



OPTIMIZING HIV, TB & NCD TREATMENT IN FIVE SUB-SAHARAN AFRICA COUNTRIES

EVALUATION OF DGD-FUNDED PROJECTS: GUINEA, KENYA, MOZAMBIQUE, SOUTH AFRICA AND ZIMBABWE (2014-2016)

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DISCLAIMER

The author's views expressed in this publication do not necessarily reflect the views of **Médecins sans Frontières** or the Stockholm Evaluation Unit.

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COVER PICTURE: MSF Clinic in Gutu (Zimbabwe) by Joost van der Meer

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ACRONYMS

AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral Drugs
CAG	Community Adherence Group
CARG	Community Adherence Refill Groups
CBO	Community Based Organisation
CCMDD	Centralised Chronic Medications Dispensing and Distribution
CD4	Cluster of Differentiation 4
CHAP	Community Health Agent
COSAT	Coalition for Support and Access to Treatment
D2D	Door-to-Door HIV testing
DGD	Director General for Development
DMoC	Differentiated Model of Care
DoH	Department of Health
DR-TB	Drug-Resistant Tuberculosis
DS-TB	Drug-Sensitive Tuberculosis
EAC	Advanced Adherence Counselling
FS	Fixed Sites HIV testing facilities
FSW	Female Sex Workers
HC	Health Centre
HepB	Hepatitis B
HIV	Human Immunodeficiency Virus
HTC	HIV Testing and Counselling
IPT	Isoniazid Prophylactic Treatment
KIPOTEC	Kibera Network of Post Test Clubs
KSHC	Kibera South Health Centre
KZN	KwaZulu Natal, South Africa
LEEP	Loop Electrosurgical Excision Procedure
LTFU	Lost to Follow Up
M1SS	Mobile 1-Stop-Shop HIV testing facilities
MAC	Medication Adherence Club
MDR-TB	Multi Drug-Resistant Tuberculosis
MMC	Medical Male Circumcision
MoH	Ministry of Health

MoHCC	Ministry of Health and Childcare
MSF	Médecins Sans Frontières
MSM	Men who have had Sex with Men
NCD	Non-Communicable Disease
NGO	Non-Governmental Organisation
NNEPOTEC	Nairobi National Network of Post Test Clubs
OCB	Operational Centre Brussels
PEPFAR	President's Emergency Plan for AIDS
PLHIV	People Living With HIV
POC	Point-of-Care
PMTCT	Prevention of Mother To Child Transmission
PrEP	Pre-Exposure Prophylaxis
PTC	Post-Test Clubs
PWID	People Who Inject Drugs
R6M	MSF program spacing clinical appointments at 6-Month intervals
RIC	Retention in Care
STI	Sexually Transmitted Infection
SW	Sex Worker
TasP	Treatment as Prevention
T&T	Test & Treat
TAT	Turnaround Time
TB	Tuberculosis
ToR	Terms of Reference
UNAIDS	Joint United Nations Program on HIV and AIDS
VIAC	Visual Inspection with Acetic Acid and Cervicography
VL	Viral Load
WHO	World Health Organisation

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EXECUTIVE SUMMARY

INTRODUCTION

Médecins Sans Frontières Belgium (MSF OCB) has been providing HIV care and supporting ministry of health HIV programs across Southern, Eastern and Western Africa since 1999. Their programs aim to increase the number of patients receiving care and improve adherence.

MSF's long-term objective for these projects is to achieve policy and health system change at national and international level to optimize prevention, diagnosis & long-term care of HIV, tuberculosis (TB) & non-communicable diseases (NCD). The short-term objective is to deliver quality and affordable care and treatment to a large number of people living with HIV, TB and/or NCDs, while controlling the attrition along the treatment cascade. Routine viral load monitoring combined with differentiated and community models of care have been at the heart of MSF's HIV strategy to achieve these objectives.

This evaluation was commissioned by the Belgian General Directorate for Development (DGD) who has been funding MSF's HIV work since 2008. It covers the HIV, TB and NCD projects in Guinea, Kenya, Mozambique, South Africa and Zimbabwe from 2014-2016, and focuses on assessing the treatment cascade, viral load monitoring and differentiated models of care, alongside the question of whether MSF's advocacy efforts have resulted in long-term policy change to optimize prevention, diagnosis and care of the diseases at stake.

METHODOLOGY

This evaluation has used a mixed-method methodology: review of internal (project) and public documents, including an analysis of quantitative data at the disposal of the evaluators, and a qualitative analysis based on key informant interviews and focus group discussions. Participants for interviews and focus group discussions were purposefully selected based on their availability and knowledge of the project. In making the selection, a diversity of perspectives has been ensured to be able to triangulate the findings, by selecting staff from various layers in the organisation, as well as external stakeholders, partners, and patients.

KEY FINDINGS

Routine viral load monitoring

MSF has been able to introduce routine viral load (VL) monitoring for people living with HIV (PLHIV) in all of the missions evaluated. This is an important step in monitoring adherence and improving antiretroviral treatment (ART), particularly when resistance develops and a switch to second line ART is needed.

The main challenge in routine VL monitoring is precisely this switch to second line treatment. Patients who have two consecutive detectable VL results should switch to second line ART, but the proportion who are actually switched at the appropriate in time remains low, ranging from 29%-75% across projects. The reasons for this are rather complex:

- All of the countries, with the exception of South Africa, have faced challenges with long turnaround time for results (TAT). This is due to a mix of problems, often linked to sample transport and equipment maintenance and change in VL protocols.
- Unclear protocols for switching patients to second line treatment.
- Patients and healthcare providers who are reluctant to switch.
- Centralized switch committees.
- Health staff not feeling sufficiently empowered to change.

MSF has responded to the delays in switch decisions by advocating for decentralised switch committees (either at provincial or facility level), and by introducing nurse-led switching, mostly with success.

To address TAT, projects have outsourced sample transport to other organisations and introduced mobile Health (mHealth) solutions to report VL results.

The main lesson learned with regards to VL monitoring is that VL is a necessary but insufficient step in improving treatment outcomes for patients. When setting up routine VL monitoring, it is necessary to ensure that VL results will

be used to manage treatment, and switch patients to second line treatment in a timely manner. Constant training, mentoring and support of healthcare professionals is essential to increase uptake of VL monitoring and use of the test results to manage patient care in HIV.

Differentiated Models of Care (DMoC)

MSF, often in cooperation with MoH, introduced various differentiated models of care (DMoC) in all its projects, adapted to the context. All modalities have convenience and patient-centeredness in common, which are aimed at improving adherence and retention in care, while simultaneously reducing the workload of overburdened healthcare providers. The uptake of the different DMoC modalities varies within projects, e.g. between urban and rural settings. Across projects, uptake of DMoC varies from 18%-37%. Notable successes include Community Adherence Groups (CAGs), ART Clubs, medication Fast-track and Pick-Up Points. CAGs and Clubs include peer-support and reduce travel and/or waiting time. Fast-tracks and Pick-Up Points are a fast and often decentralised way to pick up medication. All of these DMoC have been adopted by the health authorities in the countries involved. Patients appreciate the DMoC as they reduce disruption of daily activities; members of the group modalities of DMoC like the peer support from their fellow group members.

Stigma remains a challenge to higher participation in group models, as disclosure of status is implied with participation. A notable exception to this is the NCD / HIV club model in Kenya, which includes patients with NCDs who are not HIV-positive, and participants are not automatically assumed to be HIV-positive.

The suitability of each form of DMoC is patient and context dependent. CAGs generally function well in rural contexts with limited stigma like Mozambique and Zimbabwe, but failed in Guinea, where discrimination against HIV patients is extreme, and patients are fearful of their status being disclosed. Clubs were selected in Nairobi where distance to the clinic was not a factor. Pick-Up Points were preferred by patients in Eshowe, an urban setting. It is an open question whether there is enough uptake of DMoC among patients, and what the optimal coverage of these DMoC is. In general MSF has expanded the DMoC it has on offer to patients, including those models that do not require disclosure.

The key lesson learned is that the role of stigma and fear of disclosure remains an important barrier to uptake for some of the DMoC. Offering a selection of DMoC will allow patients to choose the option that suits them best.

Treatment Cascade

In line with the UNAIDS 90-90-90 target, MSF uses the treatment cascade to monitor its HIV programs. The 90-90-90 refers to targets for three important steps in the treatment cascade: step 1 (the first 90): 90% people living with HIV actually know their status; step 2: 90% of PLHIV who know their status are on ART (and remain in care); step 3: 90% of people on ART are adherent to treatment as shown by an undetectable viral load. All programs collectively managed to bring 55,867 PLHIV into care. Determining the percentage of PLHIV who know their status was challenging

All five of the projects have higher percentages of patients on ART than the national figures, and all of the MSF-supported projects have achieved or are close to achieving the target of having 90% of eligible PLHIV on ARV. Kenya, Zimbabwe and South Africa are also close to achieving 90% viral load suppression (87%, 83%, 86%, respectively), while Tete, Mozambique (66%) and Conakry, Guinea (63%) still struggle to increase VL suppression among their ART patients,

Main challenges include the poor results of the cascade among children, especially with respect to their retention in care. Another challenge is that men are not coming forward for testing and care, and treatment adherence in men/boys tends to be poorer than adherence in women. Poor cascade results in children are linked to difficulties that parents or guardians have in disclosing to children that they have HIV. In men, poor cascade results are linked to men being mobile to find a job, and therefore not regularly accessing care. It is also costly for men to visit a clinic or go for a test, as they must leave work to do so, and thus lose income.

MSF has responded to these challenges by introducing special adherence groups and clinics for children and adolescents, and by developing testing services that cater specifically for men and other groups that are hard to link into care, such as sex workers. These services include door-to-door testing in the communities, mobile and outreach testing strategies, and special clinics. Defaulter tracing has also been stepped up to reduce loss-to-follow-up. Finally, the earlier-mentioned DMoC are expected to have a positive influence on adherence and retention in care. These initiatives have led to progress in retention for children, while some of the initiatives targeted at men will require further monitoring to determine their effectiveness.

Aside from its focus on the last two 90s, MSF has also made impressive strides in activities which aim to prevent HIV and to achieve the first 90 with activities, like male medical circumcision, condom distribution, community HIV counselling and testing, prevention of mother to child transmission (PMTCT), post-exposure prophylaxis for survivors of sexual violence, and outreach activities to specific populations including youth in schools, sex workers and (migrant) workers in mines and on farms. All these activities show impressive volumes of activities and as such have prevented HIV, provided information on HIV, screened for TB, STIs and/or pregnancy, and provided a link to care for individuals who tested positive.

National policy change

MSF has contributed to national-level policy change in all five countries evaluated. It is regarded as a technical expert in HIV care, and its experience 'on the frontlines' is highly valued as are its financial independence and its capacity to innovate and challenge existing policies.

MSF's influence can be broken down four ways: influence on high level policies, influence on technical guidelines, influence on practice, and influence on major donors. MSF's advocacy strategy relies predominantly on participation in technical working groups, conducting and disseminating results from operational research, sharing monitoring data, and collaboration with other advocates.

Tuberculosis

In addition to HIV, MSF has introduced new approaches to tuberculosis screening and treatment in various projects, particularly with respect to drug-resistant tuberculosis. MSF has also integrated tuberculosis case finding in its HIV projects.

The integration of isoniazid preventive therapy (IPT) in HIV and TB services remain challenging, as well as achieving sufficient coverage of IPT. Other challenges include achieving high quality screening and hence improving case detection rates. This is partly due to poor record keeping, as well as insufficient attention to sensitization of staff and patients. Improving treatment outcomes is also a challenge.

MSF has responded to paying extra attention to the aforementioned issues in staff training and mentoring. Treatment has also been decentralised, especially for drug-resistant TB.

MSF could use successful elements of its own approach in HIV in its TB program to achieve improved results. For instance, the attention to monitoring and high-quality data present in the HIV project may pay off in TB as well. Differentiated care models and community involvement will also be important to adapt and transfer to TB programming.

Sustainability and replicability

Sustainability is a high priority in each of the countries evaluated. The three main strategies to improve sustainability are: 1) advocating for policy change, in order to transfer and integrate innovative interventions and models of care in the MoH models, protocols and guidelines; 2) providing extensive training, supervision and support to MoH staff (the mentoring and coaching approach) as well as to local CBOs; 3) building the capacity of civil society.

A notable sustainability success is the invention of DMOc by MSF and the subsequent inclusion of DMOc such as CAGs and Clubs the national government in all five of the countries with DGD funded projects.

MSF has not been able to secure the incorporation of lay counsellors into national human resource for health frameworks despite advocacy work since 2002 in some countries. As a result, lay counsellors in most countries are not MoH employees, and their role relies on the availability of funding by external donors.

An important finding is that a formal program of developing a mentoring and coaching approach among MoH facility staff by helping to establish a cadre of trainers is not part of the handover strategy in all projects, whereas its inclusion has the potential to amplify the sustainability of MSF's projects.

There is a tension between MSF's desire to provide a high level of quality of care and its desire to have its activities sustained beyond the life of the project. Often, interventions that are essential to improving health outcomes for PLHIV (e.g. outreach services) require resources such as fuel, vehicles and personnel – including lay counsellors as mentioned above – that the MoH often does not have the funding to sustain after MSF's departure.

