with a CTC , (both male)
64.	EC in Lamuvisa (female)
65.	EC in Mahlandle (female)
66.	EC in Mashobeni (female)
67.	EC in Nhletsheni (female)
68.	EC in Nkwene (female)
69.	EC in Olos (female)

HTC

70.	HTC ART clinic in Hlathikulu (male)
71.	HTC MSF mobile HIV testing team in Nhlangano (female)

Nurses MoH

72.	Nurse MoH in Lavumisa, (female)
73.	Nurse MoH in Hlathikhulu, (female)
74.	Nurse MoH in Mashobeni, (male)

75.	Nurse MoH in Nhletshini, (female)
76.	Nurse Senior MoH in Olos, (female)
77.	Nurse Senior MoH in Mahlandle, (male)
78.	Nurse Senior MoH in Nhletsheni, (male)

Nurses MSF

79.	Nurse MSF in Lavumisa, (female)
80.	Nurse MSF in Hlathikhulu, (female)
81.	Nurse MSF in Nkwene, (female)

Pastors

82.	Pastor in Olos (female)
83.	Pastor in New Haven (male)

Patients

84.	Patient 1 in Hlathikhulu, ART clinic (female)
85.	Patient 2 in Hlathikhulu, ART clinic (male)
86.	Patient in Lavumisa (female)
87.	Patient 1 in Malhendle (male)
88.	Patient 2 in Malhendle (male)
89.	Patient 3 in Malhendle (female)
90.	Patient 1 in Mashobeni (female)
91.	Patient 2 in Mashobeni (male)
92.	Patient 1 in Nhletcheni (female)
93.	Patient 2 in Nhletcheni (female)
94.	Patient 1 in Olos (female)
95.	Patient 2 in Olos, (female)
96.	Patient 1 in Nkwene (male)
97.	Patient 2 in Nkwene (female)
98.	Patient 3 in Nkwene (female)

Pharmacy assistants

99.	Pharmacy assistant in Nkwene, (female)
100.	Pharmacy assistant in Nhletcheni,(female)

Phlebotomists

101.	Phlebotomist in Mahlandle, (female)
102.	Phlebotomist in Nhletsheni, (male)
103.	Phlebotomist in Nkwene, (male)

104.	Phlebotomist in Olos, (female)
105.	Phlebotomist in Lavumisa, (female)

Rural health motivators

106.	Rural health motivator in Nkwene, (female)
107.	Rural health motivators in Matsanjeni (group of 2 women)

Traditional healers

108.	Traditional healer in Mahlandle, (female)
109.	Traditional healer in Matsanjeni and her husband, (group of 2 people)
110.	Traditional healer in Nkwene, (female)

Focus groups

111.	Expert client (EC) from non-selected clinic (all female)	9 (clinic and community ECs)
112.	MDR TB patients in Hlathikhulu (both genders)	5
113.	Nurses in Nhlanguano Clinics (Females)	4 (2 MSF, 2 MoH)
114.	Patient support group in Nkwene (male)	4
115.	Patient support group in Matsanjeni (both genders),	7
116.	Patient support group in Nhletsheni (both genders),	11
117.	Patient support group in Nkwene (female)	6
118.	Pharmacy assistants (both genders)	6

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