RECOMMENDATIONS

- ⇒ **Recommendation 1: Address the high HIV prevalence in adolescent girls and young women** by implementing, scaling up and adapting approaches that work in the other projects
 - Consider girls-only programming that addresses the unique vulnerabilities that girls face with respect to HIV. Alternatively, look for partner organizations implementing girls-centred programming and support these with modules on HIV and sexual and reproductive health.
 - Adolescent girls and young women in school can be addressed through school programs like the one in KZN that includes HIV testing and counselling, access to condoms and links to care.
 - Include adolescent girls and young women out-of-school in interventions based on a good needs assessment.
 - Programs for adolescent girls and young women need to be accompanied by programs aimed at changing attitudes and practices with regards to safe sex among older men.
- ⇒ **Recommendation 2: Increase uptake of services in men** throughout the treatment cascade
 - Get a better understanding of barriers for men to testing, treatment, disclosure and adherence through focus groups, survey or other suitable operational research methodologies.
 - Consider adapting services to cater for men: changing working hours of clinics to be more convenient for men who work; adherence clubs or other differentiated models of care with social activities adapted to the situation of working men; training of male counsellors and male nurses; sensitise men to seek care before they fall ill.
- ⇒ **Recommendation 3: Address weaknesses in the VL cascade**
 - Decrease turnaround time, where applicable, by setting a mutually-agreed goal with all stakeholders and work towards it by selecting a series of measures tailored to agreed problem analysis of long TAT and appropriate to the context e.g.: improving transport efficiency through contracting of commercial courier companies when possible and feasible; by limiting patients coming for VL checks on Fridays or other days on which transport of the samples may not be timely; by improving recording of results e.g. through electronic data recording systems or more stringent procedures; move towards (further) decentralised or point-of-care VL tests using existing decentralised platforms like XPERT; develop SOPs and train nurses such that task shifting to nurses for operating a VL test becomes a reality; reduce maintenance problems and problems replacing broken equipment by leasing machines rather than purchasing them.
 - Speed up decision to switch to second line antiretroviral therapy by using best practices like decentralised switch committees; advocating for and improving guidelines, protocols and standard operating procedures about switch decisions; ensure decision support for nurses by having a hotline with a doctor from a switch committee who can authorise to switch; involving patients / peer support regarding increased pill burden and potential new side-effects for those who need to switch.
- ⇒ **Recommendation 4: Scale-up utilisation of differentiated models of care**
 - Pilot a variety of modalities such that patients can choose a modality that fits them and their lifestyle;
 - Consider more flexible eligibility criteria for enrolment in DMoC; especially unstable patients with adherence problems potentially benefit from the peer support that the group modalities offer;
 - Operational research to demonstrate the positive effect of DMoC on outcomes like VL detectability or retention in care
- ⇒ **Recommendation 5: Strengthen TB case finding and treatment of DS-TB along DR-TB** with the same level of effort as has been exercised on improving the HIV treatment cascade in order achieve better treatment outcomes for DS-TB and thus have a positive impact on the most important cause of death in PLHIV.
- ⇒ **Recommendation 6: Continue advocating for formal recognition of lay counsellors** and their incorporation into national human resources for health frameworks.

INTRODUCTION

BACKGROUND

MSF OCB has been involved since 1999 in various Southern, Eastern and Western African countries in developing programs intended to decrease the incidence of HIV, by putting patients on treatment and helping them to remain adherent. The Belgian General Directorate for Development (DGD) has been funding this work in various countries since 2008. The last period of DGD funding covered South Africa, Mozambique, Zimbabwe, Kenya and Guinea. Though the DGD funding covers five countries as a single project, in practice these are five separate HIV projects with similar objectives, each with components that are tailored to meet the needs of their target populations.

The long-term objective is to achieve policy and health system change at national and international level to optimize prevention, diagnosis & long-term care of HIV, tuberculosis (TB) & and non-communicable diseases (NCD). The short-term objective of these projects is to deliver quality and affordable care and treatment to a large number of people living with HIV, TB and/or NCDs, while controlling the attrition along the treatment cascade. Routine viral load monitoring combined with differentiated / community models of care have been at the heart of MSF's HIV strategy to achieve these objectives.

For the last funding period ranging from 2014-2016, MSF conceived the following strategic framework for the DGD projects. Differentiated Models of Care (DMoC) are a part of a patient-centred approach and include models that allow stable patients to receive their treatment closer to their homes, and minimize the amount of time required to receive their drugs. Routine viral load testing helps patients and practitioners to determine if ARV treatment is working and

adequately suppressing the virus. A high viral load in a patient on treatment leads practitioners and patients to explore whether the treatment is being taken properly, and if so whether additional counselling support or alternate therapies should be considered to ensure best patient health outcomes. Combining community models of care with routine VL testing has the potential to greatly improve treatment outcomes for patients, and by extension, contribute to prevention of further transmission. The criteria for enrolment in a DMoC is that people have been more than six months on ART, and have a VL <1000 copies/ml.

Differentiated models of care include different models adapted to patients' needs:

- Adherence clubs create a fast-track group for two-monthly ART refills. They also reinforce interaction between people living with HIV, who can get to know each other, share problems and concerns and create mutual trust among themselves. They are managed by counsellors and guided by patients themselves. They aim to improve adherence, increase health education and promote positive living which is important for long-term treatment success. The clubs can be community-based or facility-based.
- In Community Adherence Groups (CAG)¹, groups of patients in a given community rotate attending the health facility to have their six-month or yearly clinical consultation, including having their bloods drawn for viral load testing. When it is a patient's turn to attend their consultation, they also take responsibility for picking up the ARVs for their community members. In

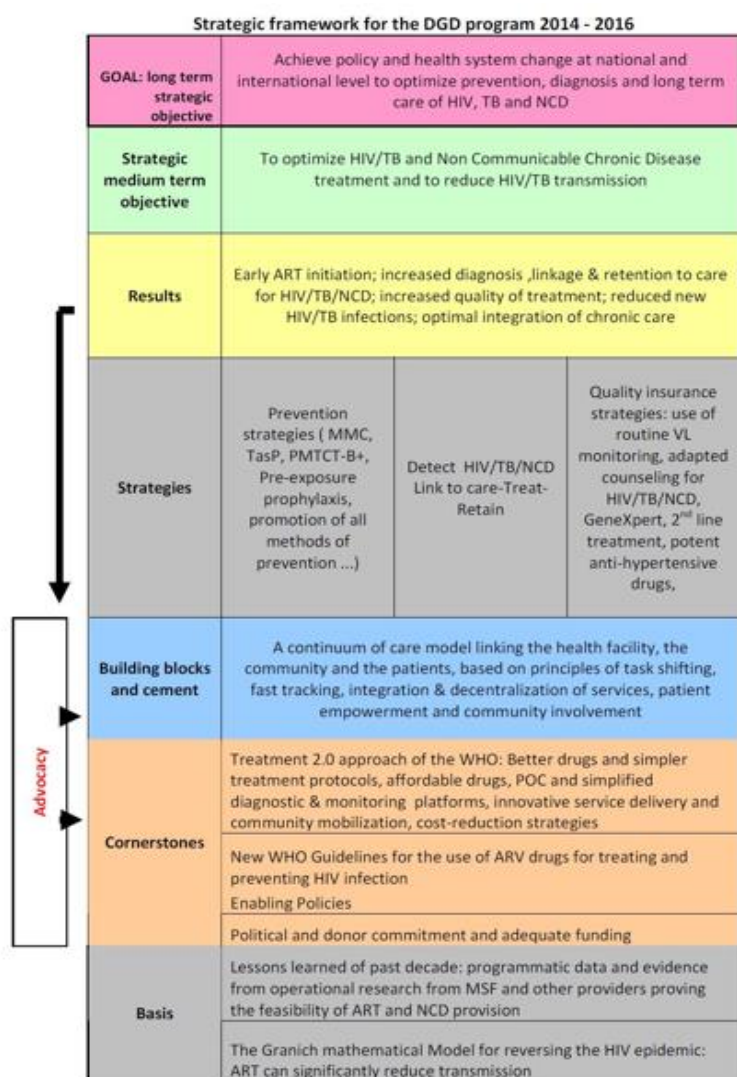


Figure 1. Strategic framework for the DGD program 2014-2016

¹ In Zimbabwe these groups are called Community Adherence Refill Groups (CARG). In Mozambique they are called GAC.

addition, community groups provide basic counselling, sessions on treatment literacy, conduct behavioural change campaigns and provide peer education.

- Drug pickup points through Centralised Chronic Medications Dispensing and Distribution (CCMDD) is not group-based but allows the individual patients to pick up their ART refills and/or other medication pre-packed from a facility-based pharmacy or a mobile drug pick-up point.
- Fast-track is refill for patients categorized as 'refill only', who have been on treatment for at least 12 months from baseline, with a good self-reported adherence. These are given appointments to come for refill of medications only and are fast-tracked through the clinic workflow without the need to be seen by clinicians if they did not report any complaints at triage. In fast-track refills (FTRs), stable patients visit the facility for clinical consultation every six months and every time they need clinical care.

Gutu, Zimbabwe and Tete, Mozambique have mainly implemented CAG, while strengthening individual care through clinical mentorship and routine VL monitoring, and HIV prevention and treatment and prevention of opportunistic infections (including TB and cervical cancer).

In KwaZulu Natal, South Africa, a variety of differentiated care models are at the disposal of patients, including CAG, adherence clubs and decentralised pre-packaged drug pick-up; MSF is moving HIV testing, prevention (including early treatment initiation) and treatment to the community level.

In Kibera, Kenya, treatment for HIV is integrated in a primary health and sexual reproductive healthcare structure, along with care for diabetes and hypertension, in an adherence club format, where patients meet every three months at one location to receive their medicine. Two lay workers provide health education and support to the patients, and the group allows for peer support. On the 30th of June 2017 MSF completed handing over its activities in Kibera to the MoH and Amref Health Africa.

In Conakry, Guinea, MSF has focused on decentralizing care by building the capacity of community health centres to provide HIV care, and by referring patients from their centralized location to sites of their choice. Patients were initially referred to sites closest to their homes, but due to stigma, many patients prefer not to receive treatment near their homes where they fear their status could be discovered, so they are now able to choose the decentralised site for receiving care.

EVALUATION SCOPE

This evaluation has four objectives:

- 1) To document and assess the degree to which routine viral load monitoring and decentralization / community models of care have been implemented in each of the five projects.
- 2) To assess the effect of routine viral load monitoring and decentralization / community models of care on the patients.
- 3) To assess the degree to which MSF OCB has influenced, through these five projects, HIV-related policy at the national level in each of the five countries.
- 4) To draw lessons learned that can be applied to current or future MSF projects.

It covers the period of the last DGD funding cycle, the three-year period of 2014-2016. Because the projects were running before that funding period, and all projects except for Kibera are continuing after that period, relevant data or publications exist that (partly) cover the period before or just after the funding cycle. Since we felt it would be artificial to disregard those data or publications, we used them if we thought they were relevant.

METHODOLOGY

The main methodologies to assess the evaluation questions have been a review of the project literature and medical data, combined with semi-structured interviews with key informants, group interviews, and focus group discussions. Interviews have been held with MSF staff at various levels (headquarters, country coordination, project), partners of MSF (Ministry of Health and other governmental stakeholders, NGO and CBO partners, community leaders, other external contacts in advocacy and policy fora) and patients.

Qualitative approaches give the stakeholders' perceptions of appropriateness, effectiveness and impact, while providing feedback about how or why some of the project components may have been more successful than others. Semi structured interviews ensure that some key questions are consistently answered while also being flexible enough for the interviewer to explore emerging issues brought up by the interviewees. Topic guides have been developed for these interviews. Focus group discussions have been held with patients to explore quality of care and access to care in-depth.

All interviewees have been informed of the purpose of the evaluation and have given their consent for the interview.

To assess MSF's influence on policy change, we used a modified Bellwether approach. A Bellwether is a person, who by virtue of his or her employment, is well informed about the policy topic at hand and the policy landscape. Bellwethers have a good understanding about how policy has evolved over time, and what the key policy influences have been. They can also provide the best educated guesses about future policy trends. We asked these actors to explain how HIV policy in their country changed over the last three years, who the main players have been, and which strategies have been the most influential.

To get the least biased feedback, we interviewed Bellwethers who are interested in the same outcomes as MSF, but are not actually MSF's partners, in addition to partners who are willing to provide honest feedback to MSF about what it has achieved and provide advice on which strategies, if any, could be improved.

The findings of our qualitative data collection have been cross-checked and triangulated with other sources stemming from our literature review including, where available, quantitative epidemiological and operational research data. Midterm evaluations for each of the five countries were completed in early 2016, and many of them have content that overlaps with the above objectives for the final evaluation. Where possible, we have used data from prior evaluations and studies, only assessing the period since the last evaluation and referring to prior results as appropriate.

LIMITATIONS

When selecting interview participants, we as evaluators depend heavily on the knowledge and cooperation of project staff, particularly the coordinators. There is always a risk that coordinators, consciously or unconsciously, introduce a selection bias by recommending people with a certain point of view; the direction of this selection bias is likely to represent the achievements and positive sides of the project.

We found that interviewees were generally honest and open, mentioning not only the achievements but also highlighting major challenges in the projects. Moreover, we are confident that we could manage the risk for positive bias by triangulating interviews with an independent assessment of selected monitoring data and by reviewing monitoring and operational research reports. We found no major discrepancies between statements by interviewees and the content of the reports. We cannot exclude a slight risk that also the reports are subject to publication bias where publications with negative results and project failures do not see the light of day.

Determining *attribution* in advocacy projects can be challenging, as policy is very rarely only caused by a single actor. Rather, this approach is looking at the *contribution* of MSF to policy change; it is equivalent to surveying experts in the field for their educated opinion about who has contributed to policy change and how, and to understand just how crucial MSF's role was, i.e.: would policy changes have taken place had MSF not advocated for them? As such, careful selection of interviewees to ensure that they are likely to provide honest and helpful feedback is essential. Wherever possible, interviews have been cross-referenced or triangulated with evidence of policy change and/or political support including policies themselves.

Even though it is easier to assess MSF's contribution to national level policy change, there is an additional challenge in assessing the particular contribution of the DGD-funded projects within the total mix of MSF in a country. Where MSF's only project in a country is the DGD-funded project, it is quite obvious that MSF's advocacy is based on that project. With more than one substantial project going on funded from other sources but DGD, like in Mozambique, South Africa or Zimbabwe, it is difficult to determine to what extent the evaluated projects have contributed. Since all projects in a country contribute to MSF's advocacy objectives, we are confident that the DGD-funded projects have contributed their share in the advocacy efforts towards policy change.

READING GUIDE

This main section of the evaluation report brings together the findings of the projects in the five countries, identifying common themes, overall achievements and shared challenges with respect to the main scope of the evaluation. Because of the different scope of each project and the variety of countries, the main section will examine general trends and

themes and consequently lack detail. Therefore, this report includes separate project evaluation reports in the annexes with more details about the findings in the individual projects, including conclusions and recommendations specific for the project. Readers wanting to read more detail about a specific project or country may want to refer to any of the relevant project reports. Since the main section of the report is based on the project findings, there is inevitably some overlap between the main section and the country-focused reports.

Throughout the report we may identify the projects by their geographical location in the country, e.g. Tete. Where we refer to the country, e.g. Mozambique in the case of Tete, we refer to the project. When we mean the whole country at national level it is explicitly stated, or clear from the context.

FINDINGS

1. ROUTINE VIRAL LOAD MONITORING

Key findings:

- MSF has been able to introduce routine Viral Load (VL) monitoring for PLHIV in all the missions evaluated.

Main challenges:

- The proportion of patients who are switched to second line treatment after two consecutive detectable VL tests is too low.
- Results of VL tests are good but there is less attention for VL completion, i.e. do all patients on ART get a VL tests and/or are the results recorded.
- Turnaround time (TAT) of test results is a problem in most countries, except in South Africa.
- Lack of reliable sample transport systems.

Response to the challenges:

- MSF has been advocating for decentralizing switch committees, and nurse-led switching, mostly with success.
- Outsourcing transport to other organisations (e.g. Riders for Health)
- Introducing mobile Health (mHealth) to report VL results

Lessons learned:

- Implementation of routine VL monitoring is a necessary but insufficient step in improving treatment outcomes for patients. When setting up routine VL monitoring, it's necessary to ensure that VL results will be used to manage treatment, and switch patients to second line treatment in a timely manner.
- Constant training, mentoring and support of healthcare professionals is essential for increase uptake of VL monitoring and use of the test results to manage care.
- Long turnaround times (TAT) of VL results may defeat the purpose of VL monitoring, as results acquired too long after the sample was taken may not accurately reflect the patient's current VL and cannot be relied upon to manage the patient's care. The key lessons regarding TAT that should be considered when implementing routine VL in new settings are:
 - Initial implementation of routine VL by the national programs may initially increase TAT, particularly in comparison to the TAT in facilities where VL is implemented by MSF
 - Rural areas tend to have longer TAT due to transport and infrastructure-related reasons
 - The introduction and/or use of multiple VL testing platforms may slow TAT results

1.1 Step 1: Achievement of viral load coverage

MSF has introduced routine viral load monitoring in all projects. This reinforces monitoring of adherence to antiretroviral therapy. A VL load measurement is done at six months and 12 months after initiation of ART. If the result is good, i.e. the VL is undetectable and patients are stable, they will only need to test their viral load every 12 months thereafter. Viral load in all projects is detectable at ≥ 1000 copies/ml; below that, VL is called undetectable and patients are virally suppressed. For international comparison, sometimes the detectability threshold is reported at a VL of ≥ 400 copies /ml. A detectable VL can be an indicator of poor adherence, or of resistance to the ART regimen the patient is taking. The protocol in the projects is to offer patients with a detectable VL enhanced adherence counselling (EAC) by a counsellor who works with the patient on adherence to the medication during a series of sessions. Three months after EAC, VL is measured again. If the VL remains detectable despite good adherence, ART resistance is likely, and patients should switch to a second line ART regimen.

Challenge: turnaround time is generally long. Table 1 shows the average TAT of VL test results over 2016. The high averages of 40-45 days in Gutu and Tete mask the fluctuation and extremes. One of the evaluators spoke to patients in Gutu district, waiting for their results from samples taken three months ago. Very long wait times almost defeat the purpose of doing a VL test: health workers are not able to act quickly on important information that has a bearing on the health of individual patients and that has public health implications as well. The main explanations regarding the long turnaround times are quoted as being due to utilization of multiple platforms, equipment broken down or waiting to be serviced, while a technician has to come from another country (South Africa), results not being reported or getting lost in the system, and (e.g. in Zimbabwe) the transition from targeted VL testing to routine VL testing which requires a

change in clinical practice that takes long to establish. Compared to reports in the literature, the TAT in the DGD projects in Zimbabwe, Mozambique and (partly) Guinea are quite long. TAT for processing within laboratories averaged 9 days in Namibia, 18 days in Cambodia, and 3.3 weeks in Uganda over the life of the programs examined. (Chatterjee, Tripathi et al. 2011). The TAT of the Kibera project in Kenya is comparable with these findings. Both the Mozambique and Zimbabwe projects are rural and face challenges with samples transportation. In Guinea, Mozambique, Kenya and Zimbabwe, there were reports of significant TAT delays when the government began implementing its own platform.

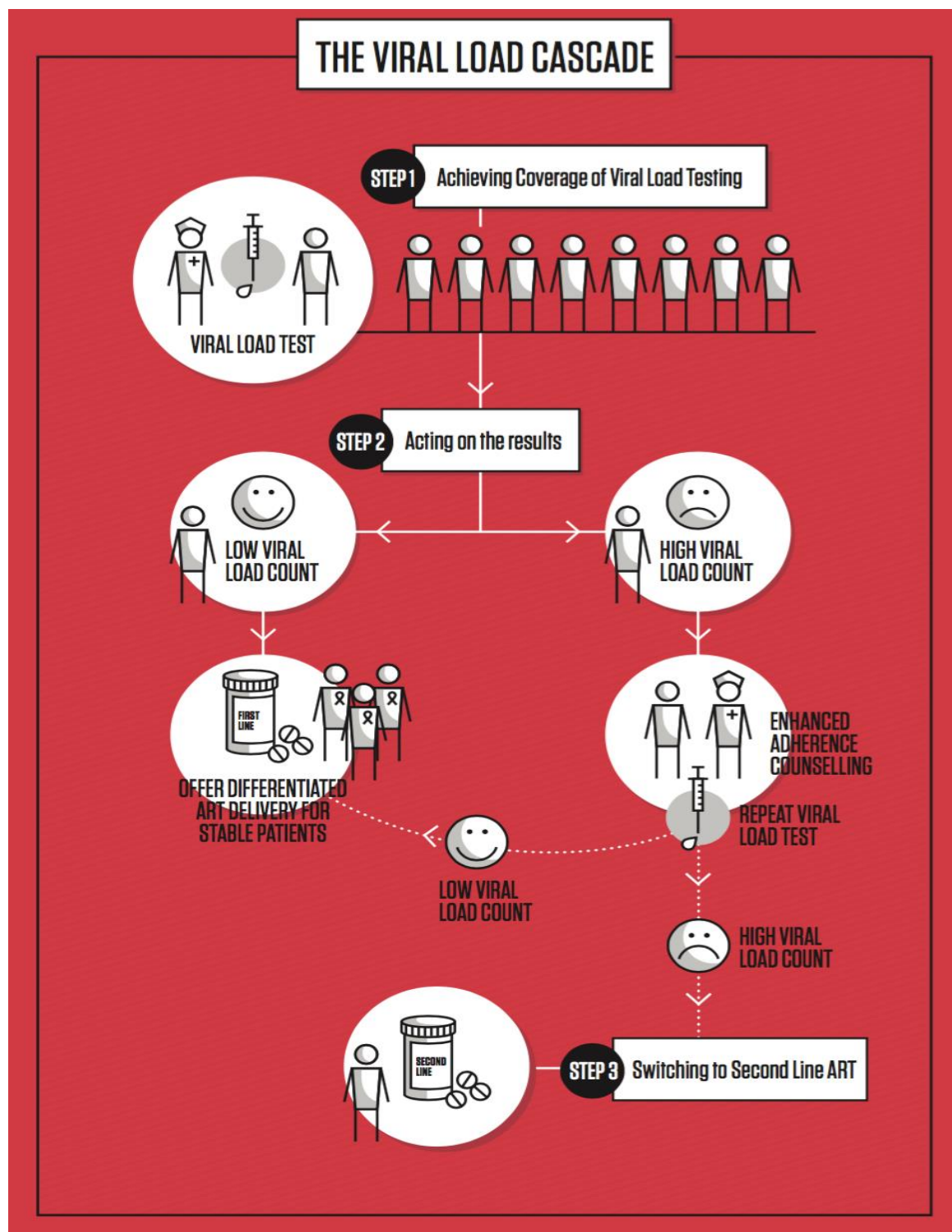


Figure 2. The viral load cascade²

² Image taken from: MSF: *Making Viral Load Routine: Successes and Challenges in the Implementation of Routine HIV Viral Load Monitoring, Part 1 Programmatic Strategies*, p.9 https://www.msf.org/sites/msf.org/files/making_viral_load_routine_part_1_programmatic_strategies.pdf

When asked to reflect on what factors need to be in place to make routine viral load monitoring effective in new settings, interviewees mentioned the following:

- The availability of the machine and the skilled technicians to maintain the machine. A suggestion was that MSF advocate for machines that are leased rather than purchased, as leased machines will be repaired by the owner and replaced when no longer functional.
- The MoH needs to be fully on board, and this requires extensive training of MoH.
- Decentralized ART committees
- Introduce VL as a MoH intervention, to encourage MoH ownership.
- Logistics of transporting samples.

MSF's response to the situation is to continue to support switching through joint mentoring. MSF has advocated for decentralised switch committees in at least three of the five projects. These decentralised switch committees have a different definition and setup in each project, but generally include the physicians and/or counsellors involved in the care of the patient(s) under discussion. In addition, MSF has lobbied MoH to allow trained nurses to switch to second line by themselves, with success in Zimbabwe and South Africa.

1.2 Step 2: Acting on the results.

Suboptimal adherence in particular groups exist in all projects. In Tete, the gender divide is substantial. Children and adolescents often have adherence problems as shown by their VL results. Where sex-disaggregated results are available, VL coverage in men is lower than in women.

Table 1 shows the detectability rates in 2016 for adults and children from project reports and project monitoring data. Detectability is high in the younger age groups. For instance, in Gutu detectability in children tends to be around two to three times the rate in adults.

In KZN pregnant mothers with PMTCT Option B+ treatment show suboptimal adherence.

Interviews confirmed that poor adherence is often related to stigma and fear of disclosure. Men who are at work often don't want to disclose and therefore don't want to be seen taking medication every day. Parents or guardians of children don't know how to disclose the status of their child, and are reluctant to explain why the child has to take pills all the time. In addition, if they are living with HIV themselves, they might find it difficult to disclose to the child. Adolescents start to discover their sexuality, hang out with friends and want relationships and get married. Disclosure about living with HIV and taking medication every day does not fit well in this phase of life. Poor adherence among pregnant mothers with PMTCT Option B+ in KZN has been explained by their sudden diagnosis through routine testing during antenatal screening; in contrast to some of the other groups, they were not tested because they wanted to or because they had symptoms — they feel healthy and may have had no idea they might be HIV-positive. Therefore, they are less motivated to adhere to ART.

MSF has responded to these adherence problems by starting support groups with strong counselling components targeted especially to the group with adherence problems: children's groups, that assist parents or guardians to disclose to the child, adolescent clubs and peer support groups in which young PLHIV can feel safe to talk about the issues they face living with HIV, and groups for pregnant women. The results of these special groups have not yet been evaluated systematically by the various projects. Adolescents appreciate the opportunity to talk with peers without the fear of being stigmatized.

"Since I am in a support group I feel more comfortable and happy, I felt sometimes out of place, but not now anymore. As peers, we can share what is within ourselves, what we cannot tell other people." –

Patient, male, 20 years old, Gutu district, Zimbabwe.

1.3 Step 3: Switching to second line ART

Not all patients with two consecutive VL are switched to second line treatment. The proportion of patients switched to second line treatment according to protocol varies widely (table 4). It is generally reported to be below target. It is not only the proportion of patient switched that is not performing. The average time between the second sample and the decision to switch is an important dimension of switching to second line too. It is not separately monitored, but for instance in Gutu the average number of days from the second VL test to switching to second line treatment is reported as 142. This far too long and defeats the whole purpose of VL monitoring. Switching should ideally be done within a week after the second consecutive high viral load is received in the clinic and communicated to patients.

The explanations for the low proportion of patients switched to second line treatment after high VL and EAC are variable. Reports and interviewees from the different projects have suggested the following:

- Uncertainty about switching; nurses are waiting for confirmation of the switch by the doctor, who may be slow in responding or not aware of the case.
- Switch committees are taking a long time for decisions to be made because they meet infrequently while the urgency of decision making is not felt because decision making is centralised and takes place too far from the field.
- Attitude of doctor and/or MoH towards second line might play a role; sometimes the argument is made that after second line no alternative is left.
- Reluctance to switch because of cost implications for MoH when patients are increasingly put on second line treatment.
- Fear of second line drug ruptures (and potential increasing of second line resistance consequently).
- If there have been troubles suspected with adherence, the second VL is postponed. This contributes to unnecessary delays.
- Unclear guidelines or protocols for switching patients to second line treatment

With a focus on viral suppression, viral load completion (i.e. the proportion of patients who are initiated on ART and get a VL when they are approximately 6 months on treatment) tends to fall between the cracks. In KZN viral load completion has decreased over 2016 from 83.0% to 80.9%, and further down to 67.8% in the second quarter of 2017. Although a finding in KZN, it may be an issue to monitor in other projects since reported challenges with VL measurement are found across projects:

- Interviewees in both KZN and Gutu refer to Friday as a problem day because if patients come late, transport to the lab may be a challenge and nurses may skip the VL test altogether.
- The high workload of nurses and the absence of a real system to remind nurses to record VL results.
- When the clinic is very busy, patients are told to return the next day for follow up. Because of the distance, they do not return.

"Often the nurses are busy with patients, and do not always check the VL (when in fact it has been done). And there is lack of organisation of the head of the clinic." – MSF staff, Eshowe.

Table 1. Viral Load Monitoring outcomes, 2016

Project	% Suppressed of those on ART					Patients with A VL test switched to second line as per protocol %	Average turnaround time of VL test results in days (TAT)	VL coverage % among all patients on ART	Comment
	Women	Men	Adults	Children	Total				
Conakry, Guinea	55.6	65.6	NA	NA	65.3	48.0	7-30	M: 70.2 F: 81.1	TAT based on interviews
Kibera, Kenya	NA	NA	NA	NA	89,7	72.0	14	96.0	Limited data available due to closure of project.
Tete, Mozambique	71.9	28.1	NA	NA	66.0 (76.0)	28.7	40 range: 21-112	72.0 M: 31.4 F: 68.6	Overall VL <1000 for patients in CAGs: 76% % of switched patients possibly underestimated because of reporting delays
KwaZulu Natal, South Africa	NA	NA	66.7	46.4	66.4 (92.3)	75.2	5	80.9	VL: Children: < 15; Adults: 15-59 Denominator: all PLHIV. Undetectable VL among patients on ART: 92.3% TAT based on interviews
Gutu, Zimbabwe	85.4	85,6	85.5	68.0	85.3	70.0	45	83.0 (77.0)	VL coverage in Gutu from a VL cascade study is 77.0% (in 2015)

2. DIFFERENTIATED MODELS OF CARE

Key findings:

- MSF introduced various differentiated models of care (DMoC) in all its projects, adapted to the context. The uptake of the different DMoC modalities varies within projects, e.g. between urban and rural settings, and across projects.
- Notable successes include CAGs, which have been adopted by the ministries of health in Mozambique and Zimbabwe; and clubs which have been adopted by the ministries of health in Mozambique and South Africa, as well as partners in Kenya. R6M has been adopted by the ministry of health in Guinea. The uptake of clubs and CAGs in South Africa is limited.
- Patients appreciate the DMoC as they reduce disruption of daily activities; members of the group modalities of DMoC like the peer support from their fellow group members.

Main challenges:

- Most group modalities of DMoC require disclosure of HIV status to group members, which hampers scale-up for these forms of DMoC.
- It is an open question whether there is enough uptake of DMoC among patients, and what the optimal coverage of these DMoC is.

Responses to the challenges:

- Offering more DMoC modalities to patients, including individual modalities not requiring disclosure.

Lessons learned:

- Stigma remains an important barrier to care in all project sites.
- CAGs may be more appropriate for implementation in rural settings.
- Most CAGs and clubs require de facto disclosure of HIV status. This may be a barrier to participation.
- Offering a selection of DMoC allows patients to choose the option that suits them best.

One of the central objectives of all projects is to introduce innovative, differentiated and community-based models of care to the projects — Differentiated Models of Care (DMoC). Stable patients with undetectable viral load are eligible for DMoC. They will get medication refills covering a longer period (typically three months), will need fewer clinic visits, and hence experience less disruption in their lives in terms of travel, waiting time and transport expense, compared to the regular facility-based model of care. For nurses and counsellors in the healthcare facilities, it means less burden of visits by stable patients, and a more organised workload and therefore more opportunity to focus on newly-initiated and unstable patients.

Table 2 shows the proportion of patients in the ART cohorts who are enrolled in any of DMoC in the five projects. Conakry has the smallest proportion of patients in its DMoC with 18%, KZN and Gutu are the two projects achieving the highest proportions in DMoC, around 37% of patients.

Overview of the differentiated models of care available in the projects evaluated, with notes on replicability.

Community Adherence and Retention Groups / Community ART Groups (CAG /CARG): Implemented in Mozambique, Zimbabwe, South Africa. Attempted in Guinea. Community Adherence and Retention Groups were invented in the rural area of Tete, Mozambique, by MSF clinicians seeking to reduce the amount of times that patients would have to travel long distances to the clinic, while also reducing the volume of patients that would need to be seen by clinicians each month. A CAG is a group of 6 stable HIV patients from one community (or who live in close proximity to one another). Each of the patients must alternate attending one clinic consultation every six months, so that every month there is one member attending the clinic. At the patient's consultation, they take responsibility for picking up and distributing the medicines to the other group members. This model means that for every group, the number of patients who need to be seen in the clinic every month is reduced from 6 to 1. Patients also avoid travelling long distances once monthly, enabling them to work, and save transportation and childcare money. **Keys to replicability:** Ideally suited to rural environments. In their current form, CAGs require that patients disclose their status to one another, and are not suited to highly stigmatizing contexts.

Adherence Clubs: Implemented in South Africa, soon to be implemented in Mozambique, alternative model implemented in Kenya (discussed separately below). Clubs were first implemented in Khayelitsha, an urban township in Cape Town, South Africa. Clubs allow patients to attend a clinical consultation annually, and a group session at the clinic once every two months where they receive peer support, health education and pick up their medicines. **Keys to replicability:** Ideally suited to urban environments where patients live a short distance to health facilities. Drugs must be dispensed for a minimum of two months at a time. In this form, clubs require patients to disclose their status and are not suited to highly stigmatizing contexts.

Integrated HIV/NCD Adherence Clubs: Piloted and implemented in Nairobi Kenya, integrated clubs were adapted from the South African club model, and recognizing that treatment for HIV is similar to that of chronic diseases, incorporates patients with diabetes mellitus and/ or hypertension. Patients attend clinical consultations annually, and attend 30-60-minute group sessions once every three months. At the group sessions, patients receive peer support, health information about all the diseases covered by the MAC, have their blood pressure taken by a health promoter (a lay cadre), and receive a three-month supply of medicine. Medicines are dispensed in a paper bag, and patients are not required to disclose their status. **Keys to replicability:** The integrated MAC, in this form, requires that NCD care is integrated with primary care at the facility level, and at the provider level it requires task shifting of NCD and HIV care to nurses and that lay cadres be enabled to take vitals and dispense drugs. This model is ideally suited to urban environments with a high prevalence of HIV and NCDs. The model also necessitates that a free, three-month supply of HIV and NCD drugs be dispensed to patients, and there may be challenges implementing this model where ARVs or NCDs are not available free-of-charge and for three months at a time.

Long term appointments / fast-tracked refill: Require patients to attend one consultation per period: six months in Guinea, 12 months in Kenya and South Africa. ART may be pre-prepared and packaged in advance and picked up separately if the patients does not need a consultation on the day of drug pick up. **Keys to replicability:** ideally suited for patients who do not want the social/peer support element or who are unwilling to disclose their status.

Drug pick-up points: Available in South Africa and Zimbabwe. Patients can pick up their drugs at various locations, including hospital pharmacies.

Table 2. Proportion of ART cohort in any Differentiated Model of Care, (end of) 2016

Project	Patients in Differentiated Model of Care %	Additional information
Conakry, Guinea	18.0	Patients in DMOc M: 16.7%; F: 19.0%
Kibera, Kenya	29.0	% of ART patients enrolled.
Tete, Mozambique	31.8	Patients in DMOc M:30.9%; F: 32.4%
KwaZulu Natal, South Africa	36.9	Clubs or CAG: 9.9 %; Drug pick up: 26.2%; Drug pick up is an MoH initiative
Gutu, Zimbabwe	37.0	Patients in DMOc mainly in CARGs. No 2016 breakdown by modality available. 2015 data: 1.1% of patients in Drug Pick Up and 18.4% in CARG.

There is a marked difference between the latter two projects that is worth noting. In Gutu, the vast majority of patients are in a CARG, and only a very small proportion of patients, in the range of one per cent, are utilising the drug pick-up point. In KZN the exact inverse is true. Only around 10% of patients are in a group, of whom just over 1% in a CAG (data not shown), whereas 26% of patients use a drug pick-up modality. The latter is an initiative of the DoH South Africa and not of MSF. In that light, the contribution of MSF to pilot and implement innovative DMOc to scale in KZN is rather limited.

Gutu faced some challenges with getting drug pick-up points organised through the facility pharmacies, which may have created a negative reputation for drug pick-ups. Also in KZN the organisation of drug pick-ups had significant problems in the start-up phase, and despite this, it is the most popular DMOc there.

Low participation in CAGs and other challenges to introducing DMOc have been cited as caused by insufficient assurance of buy-in of and training provided by the respective MoH. DMOc are then seen as extraneous MSF initiatives that nurses and counsellors would not necessarily be committed to. Therefore, it is crucial to ensure involvement of MoH and other relevant authorities from the start when introducing DMOc.

An alternative explanation for low participation in CAGs or CARGs is that these forms of DMOc are ideal for a rural setting: the frequency for clinic visits can be minimised to once or twice a year because the burden of pick-up of drug refills is shared among the group members. Drug pick-up points or other individual schemes of DMOc do not have that added advantage, but in a (semi-) urban setting there may also be less need to limit travel to a minimum as facilities or pick-up points are closer and easier to reach. Gutu, and Tete, both rural settings, may therefore be ideal for CARGs, whereas KZN, partly rural and partly semi-urban with a relatively good infrastructure in terms of road and transport, is more suitable for drug pick-ups. There are also other differences between the contexts. Based on contacts with individual patients and CAGs, as well as on interviews with key informants, it seems that PLHIV in Zimbabwe are more prepared to disclose their status to peers than in South Africa, where patients cited disclosure as one of the obstacles to join a group or ask new members to join an existing group.

“I am on ART since January 2014. I take my pills every day, no problem. I am not in a CARG. There are no people that I know on medication, I am not prepared to disclose. I know only one in our family who is HIV+. I am not sure how people would react, I am afraid of stigma, and discrimination.” – Patient, male, Zimbabwe.

Similar reasons feature in Mozambique, where both patients and an evaluation cited disclosure, not wanting to take responsibility for picking up the medicine for other people or cede responsibility to someone else, or moving frequently, as reasons not to participate in a CAG. Interestingly, Kibera featured a differentiated group model known as a medication adherence club (MAC), that did not involve disclosure of one’s disease status as part of the group process. It would be interesting to learn from this club model and see if it would be feasible to implement it in areas with high stigma or for groups that are particularly reluctant to disclose. Remarkably, participants in the Kibera MACs did ultimately disclose their status with their peers, as they became comfortable with other club members after spending some time in their groups.

Like everywhere else, people do not like to wait. Reduced waiting time is an important pull factor for patients to participate in any DMOc. Conversely, if there are problems with waiting times, as was the case with drug pick-up models in Gutu, KZN and Mozambique, people complain. In almost every interview in Mozambique patients complained that, at roughly an hour, the wait times at the pharmacy were too long. Patients and community members requested that they be able to get their ARVs from the clinic. While Mozambique has a policy of differentiated care, it is not yet in place in Tete, and some questioned the feasibility / acceptability of having the medicines dispensed at the clinics. The possibility of having the medicines prepared in advance —as in the club models in Kenya and South Africa— should be considered, but these models equally require preparation and organisation in addition to skilled manpower, and would require a reinvestment from MSF, which is currently working on its exit strategy from the project.

The low penetration of DMoC in Conakry is likely to be related to the HIV epidemiology in Guinea. The country has a low level generalised HIV epidemic in contrast to countries in East- and Southern Africa, so there are fewer patients. MSF attempted to establish CAG-like groups in Conakry that never took off with the majority of patients, because the rural areas have small populations where *‘everyone knows each other, and everything about each other’* and patients feared that joining the CAG would be tantamount to disclosing their status to their entire community. Another attempt was made to have CAGs with active members of associations of people living with HIV. While these patients greatly appreciated the social aspect of the CAG, members did not always reside close to one another, which complicated the timely delivery of drugs from one patient to the others. Now Conakry has established another DMoC modality in which stable patients individually return to the clinic every six months and get a six-month refill. They can return any time in between if they want to.

The key question about DMoCs is if they fulfil their original objective: less disruption for patients and more support, leading to better adherence and overall quality of ART; and less workload in the healthcare system.

In general, patients are very satisfied with DMoC. They are happy with reduced waiting times, not having to miss work, or being able to look after the kids instead of going to the clinic.

“My sister goes (to pick up medication –JvdM) and then I can look after the children” – Patient, Mbongolwane.

“When we first started [treatment] we had to come once a week, and then it was once every three months, but for a whole day. We had to prepare ourselves psychologically to be at the clinic all day. There was tension with employers, too. Now, we can give ourselves a one-hour allowance from work and that’s enough.” – Patient, Kibera MAC.

“When [a CAG member] gets sick, we help each other. We will take him to the hospital, visit to make sure he is ok. We will help with the other things in his family, cook for him, get his water for him. We are friends. We care about each other.” – Patient, Changara CAG.

Patients participating in a group model are very enthusiastic about the support they get and give. In some cases, in Zimbabwe the CARGs go beyond adherence support and group members assist one another to work on the land of a member when (s)he is sick, or they start microcredit schemes to start rearing chickens or other small animals as a group.

“We pull money together and buy chicken, we help each other then there is too much work at home to do and ask group members to help. We do also do community saving of \$5 per month. So, if a member needs money they get a loan, interest free.” – CARG Member, Gutu, Zimbabwe.

Nurses and counsellors see the impact on patients, but also note the decongestion of their clinics.

“Disclosure levels are very high, people speak up at meetings even. (...) built formidable ties in the community, they work for each other the entire day, they work in the fields. Relationship level is bigger in these groups than with some of the other relatives. They are more prepared to share secrets in the group than to relatives. (...) I think it transformed the lives of people.” – Counsellor, Gutu, Zimbabwe.

“Clubs are successful because I have one a day, I have time. We can talk and discuss everything. I am not in a hurry. Even if I am supposed to take the bloods it is easy. (...) Before patients used to come every day, or they would not come. (...) Sometimes I saw 50 patients per day. And they were seen by someone else each time.” – DoH Nurse, Eshowe.

Whether DMoCs realise better outcomes in the projects in terms of better adherence, better viral suppression and better retention in care is unclear. Monitoring data, for instance in Guinea, indicate that stable patients in DMoC are more likely to remain in care than stable patients who are not in DMoC, but it does not indicate whether there are differences between the VL of the two groups.

Although individual projects are conducting studies, there has been no systematic operational research conducted across the projects to assess the effects of DMoC on treatment outcomes such as adherence / viral suppression and retention in care. It would strengthen the case for these care models if they showed improved outcomes. The design of the operational research should address the problem of selection bias.

The positive effects of DMoC on patients, health workers / healthcare system and the potential positive effects in the form of improved treatment outcomes and retention in care, combined with the relatively limited budget implications of DMoC, trigger the question if DMoCs should not be massively scaled up. The relatively low percentages of patients in DMoC in Table 2 seem to leave room for scale-up but at the same time raise the question if the optimum has already been reached in countries like Mozambique, South Africa and Zimbabwe. There will always be a contingent of patients

who, for reasons of their own, do not want to be enrolled in a DMoC, and there are patients who fare better in a DMoC that is not on offer or not scaled up in the context of the program — see the struggle the Conakry project had to adapt ‘standard’ DMoC to their situation. Offering many different modalities of differentiated care may be the way to go.

“In the past, we said: you can have a club or nothing. Especially men were concerned about stigma and so had nothing.” MSF staff member, South Africa.

In addition, there will always be unstable patients who are not eligible for DMoC. In itself it is understandable that putting patients under less supervision should be reserved for stable patients. On the other hand, unstable patients might benefit greatly from DMoC. Particularly the support coming from the group models such as CAGs and clubs may help unstable patients to better adhere to their treatment.

3. TREATMENT CASCADE

Key findings:

- MSF managed to implement reasonably good treatment cascades across projects, with the poorest results recorded in Tete, Mozambique and Conakry, Guinea, where the proportion of patients on ART with an undetectable VL remains low, despite relatively good retention in care.

Main challenges:

- Retention in care for children is particularly poor compared to the cascade in adults.
- Men are not coming forward for testing and care (corrected for lower prevalence), adherence in men/boys is poorer than in women.

Responses to the challenges:

- Introducing Differentiated Models of Care, which are expected to have a positive influence on adherence and retention in care.
- Introducing special adherence groups and clinic days for children, adolescents.
- Stepping up defaulter tracing to reduce loss-to-follow-up.
- Differentiated models of testing, including door-to-door testing in the communities, mobile and outreach testing strategies targeting places where groups congregate that are difficult to reach.

Lessons learned:

- When implementing new approaches aimed at improving access and retention in care for key populations and/or mobile populations, it is necessary to ensure systematic monitoring of results for each population separately. It will permit assessment of the effectiveness of the services for each population, i.e. workplace outreach to increase access for men may work in linking them into care, but the same is not necessarily true for sex workers.
- The perception that healthcare workers are judgmental towards patients is a barrier to retaining patients in care.

All programs together managed to link 55,867 PLHIV into care (Table 3). In line with the UNAIDS 90-90-90 target, MSF uses the treatment cascade to monitor its HIV programs. The 90-90-90 target relies on the idea of treatment as prevention: if enough people are on treatment, it will have an impact on morbidity and mortality. The 90-90-90 refers to targets for three important steps in that process, the treatment cascade: step 1 (the first 90): 90% people living with HIV actually know their status; step 2: 90% of PLHIV who know their status are on ART (and remain in care); step 3: 90% of people on ART are adherent to treatment as shown by an undetectable viral load.

Good quality treatment with adequate coverage has brought an impact that we could not verify with quantitative data, such as trends in mortality or incidence – on which studies are forthcoming – but many patients and community members testified that improved access to ART has had a visible and noticeable impact in terms of fewer visibly sick, emaciated people in the community and fewer funerals to attend.



Figure 3. The treatment cascade. UNAIDS targets³

The treatment cascade shows how many of total PLHIV are actually virally suppressed. Thus, it enables to estimate the impact a program can potentially make on the epidemic. Modelling studies estimate that if the cumulative 90-90-90 target is reached on time, i.e. 73% of PLHIV are on treatment and virally suppressed, 50% of the HIV burden may be averted in future decades. (Maddali, Gupta et al. 2016, Maheu-Giroux, Vesga et al. 2017) Thanks to an Epicentre survey in the area, Gutu has full treatment cascade data, which manages to achieve viral suppression among 68% of all PLHIV, quite close to the cumulative cascade target. In Mozambique, only 41% of ART patients show viral suppression (Table 3), but this is largely a reflection of the challenges that they have had in increasing the coverage of VL testing, as only 71% of ART patients have had their VL tested. The proportion of patients who have a suppressed VL among all patients who have had their VL tested is 66%. Much depends on the first step in the cascade, and if this would be similar to Gutu, results can be considered good for at least three out of the five projects.

Table 3. HIV treatment cascade in the five projects⁴

Project	Number of patients in active cohort	Step 1: % of PLHIV who know their status ⁵	Step 2: % of PLHIV on ART		Step 3: % of PLHIV on ART with suppressed VL
			Baseline	End line	
Conakry, Guinea ⁶	9736	n/a	n/a	98	63
KwaZulu Natal, South Africa	20576	85%	75	92	86
Gutu, Zimbabwe	12114	87	45	98	83
Kibera, Kenya	5407	n/a	96	83	87
Tete, Mozambique ⁷	8034 ⁸	88	n/a	94	41 (% of PLHIV who have had their VL teste with suppressed VL:66)

3.1 The first 90: Access to testing

The number of people living with HIV in a given geographic area is determined via a modelling exercise or survey, and the proportion of those who know their status is calculated by looking at the number of people who have tested positive over the total number. To do this effectively, MSF would need access to the estimated number of people living with HIV, and the total number of people who have tested positive. Evaluating MSF's progress against this target is only appropriate when MSF is the only organization conducting testing within a defined region.

³ Avert, *Global HIV Targets* <https://www.avert.org/global-hiv-targets>

⁴ Project data from MSF-OCB (2017). Optimizing treatment for HIV/TB and non-communicable diseases (NCDs) in 5 countries in sub-Saharan Africa. (Guinea, Kenya, Mozambique, South Africa, Zimbabwe). Program DGD 2014-2016. MEDECINS SANS FRONTIERES (MSF-B). Final Report 2014 - 2016., MSF-OCB.

⁵ Since this indicator can only be derived from modelling or surveys, data on this indicator are not available in all projects

⁶ The figure for Guinea represents all of the HIV patients in MSF supported structures. The number of patients ever registered in care is 24909.

⁷ The Tete Province was using CD4 500 as the criteria for starting treatment at the time of the evaluation. Their second 90 refers to % of eligible ART patients receiving care.

⁸ Total registered PLHIV = 15822

In Gutu, Zimbabwe, 86% of PLHIV know their status. This means we can see the full treatment cascade for this project. In the other projects, MSF's catchment area is difficult to define. For example, in Kenya MSF was one of many actors working in the Kibera slum where the population was largely transient. As a result, MSF could not accurately estimate the number of people living with HIV or the total number of people tested in Kibera. In Guinea, MSF provides care in Conakry, but the patients come from across the country. The projects have emphasised the last two elements of the treatment cascade: the percentage of PLHIV on ART and the percentage of PLHIV on ART with an undetectable VL. Despite difficulties in measuring the first 90, MSF has implemented a number of initiatives to increase access to testing and prevent HIV transmission, including health education, HIV / STI / TB screening / pregnancy testing, male medical circumcision, condom distribution, community HIV counselling and testing, prevention of mother to child transmission, post-exposure prophylaxis for survivors of sexual violence, and outreach activities to specific populations including youth in schools, sex workers and (migrant) workers in mines and on farms.

3.2 The second 90: ART Coverage

All five of the projects have higher percentages of patients on ART than the national figures (Figure 4). Project data and national cascade data on Mozambique come from MSF project reports (MSF-OCB 2017), data on Guinea and Zimbabwe come from official government reports (Comité National de Lutte contre le Sida 2015) (Ministry of Health and Child Care 2016), Kenya cascade data are based on the UNAIDS website (Joint United Nations Program on HIV/AIDS 2016), and South Africa cascade data are based on a weblog by the South Africa DoH's deputy director general for HIV, TB and maternal, child and women's health (Pillay 2016).

The results for Kibera show a somewhat surprising *decline* in ART coverage from baseline. Project reports attribute this to new facilities providing HIV care throughout Kibera, and to the impending handover of the MSF project. In KwaZulu Natal the improvement from baseline is clear; in Gutu the change is spectacular - from 45% to 98% (Table 3).

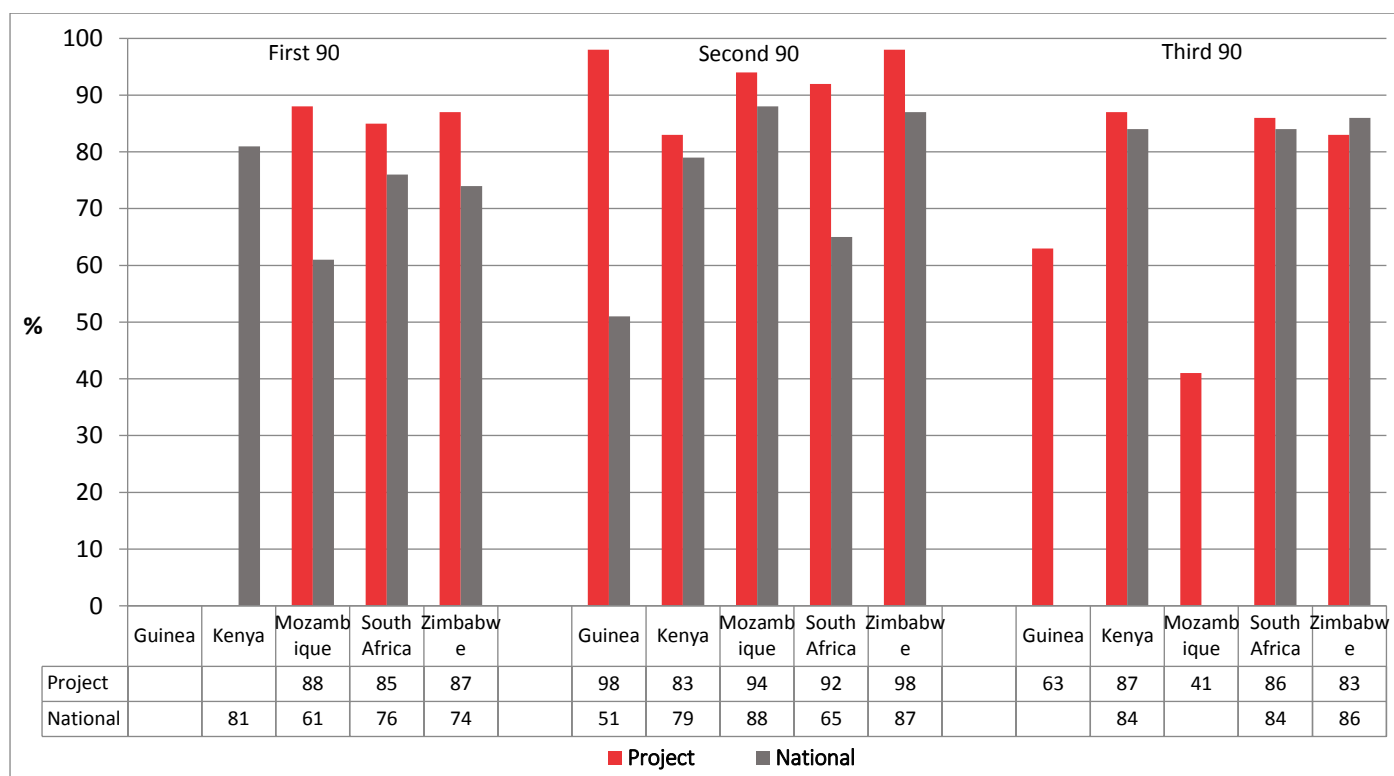


Figure 4. Treatment cascade: comparison MSF projects with national data

Morbidity, particularly in newly initiated patients at lower CD4 counts, plays a role in retention in care. At lower CD4 counts, RIC is worse because of increased mortality in this group, along with considerable morbidity. People may be bedridden and cannot turn up repeatedly for clinic visits, so end up in the records as LTFU. With the introduction of test & treat in some countries, also healthier PLHIV with higher CD4 counts are eligible for treatment, the average CD4 count of treatment cohorts is expected to go up and LTFU due to severely ill patients may diminish, improving RIC. This will particularly impact the second and third nineties. Evidence from South Africa, Zimbabwe and many countries shows that despite increased access to ART services and patients starting treatment earlier, a stable 20% of patients come with advanced HIV (defined as CD4 < 200 or WHO 3-4). The majority of these patients are not treatment naïve, but defaulted their treatments at a particular moment.

3.3 The third 90: Viral Load Suppression

Kenya, Mozambique and South Africa have higher rates of VL suppression than the national figures. There is no data on VL suppression at the national level for Guinea. Only the national average of the last step in the treatment cascade in Zimbabwe is 1 percentage point better than the result in the Gutu project. Based on the population survey by Epicentre, MSF in Gutu achieved a treatment cascade of 87-98-83, compared to 74-86-90 in surrounding Masvingo province (Ministry of Health and Child Care 2016).⁹ Although Masvingo seems to have better results in the last 90 by actually achieving it, MSF is closer in meeting the first two 90s which ultimately means a larger coverage. The total MSF cascade implies that 69% of all potential patients are on treatment and virally suppressed, whereas in Masvingo this is just 57%.

The cascades in Guinea and Mozambique suffer from low numbers of people with an undetectable VL: 63%, and 41% respectively, despite good ART coverage. As mentioned above, these figures are at least in part due to low VL coverage in these countries.

The project in Mozambique is in a rural area that suffers from poor infrastructure, resulting in challenges for patients to access services and, therefore, high rates of LTFU, as well as procurement and supply management problems for ART and other essential medicines. The lab in Maputo has also had difficulties to maintaining and servicing its VL laboratory equipment. All these factors add up and result in poor cascade outcomes. Finally, the results might (partly) be explained by high levels of resistance of the virus in this part of Mozambique to the first line ART regimen. To better understand the low viral load suppression despite high ART coverage, MSF is conducting a study on ART resistance in Tete.

Despite low numbers of patients with undetectable VL, the Tete project is outperforming the rest of the country. Additionally, Tete, where MSF has been working for many years, is the only province in Mozambique where prevalence is decreasing.

Challenges explaining the poorer cascade in Guinea include long travel distances for patients to visit the clinic and long waiting times at the clinic, both of which result in LTFU. Also, challenges to linking patients with psychosocial support teams, who assist in adherence, play a role. While the remaining three projects show good treatment cascades compared to national figures, all projects still face significant challenges with respect to retention in care. Below is a breakdown of challenges retaining patients in care, by category of patient.

3.4 General population

The Kibera project has faced challenges retaining patients in care, as Kibera is an informal settlement with a transient population. As the project drew to a close, and as the number of care providers in Kibera increased, the project saw a decline in retention as patients anticipated the closure and sought treatment elsewhere. Thus, in this case patients might be retained in care elsewhere, but they are still recorded as LTFU to the project.

All patients in Guinea face major barriers to accessing and adhering to their care: stigma is extreme in the country, and patients choose to travel long distances to seek care rather than undergoing care close to home where they risk exposure. These distances create additional financial barriers, exacerbate problems with wait times and follow up, and create complications with work and school schedules.

Strategies in place with potential to improve RIC

Decentralization of HIV services to PHC and the implementation of differentiated models of care, which require fewer clinic visits per year, and particularly those with a strong social support component like CAGs, CARGs or Clubs, may increase the likelihood of patients remaining in care. So far, Guinea is the only country to examine the effects of DMOc on adherence and retention in care that considers the selection bias caused by stable patients joining DMOc. In that case, patients on R6M were found to have better retention in care than stable patients who were not enrolled in R6M.

RIC may also be influenced by attitudes of health facility staff. Some patients mentioned they would be scolded at, or receive reprimands for not being adherent or otherwise not following directions of health staff. Although we did not specifically address this issue any further in terms of exploring a relationship with RIC, this attitude of health staff and/or other judgmental attitudes might create barriers to visiting health facilities, particularly by patients who already face difficulties with adherence or keeping appointments.

We expect that defaulter tracing through the various forms of community health workers in the projects would be able to improve RIC. At the Matam facility in Conakry, patients not showing up for an appointment get a phone call, but due

⁹ National data from figure 4 on Zimbabwe differ because they are Zimbabwe national-level data, whereas here province-level data are being given.

to stigma, many patients either do not answer or provide false contact information. Of those who received a call, 75% come back. It is difficult to assess whether sufficient time has passed since changes like defaulter tracing, DMOc and T&T took place to expect a positive impact on RIC. In Zimbabwe, most data on defaulter tracing show that the majority of patients who defaulted have actually been misclassified; in reality, they are in care and misclassified as defaulters due to lack of documentation and updated visit records. Most patients who were genuinely LTFU returned to care after being traced. However, it is unknown if tracing efforts result in bringing the patient back into care for a prolonged period of time.

3.5 Children

Monitoring data in the South Africa and Zimbabwe projects indicated that, earlier in the lifecycle of the project, the adherence and retention was poorer in children than in adults. The proportion of children with HIV in care in KZN was 66%, whereas in adults it was nearly 80%; less than half of children showed viral suppression; over two-thirds of adults were suppressed (data not shown). Monitoring of VL in Gutu showed high detectability rates in the younger age groups. In children, detectability of VL tended to be around two to three times the rate in adults (data not shown).¹⁰

Strategies in place with potential to improve RIC

Teams in Mozambique, Guinea, South Africa, and Zimbabwe have created special days or groups for children and adolescents to enhance adherence, improve social support, reduce stigma and increase knowledge. Interviews with both staff and patients reveal that parents or guardians are often reluctant to disclose their personal HIV status to their children, and parents also need support in informing their children of their status when their children are HIV+. In the later ages, the concept of HIV is introduced. This support in discussing HIV status is provided by the projects. When children get older, information about safe sex practices and family planning is included in the health information.

In order to encourage more guardians to test their children, links with partner organisations working with orphans and vulnerable children have been established.

The results of this targeted approach have not yet been systematically evaluated in all projects, but both South Africa and Zimbabwe now have good retention rates in children. In South Africa, RIC after 12 months for children under 15 years is just over 83%. In Gutu, Zimbabwe RIC rates for children 10-14 years is 92.1% (Table 4).

Table 4. Retention in care at 12 months in the five projects, by age category: improved results in children after special interventions in South Africa and Zimbabwe

Project	Adults %	Children %	Adolescents %	Comment
Conakry, Guinea	71.5	72.5	-	
Kibera, Kenya	67	-	-	
Tete, Mozambique	83	-	-	
KwaZulu Natal, South Africa	65.1	83.3	-	Adults >= 15 years; Children < 15 years
Gutu, Zimbabwe	64.5	75.0	54.6	Adults with CD4 350-500; Children <5 years; Children 10-14 years: 92.1% RIC.

3.6 Men

"Females are embracing programs but men are hard to get" — MoH staff, Gutu, Zimbabwe.

Linking men to care and treatment is important for the wellbeing of these individual men, but also from a public health point of view. The pattern in much of (Southern) Africa is that HIV prevalence in young women is markedly higher than among young men, whereas prevalence of HIV in older men is as high or higher than in women. This likely reflects a pattern whereby older men tend to have unprotected sex with younger women, thus spreading the virus. Breaking this cycle by putting men with HIV on treatment would have a positive impact on the epidemic.

The underutilisation of HIV services by men is a challenge that all projects report on, both in documents and in interviews. The exception is Kibera, where we do not have access to data disaggregated by sex.

- Data from an Epicentre population survey in Gutu, Zimbabwe (Table 5) show the gender differences throughout the treatment cascade. A much smaller proportion (58.3%) of men younger than 30 years with HIV know their

¹⁰ Source: MSF UNITAID funded HIV monitoring Project- 2016 Annual report, p.4

status, where this proportion in women is 84.2%. This trend is also visible in the surrounding province, Masvingo.

- Once linked to care, young men (<30) have better outcomes than women (e.g. larger proportion of younger men have an undetectable VL in Gutu - Table 5) but there is still a trend of less men living with HIV being on treatment than women due gaps in the first 90.
- Project data in Mozambique show that there are proportionally fewer men on ART, taking into account the lower HIV prevalence in men compared to women.
- Data from the project in KZN and Gutu project show that men living with HIV are more likely to be immuno-compromised (CD4 < 200) or present with clinically advanced disease (WHO 3-4) when linked to HIV treatment.
- In some projects, the proportion of men on ART who are virally suppressed is lower than the proportion of HIV-positive women who are virally suppressed.
- In Conakry, girls and women on ART are more likely than men and boys to have a VL test done, and more likely to have an undetectable VL. Boys under 15 years old are the least likely to have an undetectable VL. Findings from Tete also show a difference in VL coverage between men and women.

Table 5. Treatment cascade by age and sex, Gutu district and Masvingo province, Zimbabwe

	First 90 Diagnosed					Second 90 On treatment					Third 90 VL<1,000 cp/ml (* 52 missing results)				
	Total 15-64	< 30 y		30- 64 y		Total 15-64	< 30 y		30- 64 y		Total 15-64	< 30 y		30- 64 y	
		F	M	F	M		F	M	F	M		F	M	F	M
Gutu District (n=631)	86.4	84.2	58.3	90.1	82.3	94.2	87.5	95.2	97.2	89.5	85.5	63.6	90.0	88.4	85.5
Masvingo Province (n=359)	74.0	54.0	47.5	81.3	77.1	86.3	84.4	68.7	88.0	85.7	89.7	93.0	100	89.7	87.8

Source: Epicentre Survey Gutu district, 2016

There are multiple determinants for the lower participation of men in the treatment cascade. Interviews indicate that these include psychosocial and cultural issues as well as structural barriers.

Psychosocial and cultural barriers are related to gender norms and behaviours. In KZN for instance, men are reluctant to be examined by a woman or disclose their status towards women. In a healthcare system where most nurses are female, this creates a barrier.

In Zimbabwe, staff mentioned that some men also believe they don't need to get tested if their wife or girlfriend tests negative.

Stigma plays a role too. In Tete, counsellors reported that some men do not want to go to the clinic for care, especially with their wives, for fear of being judged for having transmitted the disease to them. Others reported that some men see visiting the clinic as a woman's responsibility and prefer to send their wives to get their medicines.

Structural barriers that came up frequently are the fact that men are at work as breadwinners. Opening hours of health facilities coincide with the working hours. Having a job means that men cannot take time off to go to a clinic to get tested or pick up medication. Even if they could, it would mean they would not receive pay or risk being fired. Because of their jobs, men tend to be highly mobile: they work in farms, mines or other locations far from their home, often in another country where access to care and treatment is difficult or irregular at best.

"From the male side, there is still a challenge. Men wait until they become sick. They come when their CD4 is even below 100. The advantage of most of women is PMTCT, they get tested, and they are coming for the services. Men say they have no time, they are busy working. When we started the night clinic the main target was men. It worked." – Nurse, Gutu.

Strategies in place with potential to improve RIC

The response to the underutilization of services by men has been to tailor services to the needs of men by providing outreach testing and clinics at locations near work sites, for instance visiting farms in KwaZulu Natal and Gutu. The KwaZulu Natal project found out that community testing was able to reach many men across age categories, particularly through fixed sites and mobile one-stop shops (Bedell 2016). The KZN project also responded by starting a special service catering for men without openly displaying its HIV focus ('men's wellness centre'). Since this centre wasn't fully operational at the time of the evaluation, it's not yet possible to draw conclusions about the effectiveness of this special service to link men to HIV prevention and care. Counsellors in Mozambique have adjusted their working hours to be more accessible for men.

3.7 Key and mobile populations

Key and mobile populations are at higher risk of contracting HIV than the general population. Key populations relevant for the projects in this evaluation are female sex workers (FSW), men-who-have-sex-with-men (MSM), and prisoners. There is no mention anywhere in the project reports and interviews of other key populations such as people who inject drugs (PWID) or transgender people. Key populations are subject to considerable stigma because of their behaviour, which is perceived negatively in many societies. In addition, legislation in many countries, including the ones subject to this evaluation, is such that activities of some or all of these key populations is punishable by law. The heavy stigma and legislation cause individuals to avoid seeking care, including effectively creating considerable barriers to access HIV services and to retention in care.

Mobile populations relevant for the evaluated projects include truck drivers, among others. They have livelihoods that require them to travel away from home – and by extension, from their regular care providers– for extended periods of time. Therefore, they show higher rates of LTFU and consequently RIC of these populations is more difficult to achieve.

Strategies in place with potential to improve RIC

All the projects, with the exception of Kenya, have activities geared towards improving access to care and retention in care for key and mobile populations. These projects include prevention, testing and referral to care held at times and in locations that are convenient and safe for these populations.

For some populations like working men, staff indicate positive results (see, for instance, the quote on the previous page) but we do not have evidence from routine monitoring data to be able to say that these interventions work, simply because we did not collect them. Some projects have quite detailed data, so it may be possible to monitor and document effectiveness of targeted interventions. Based on research evidence from South Africa, it is reasonable to assume that interventions like outreach result in, for instance, higher proportions of men accessing services (Meehan, Naidoo et al. 2014).

The differentiated models of care mentioned above reduce the frequency of clinic visits, increase the length of prescriptions and increase social support to patients. These may be of particular benefit for key and mobile populations who, particularly due to travel, may struggle to attend more frequent visits. Indeed, findings from the literature suggest that streamlining services to minimize patient visits, providing adequate medical and peer support, and providing incentives may decrease attrition, but the quality of the current evidence base is low (Govindasamy, Meghij et al. 2014).

Mozambique has developed a special project that targets FSWs. MSF has a mobile clinic that does prevention activities, including providing condoms and health information, provides free STI screening and care to sex workers, does HIV testing, refers and accompanies patients for HIV treatment at city health facilities, and conducts counselling within the SW. MSF also supports peer educator from within the FSW community.

4. NATIONAL POLICY CHANGE

Key findings:

- MSF has contributed to national-level policy change in all five countries evaluated. MSF has an ambitious advocacy agenda, pushing for improvements in HIV care on multiple fronts. It is regarded as a technical expert in HIV care, and its experience ‘on the frontlines’ is highly valued. MSF’s influence can be broken down into four categories: influence on high level policies, influence on technical guidelines, practice, and influence on major donors. MSF’s advocacy strategy relies predominantly on participation in technical working groups, conducting and disseminating results from operational research, sharing monitoring data, and partnerships.
- A notable success to mention is the uptake of MSF DMOc by national government in all five of the countries with DGD funded projects.
- As a notable weakness, MSF has not been able to secure formal recognition of lay counsellors and their incorporation into national human resource for health frameworks, despite advocacy work since 2002 in some countries.

Main challenges:

- MSF’s advocacy strategy has occasionally been perceived as adversarial and MSF has been seen as working in isolation on some of its advocacy efforts.

Response to challenges:

- MSF collaborates closely with other HIV advocates and provides valued support to technical working groups.

Lessons learned:

- MSF’s experience providing HIV care in country, combined with evidence from operational research, its financial independence, and its capacity to innovate and challenge existing policies, are essential for MSF’s credibility and advocacy influence.

In all five DGD-funded countries, MSF seeks to influence national level policies on HIV care. MSF considers this a key pillar for ensuring the sustainability of their work in improving each country’s ability to respond to the HIV pandemic. Evaluating MSF’s role in influencing policy is in some cases complex, particularly in countries like South Africa and Kenya, where the organizations providing HIV care number in the hundreds, if not thousands. In these circumstances, it can be difficult to measure the exact contribution that MSF made to a given policy change.

To evaluate MSF’s contribution to policy change, we have used a modified Bellwether design. We spoke with MSF’s peers, other organizations that either work alongside MSF to influence HIV care and/or who are well informed about the HIV policy landscape. Respondents were selected because of their knowledge of HIV care and policy, as well as their willingness to be candid with the evaluators. Some respondents were unauthorized to speak on behalf of their organizations, and we accepted not to name them in exchange for their honest feedback. We cross checked the findings from interviews with other interviewees, MSF staff, news reports of policy changes, and within the policies themselves. In most cases, interviewees also gave similar responses to our questions, further reinforcing our confidence in our findings.

MSF has made many important contributions to policy change, usually in collaboration with other HIV stakeholders. MSF was not alone in providing HIV care or trying to influence HIV policy in any of the countries, and most policy changes cannot be attributed to them alone. A common finding across all countries is that had MSF not been present and advocating for a given policy change, it may have taken much longer to secure and/or that the content might have suffered without MSF’s technical knowledge. Some cases, however, are clearer cut. CAGs, for example, were invented by MSF and are now in the national policy in Mozambique and in South Africa and recognised in Zimbabwe; likewise R6M in Guinea. Adherence clubs, also invented by MSF, will be rolled out nationally in Mozambique in the coming year. We can confidently say here that without MSF, these changes would not have taken place.

While many of MSF’s advocacy efforts have been successful, they have not been able to secure formal recognition of lay counsellors in the national human resources for health frameworks. As a result, lay counsellors are not state employees, and their presence in HIV programs is not a given. It is unclear if this cadre –which respondents consistently report is essential for supporting patients’ adherence and retention— will exist at the facilities that MSF has supported after MSF hands over its activities.

Table 6. Policies, guidelines, practices and donors influenced by MSF

South Africa	Zimbabwe	Mozambique	Kenya	Guinea
<p>New Adherence guidelines</p> <p>Incorporation of HIV/TB services into the Learner Support Agents (LSA) role within the schools.</p> <p>South African HIV Clinicians Society issued guidelines, with scale-up of self-testing for HIV with participation of MSF staff in the writing committee. 2017</p> <p>ART eligibility criteria, from CD4 350 to CD4 500, and from CD4 500 to test & treat, and introducing option B+ in PMTCT.</p> <p>New standards for government-purchased condoms.</p> <p>Door to door testing: First resisted by DoH, now D2D is a well-established testing strategy, for which the Eshowe project provided evidence through operational research.^{1,2} D2D testing is e.g. funded by PEPFAR.</p> <p>Some people claim that MSF has also played a role in South Africa's focus on young women and girls</p>	<p>Routine VL monitoring, 2013</p> <p>CARG</p> <p>National VL Plan, 2015.</p> <p>Introduction of TDF/3TC/EFV regimens for ART, 9-month DR TB regimens and strengthening IPT.</p> <p>CHAI picked up on MSF operational research that proved that GeneXpert can be used to offer both viral load and early infant diagnosis in addition to TB diagnosis and expanded VL testing on the Xpert to 13 districts in Zimbabwe.</p> <p>PEPFAR has taken up CARGs and decided to fund its roll out in Zimbabwe in 30 priority districts. As such sustainability and uptake of this strategy is assured.</p> <p>MSF experience in cervical cancer screening influenced MoHCC to include this in the 2018-2020 Global Fund country application.</p>	<p>Implementation guide for Test & Treat, 2016.</p> <p>3 months' supply, 2017.</p> <p>CD4 500, 2014. Key populations, 2016.</p> <p>MoH acceleration plan, 2014.</p> <p>Switch to second line treatment at viral load above 1000 copies, 2016.</p> <p>CAGS, 2015. Universal access to ARVs for pregnant women 2013.</p> <p>Task shifting, 2010. "Paragem unica in SMI"</p> <p>One stop service in MNCH/PMTCT. MWS responsible for the prescription and management of ARVs.</p> <p>National Guideline for Psychosocial Support and Positive Prevention, 2015. (MSF listed as an author)</p> <p>Guideline for Viral Load Implementation, 2015. (MSF listed as an author)</p> <p>Universal access to HIV treatment for TB co-infection.</p> <p>Waterguard/Pure, 2017</p>	<p>National Plan for Accelerating HIV Care and Treatment NASCOP, 2015-2017. *</p> <p>Guidelines on the Use of Antiretroviral drugs for treating and preventing HIV in Kenya, 2016. Multiple chapters. *</p> <p>National Isoniazid Preventive Therapy Standard Operating Procedure March 2015*</p> <p>Asthma (draft guideline).</p> <p>Sickle cell (draft guideline)</p> <p>Epilepsy (final guideline)</p> <p>Mental health (final policy, draft guidelines)</p> <p>National Curriculum for the training of paramedical staff on the management of Non-Communicable Diseases</p> <p>Kenya National Strategy for the Prevention and Control of Non-Communicable Diseases 2015 - 2020</p> <p>Nairobi City County Health Services asked MSF Belgium to provide technical guidance on the implementation of differentiated models of care including 1-year appointments and the MAC model for HIV.</p> <p>* MSF France has taken the lead on HIV advocacy, but continues to use data from and collaborate with MSF Belgium</p>	<p>Normes et procédures de l'accompagnement psychosocial des personnes vivant avec le VIH en Guinée</p> <p>Guide des Formateurs: L'Accompagnement Psychosocial des PVVIH en Guinée</p> <p>Plan de Rattrapage d'Urgence pour Accélérer et Maintenir La Réponse au VIH En République De Guinée</p> <p>Option B+</p> <p>R6M</p> <p>Inclusion of Routine VL in the Global Fund proposal</p>

Advocacy strategy

Across all five countries, MSF regularly participates in technical working groups ('writing committees' in South Africa). These groups are largely tasked with the development of new guidelines, and MSF is viewed as a credible expert in the field of HIV and NCDs in the case of Kenya. In Mozambique, Guinea, Zimbabwe, and Kenya, MSF is a major player in these committees, and influences the content of guidelines across an array of topics. This has led to MSF influencing the introduction of routine VL monitoring, ART eligibility criteria, task shifting and NCD guidelines on a national level. Some advocacy has mobilised donors like the Global Fund or PEPFAR to implement advocated approaches like routine VL monitoring.

In all countries, external respondents said that MSF is respected for collaborating and providing valuable technical guidance on guidelines development. In Mozambique and in Guinea, there were some critiques of MSF's past advocacy, which some partners deemed as isolated and occasionally confrontational. In both countries, partners appreciate MSF's more recent efforts to be more constructive and collaborate more with other actors.

One of MSF's key strategies in advancing HIV care is to conduct operational research on innovative approaches. In some cases, such as with community and differentiated models of care, MSF has designed new interventions and conducts operational research to test their effectiveness. In most of the countries evaluated, national ministries of health are unwilling to implement new strategies in-country without local evidence. In these cases, MSF also conducts operational research and/or shares data on interventions that are known to be effective elsewhere, in order to provide relevant MoH with evidence and motivation to implement the strategies. Examples of this include PrEP in Mozambique (research ongoing) and routine viral load monitoring in Kenya. Influencing national protocols mostly works where health authorities are pro-active and seek innovation, but lack the technical expertise or fiscal space to pilot such new approaches.

In Mozambique, Kenya, and Guinea, MSF's reputation comes from its historical role in treating HIV in those countries. MSF was the first organization to give free ARVs in Kenya and the second in Mozambique, and is still the third largest financial contributor to HIV care in Mozambique. MSF still treats between 25-30% of all active patients in Guinea, where it has been working since 2003. MSF is often viewed as a pioneer and a leader when it comes to HIV. In Kenya and South Africa, middle income countries with many actors, MSF's role is no longer as prominent, and MSF is no longer always the leader.

"MSF tends to run faster than the rest, but now, the ministry is catching up." – MSF partner, Kenya.

Another separate but related enabling factor is that MSF continues to provide HIV care. This may seem like a given, but in Guinea and Kenya there are advocates that are not implementers; in Mozambique, PEPFAR is a major donor and advocate, but does not have first-hand experience with implementation.

Across all countries, respondents suggested that MSF's independence facilitates MSF's advocacy work. MSF is not financially dependent on the usual major HIV donors (Global Fund and PEPFAR) and not constrained by bilateral agreements. Whereas other organizations may not have the freedom to critique their donors' approaches or they may need to make trade-offs in order to achieve a broader set of policy objectives, MSF is free to express its expert opinion, and does so frequently. In Mozambique, both because of this freedom to speak liberally, and MSF's proximity to patients, PEPFAR views MSF as a proxy for civil society. This financial freedom also allows MSF to allocate funds to areas that are not being addressed, and to try innovative approaches.

5. TUBERCULOSIS

Key findings:

- MSF has introduced new approaches to tuberculosis care in various projects, particularly with respect to drug-resistant tuberculosis. MSF has also integrated tuberculosis case finding in its HIV projects.

Main challenges:

- Integration of isoniazid preventive therapy (IPT) in HIV and TB services, and insufficient coverage of IPT.
- Achieving good quality screening and hence good case detection rates.
- Treatment outcomes.

Response to challenges:

- Decentralizing treatment to improve outcomes.
- Increased attention for record keeping.
- Intensified sensitization, training and mentoring of staff on TB screening.
- Intensified sensitization of patients towards TB screening.

Lessons learned:

- Elements of MSF's approach that yielded successful results in HIV, including differentiated and community models of care, could be applied to DR-TB and DS-TB to improve outcomes.

Tuberculosis is the most important cause of death for PLHIV. Four out of the five DGD project countries, Kenya, Mozambique, South Africa and Zimbabwe, appear on the 2015 list of 30 high-burden countries with respect to their rates or numbers of TB incidence, TB/HIV co-infection and multidrug-resistant tuberculosis (MDR-TB) burden.¹¹

It is therefore logical for MSF to take on case finding and treatment of TB in its projects. MSF has introduced new approaches to TB in various projects, particularly with respect to drug-resistant tuberculosis (DR-TB).

This includes:

- Introduction of shorter regimens for MDR-TB;
- Decentralised treatment of DR-TB;
- Intensified case finding for all forms of TB;
- Procuring Xpert machines to strengthen diagnosis of (DR-)TB;
- Integration of TB screening in its HIV projects, including integration in HIV counselling and testing in the community;
- Integration of TB treatment and prevention with isoniazid preventive therapy (IPT) in HIV activities.

These activities mean that where MSF adopted the mentoring approaches, healthcare personnel and volunteers have also been trained and mentored to perform TB care activities.

The integration of TB into HIV activities has largely been successful. The KZN project has successfully introduced TB screening in all its HIV activities, including community counselling and testing for HIV, resulting in large numbers of TB screenings performed. For community testing in KZN alone, this means that over 56,000 people have been screened for TB. The main objective of the project in Kibera was integrated HIV, NCD and TB service delivery, and both Tete and Gutu have integrated TB treatment for their HIV patients. For those patients on ART who test negative for TB, three projects provide IPT: Mozambique, South Africa and Zimbabwe. Also, the Conakry project aims to provide integrated TB/HIV services, but faces some challenges as the MoH systems are not integrated. For example, the percentage of TB/HIV patients treated for each disease in the same health centre in the Conakry project was just 26% in 2016.

Challenges with regards to both drug-sensitive tuberculosis (DS-TB) and DR-TB include:

- Suboptimal cure rates for DS-TB. Table 7 demonstrates that all projects reporting a cure rate for their TB/HIV co-infected patients achieve fair but suboptimal results, since they are quite far from the standard of 85% treatment success. This isn't likely to be due to high MDR prevalence since patients are generally tested with XPERT Rif tests, so the DS-TB cohort can be expected to have no DR cases mixed in. Project-related factors such

¹¹ Source: World Health Organization Strategic and Technical Advisory Group for TB 2015.

as complete and adequate record keeping, and quality of treatment supervision are likely to play a role. Better results have been achieved in comparable populations. A study on TB treatment among TB/HIV co-infected patients in KZN achieved a treatment completion of 82%, much higher cure rates than the KZN project reports.¹² In Kenya, the project has decentralised treatment as a response to achieve better cure rates. Although we have no data to show an improvement in cure rates linked to decentralising treatment, Kenya has the best documented cure rates in Table 7, although it is still not very close to the WHO/Stop TB standards of 85%.

- Cure rates for MDR-TB have not been systematically reported across projects, and (DR-)TB documentation, reporting and operational research is far less extensive than for the projects' HIV components. For KZN it is still too early to report as the first MDR-TB patients have only been enrolled in 2017. Gutu reports cure in 14 out of the 26 MDR-TB patients (53%) who started treatment in 2016.
- Declining case finding. For instance, in South Africa and Kenya the numbers of newly detected TB cases are declining over the past 3 years and staff doubt whether the quality of the screening is good enough and if files are complete of those patients who screen positive. Intensified sensitisation of both staff and patients, plus training and additional mentoring of MoH staff on TB are the remedial actions that the projects have been proposed so far.

Table 7. TB outcomes in the five MSF projects

Project	Number of MSF co-infected patients treated for tuberculosis in 2016	Cure rate % MSF program	Cure rate % national average co-infected patients in 2016 ¹³	Number of MSF patients initiated on treatment for MDR TB in 2016	Eligible patients of MSF ART cohort on IPT %	Additional information
Conakry, Guinea	207	NA	74	NA	NA	
Kibera, Kenya	368	76.5	82	3	NA	Detection rate is declining. Cure rate is improving from 68% in 2015. Number of MDR TB patients is the number initiated in 2016.
Tete, Mozambique	168	NA	86	1	46	Number of MDR TB patients is the number initiated in 2016. In previous year the number of new MDR patients initiated on treatment varied from 4-15.
KwaZulu Natal, South Africa	456	74	80	NA	37	The 456 initiated on treatment in 2016 represents a declining trend: 722 (2014); 588 (2015). 74% is the overall treatment success rate in the quarterly 2015 cohorts treated for TB.
Gutu, Zimbabwe	NA	71	79	26	26	MDR notification: 48 (37 from Gutu, 11 patients notified outside Gutu but treated in Gutu).

- Challenges with the DR-TB lab results. Analogous to long TAT with VL tests, the Gutu project reports long TAT of sputum culture results from central labs, which delays diagnosis and choice of treatment. MSF has responded with decentralised testing using GeneXpert platforms.
- IPT coverage was initially low in Gutu at 15% but achieved better results as MoH scaled up. By the end of 2016, all 29 clinics included 3146 PLHIV on IPT, representing a coverage of 26%. The projects in Mozambique and South Africa achieved IPT coverage rates that are higher than those in Zimbabwe during the same period.¹⁴ Malawi has received IPT coverage of up to 79%, which demonstrates that it is possible in high-burden HIV settings to achieve high coverage of IPT.¹⁵ Coupled with high ART coverage, good IPT coverage is expected to reduce incidence of TB and has additional effects on mortality in PLHIV (Dowdy, Golub et al. 2014). It is difficult to compare MSF's achievements in IPT with nationally reported data, because the indicator definitions are very different.¹⁶ Success factors and challenges to improve IPT coverage in the projects have not been discussed as they are outside the direct scope of this evaluation.

The potential beneficial implications of scaling up and integrating TB screening and treatment throughout its projects cannot be underestimated, given that TB is the leading cause of death among PLHIV and four of the project countries

¹² Source: Jacobson, Moll et al. 2015.

¹³ Source: World Health Organization (2016) World tuberculosis report.

¹⁴ Based on MoH data, Gutu reportedly achieved IPT coverage of nearly 38% in 2017; for Zimbabwe nationwide IPT coverage was 44% in 2017.

¹⁵ Source: World Health Organisation, 2016.

¹⁶ WHO reporting on IPT coverage is calculated only with patients enrolled in ART the previous year in the denominator.

are high-burden TB and/or high-burden MDR TB countries. In addition, technical assistance and capacity building with respect to diagnosis and treatment of MDR-TB is likely to have a positive impact — first of all on the lives of patients with MDR-TB who will be treated with a shortened regimen that is easier to follow than the standard MDR treatment. This implies that more MDR-TB patients can be successfully treated which will have a positive impact on the (MDR-)TB epidemics in the countries involved. The challenges identified are related to the outcomes of DS-TB. While putting considerable amounts of human and financial resources in the treatment of MDR-TB cases, in high-burden dual epidemics of TB and HIV it would be a lost opportunity for MSF to not put its weight behind achieving better outcomes for all TB patients. In order to do that, projects should bring the detail and quality of TB monitoring to the same level as monitoring its HIV outcomes, and initiate relevant operational research on (DR-)TB. Lessons learned from HIV, including differentiated care models and community involvement, will be important to adapt and transfer to TB programming.

6. SUSTAINABILITY AND REPLICABILITY

Key findings:

- Sustainability is a high priority in each top priority in each of the countries evaluated. MSF's two most effective strategies to improve sustainability are:
 - Transferring innovative interventions and models of care, particularly those that make optimal use of human resources for health, like community and differentiated models of care;
 - Providing extensive training, supervision and support to MoH staff.

Challenge:

- There is a tension between MSF's desire to provide a high level of quality of care —which often requires more staff, and resources than are available within the national ministries of health— and its desire to have its activities sustained beyond the life of the project.
- Lay counsellors play a critical role in improving adherence and retention in care. This cadre is not fully integrated to the health system in four of the five DGD funded countries, who either do not have paid personnel conducting lay counsellor functions, or they rely on already overstretched clinical staff such as nurses. This presents a major barrier to the sustainability of MSF's clinical activities.

Response to challenges:

- MSF advocates that the ministries of health formally agree to take on MSF activities and incorporate MSF positions into their human resource for health framework.
- MSF has designed models of HIV care that reduces unnecessary workload for ministry of health staff and maximizes use of existing human resources (R6M, Clubs, CAG, long term appointments and prescriptions).

Lessons learned:

- Handing over the mentoring and coaching approach to MoH facility staff by helping to establish a cadre of trainers has the potential to amplify sustainability of MSF's approach.

In South Africa, Zimbabwe, Mozambique, and Guinea, there is recognition that activities deemed 'expensive' are less likely to be sustained. These include outreach activities, and more specifically the costs associated with transportation. The Guinea project has cut expenditures on its health education sessions to prepare patients for the inevitable end of the project, because they do not believe those additional expenses will be covered.

Table 8. Practices and their likelihood of being sustained, by country

South Africa	Zimbabwe	Mozambique	Kenya	Guinea
<u>Sustainable practices:</u> Clubs CAG Reduced stigma Men's clinic	Policies Training of mentors within the MoH to replicate (extra light) Reduced stigma	Policies / guidelines Training of MoH staff CAG Reduced stigma	Policies / guidelines Training of MoH staff MAC for HIV Capacity of civil society Reduced stigma	Policies / guidelines Training of MoH staff R6M Capacity of civil society*
<u>Unlikely to be sustained:</u> Outreach activities Substituted staff (e.g.: data capturers)	Outreach activities	Work of lay counsellors Incentives	Free medicines for NCDs Integrated HIV / NCD medicine adherence clubs. Work of health promoters and lay counsellors	Work of lay counsellors / psychosocial support team Incentives

Human resources for health represent an enormous and growing portion of national health budgets, as salaries and benefits are rarely reduced. As a result, there is often resistance to engaging additional personnel. This means that when MSF brings its own employees to work in the facilities that it supports, these positions may not be filled by the government after MSF's departure. Substitution of ministry staff has taken place to varying degrees in South Africa, Guinea, Kenya, and Mozambique, though Kenya has had success in having much of their staff taken over by the MoH or by Amref.

6.1 Strategies to improve sustainability:

Advocacy for policy change

National policies can enable sustainability and replication of MSF initiatives or they can inhibit these initiatives. The policy gains listed in the advocacy section above are essential contributions to the sustainability of MSF's work. As mentioned above, all five of the missions evaluated have made important contributions to policy changes at the national level. Advocacy is central to MSF's sustainability strategy as policy changes demonstrate that the government has taken on MSF's strategies and activities, and implies that these activities will be funded. Community models of care invented by MSF (Clubs, CAG, R6M) have been taken on in all the five missions being evaluated. These models are particularly desirable for national governments because they reduce burden on already overstretched healthcare providers, while maintaining the health outcomes, and require very limited resources to maintain.

In addition to the gains listed above, each of the countries also maintain ambitious advocacy objectives across a variety of topics.

Lay counsellors

Advocacy for the official recognition of lay counsellors and incorporation of the lay counsellor function into the national human resources for health framework is ongoing in Mozambique, Guinea and South Africa. Ensuring that lay counsellors are supported with training, supervision and adequate remuneration will be essential to the sustainability of MSF's results beyond the life of the project. Lay counsellors perform important functions in HIV programs, and health outcomes have been known to worsen when counsellors' capacities are limited.

Continuous supply of ARVs

Mozambique, South Africa, Guinea, Zimbabwe and Kenya (prior to closure) are vigilant in noting stock outs of ARVs and advocate for adequate systems to be put in place to guarantee their availability to patients.

New models of care

MSF in South Africa is conducting ongoing advocacy about the effectiveness of the 'Bending the Curves' model in Eshowe, so that it can be replicated and scaled up elsewhere in the country. In Kenya, advocacy for integrated and differentiated models of care like the HIV/NCD model are ongoing. To attract men into testing and care, a special clinic

for men is being piloted in the project in South Africa; in Western Cape in South Africa this targeted strategy is officially recognised and therefore has a potential to be sustained.

Training of MoH staff

All the countries have extensively trained ministry of health staff. South Africa, Zimbabwe, Mozambique, and Guinea have ongoing mentoring programs to increase the capacity of the ministry of health.

In South Africa, MSF has a mentoring program for MoH staff working at its facility, and also trained community based organizations on various modules on topics including, but not limited to: HIV, TB/ DR-TB, sexual and reproductive health, child and adolescent health (South Africa).

In Mozambique, MSF provides mentoring and training to 13 MoH facilities in two districts on a range of topics including, but not limited to: HIV care, counselling, pharmacy management, and maternal health.

In Guinea, the Matam health centre acts as a training centre for MoH clinicians visiting from the 6 decentralised structures that MSF supports. Healthcare providers participate in on-site training stages to learn MSF's practices. MSF provides light support to each of the facilities, and once each of the facilities attains an acceptable level of care, MSF will rotate its support to new facilities, thereby slowly increasing the ability of a number of facilities in Conakry.

In Zimbabwe, MSF's operational strategy relies on mentoring MoH staff, and MSF has trained ministry staff to train mentors (training of trainers). The approach ensures that maximum knowledge transfer is made the MoH, and empowers them to train their own staff without relying on MSF.

In Kenya, the Kibera South health centre was used as a model for a number of interventions, and members from technical working groups often visited the facility in order to see how it was functioning. MSF also provided training to MoH staff and other NGOs when requested, and provides technical guidance to the Nairobi City County Health Services on the implementation of differentiated models of care.

Building the capacity of civil society

Mozambique and Guinea both conduct ongoing trainings with civil society groups including PLHIV to improve access to ARVs. Kenya, until the closure of the Kibera project also continued to do so, while supporting patients from the HIV/NCD MAC to form a group Coalition for Support and Access to Treatment (COSAT) to advocate for access to NCD drugs as well. Kenya has a long history of supporting civil society groups, and helped to form post-test clubs for patients to advocate for access to HIV treatment. Now the Kibera Network of Post Test Clubs (KIPOTEC) and The Nairobi National Network of Post Test Clubs (NNEPOTEC) grew out of the post-test clubs, and are invited to represent patients at policy national fora. MSF has also supported civil society groups in the Zimbabwe and South Africa projects with capacity building, both in service delivery as well as general organisational capacity development.

Partners

Temporary sustainability is a possibility where capable partners exist to take over MSF's work. In Kenya, Amref Health Africa (formerly the African Medical Research Foundation) will take over supporting HIV and NCD care in Kibera South and Silanga Health centres, and in Mozambique, *Fundacao para o Desenvolvimento da Comunidade* and *Kuthandizana Kutchira* will take over the employment and management of lay counsellors until 2020.

CONCLUSIONS

MSF has met very important and urgent needs in the evaluated projects. Most of the countries where MSF implemented the DGD-funded projects are high-burden, high HIV prevalence settings where the impact of the epidemics in general or on specific populations in the project locations were particularly severe. In Guinea, where HIV prevalence is low, PLHIV face very high stigma which creates obstacles to access to care, and therefore the project also addresses high needs in this population.

Good quality treatment with adequate coverage has brought an impact that we could not verify with trends in mortality or incidence — on which studies are forthcoming — but many patients and community members testified that **improved access to ART has had a visible and noticeable impact in terms of less visibly sick, emaciated people in the community and fewer funerals to attend.**

Integrating DR and DS-TB in these projects is also highly relevant as TB remains the most important cause of death of PLHIV in Africa. Besides, four out of the five project countries are high-burden countries in terms of TB incidence, TB/HIV co-infection and MDR-TB burden. Also, the integration of other relevant co-infections such as cervical cancer in Gutu district (Zimbabwe) through screening and referral tackles significant co-morbidities in PLHIV.

With a focus on improving the treatment cascade towards UNAIDS' 90-90-90 goals the project aims to improve care for the individual patients as well as lowering the transmission of HIV on a population level.

MSF has chosen to focus the project activities on the second and third 90 (step in the cascade) by scaling up ART and introducing routine VL monitoring. Three of the projects (**Zimbabwe, Mozambique and Guinea**) **have achieved the target of placing 90% of eligible patients on ARVs, and Kenya and South Africa have exceeded 80%.** All five projects achieved better results than their government counterparts. For the last 90 (the percentage of patients who are virally suppressed), **South Africa, Kenya and Zimbabwe are quite close to achieving 90% undetectable,** and their figures are comparable to the national figures. The projects in **Guinea (63%) and Mozambique (41%) are quite far from achieving the target,** but this poor performance in this respect also reflects poor VL coverage in these countries. In some projects, like Gutu district (Zimbabwe) the project demonstrates a treatment cascade that has achieved superior results than the cascade in the surrounding province.

Routine VL has been implemented and mainstreamed throughout the projects. Rates of viral suppression are high in adults, but lower in children and adolescents. Viral suppression in adults remains worrisome in Mozambique. Stigma, resulting in a reluctance to disclose HIV status and/or use of ART, is at the root of most adherence problems in these groups. **Challenges with VL monitoring include long turnaround times of results, resulting in delayed decision making on offering enhanced adherence counselling or switching to second line ART regimens. Fewer patients than expected switch to second line treatment, which has to do with unclear protocols, and slow decision making in centralised switch committees.** Patients may be reluctant to accept a drug regimen that increases the pill burden.

Several modalities of differentiated models of care have been implemented in all projects. Patients appreciate the social support aspect of the group modalities; groups in Zimbabwe have taken livelihood initiatives like gardening or microcredit schemes that go beyond the direct realm of HIV peer support and picking up drug refills. Patients welcome the convenience of decreased clinic visits and waiting times that allow them to spend less time, lose less income and spend less money on transport than they used to. Nurses value the decreased and more predictable workload as a consequence of the differentiated models of care. **The proportion of patients on ART in differentiated models of care ranges between 18 and 37%.** This may be partly because only stable patients with undetectable VL are eligible for this type of care. **The question remains if utilisation of differentiated models can be further boosted, and if offering a choice of models would be a way to achieve enhanced utilisation of these models.** It is also an open question if participation in differentiated models of care leads to better outcomes in terms of viral suppression and retention in care.

Aside from its focus on the last two 90s, **MSF has also made impressive strides in activities which aim to prevent HIV and to achieve the first 90** with activities, like male medical circumcision, condom distribution, community HIV counselling and testing, prevention of mother to child transmission, post-exposure prophylaxis for survivors of sexual violence, and outreach activities to specific populations including youth in schools, sex workers and (migrant) workers in mines and on farms. All these activities show impressive volumes of activities and as such have prevented HIV, provided information on HIV, screened for TB, STIs and/or pregnancy, and provided a link to care for individuals who tested positive.

Throughout the steps in the treatment cascade, we identified some issues that appear across the projects:

HIV epidemiology patterns show high prevalence in adolescent girls and young women compared to boys or men in the same age brackets. HIV prevalence in older men tends to be higher than in women of the same age. This represents a transmission pattern where older men have (unprotected) sex with younger women. **This calls for programs empowering girls and young women, and stepped-up, innovative HIV prevention in this age group.** MSF has partly responded to that, e.g. in KZN by gaining access to schools with HIV prevention messages, testing, and provision of condoms. The other side of the coin is changing attitudes and practices surrounding unsafe sex in men. MSF has not particularly addressed adolescent girls and young women out-of-school, who are more vulnerable to HIV than those in school.¹⁷

An important challenge in the cascade is retention in care. **Despite defaulter tracing by community volunteers or community health workers, mobile phone messages and calls, counselling and peer support, it is difficult to retain more than two-thirds of people on treatment for 12 months or longer.**

Children and adolescents show poorer retention than adults. They also tend to have higher detectability of VL. Parents are reluctant to disclose to children. Adolescents hang out with friends, are looking for relationships and disclosure of HIV status doesn't fit well in this phase of life. MSF has responded to these challenges with special adherence groups or clubs for children, adolescents and others.

Men are not coming forward to testing, and are hard to link into care. They are reported to have higher rates of detectable VL than women. According to project monitoring data, the latter is particularly the case in Mozambique. The underlying reasons are related to health seeking behaviour of men, cultural beliefs and the fact that men are breadwinners and therefore face barriers to visiting healthcare facilities that open during working hours. In addition, they are often mobile because of work or are away from their home for extended periods, which also presents barriers to seek HIV testing, treatment and care. MSF has also responded with outreach and special initiatives that cater for men to tackle these issues.

Stigma remains high in all settings, and is an impediment to care utilisation across the treatment cascade. Coming forward for testing, being linked to treatment, wanting to participate in group like a CAG or adherence club, and being adherent are all impacted by stigma. Overall, stigma is an underlying factor in poor adherence in adults and children, as people don't want to disclose why they take medicines each day. Men seem to be more sensitive to stigma than women, possibly related to fear for disclosure at the workplace.

All projects address tuberculosis, drug-sensitive as well as drug-resistant. MSF has integrated TB services in its projects, like TB screening and treatment. MSF has been involved as well in (decentralised) treatment of MDR-TB with new treatment protocols and improved diagnosis through XPERT technology. Reported problems include quality of screening, completeness of patient files with regards to TB, long turnaround of lab results, suboptimal outcomes of DS-TB treatment and suboptimal uptake of isoniazid preventive therapy.

The projects achieved change at the level of national policies and practices on a variety of issues. **There is clear evidence for national influence of MSF on mainstreaming and adoption of differentiated models of care in project countries,** with significant contributions from MSF on guidelines development regarding differentiated models. Depending on the country, **MSF has also wielded national influence on the introduction of routine VL monitoring, ART eligibility criteria, task shifting and NCD guidelines.** Since policy change does not happen in a vacuum, MSF has been able to mobilise many relevant actors in its advocacy for policy change besides MoH and other health authorities, including PLHIV, (I)NGOs and CBOs. Some advocacy has mobilised donors like the Global Fund or PEPFAR to implement advocated approaches like routine VL monitoring. Influencing national protocols mostly works where health authorities are pro-active and seek innovation, but lack the technical expertise or fiscal space to pilot new approaches.

The level of cooperation with the respective Ministries of Health varies across countries but has mostly been good, as MSF has put energy into developing relationships and demonstrating alignment with the relevant national strategies and policies. This doesn't mean that introduction of all new ideas went smoothly and without opposition: MSF is sometimes consciously not aligned with MoH policies, for example when MSF tries to be one step ahead, demonstrating results of new approaches through operational research. Sometimes this leads to tensions; health authorities still appreciate this strategy if there is an open and transparent relationship.

The policy gains mentioned in the paragraphs above are essential contributions to the sustainability of MSF's projects, as they demonstrate that the government has taken on MSF's strategies and approaches, and implies that these activities will be funded. In that sense, MSF has without doubt contributed to sustainable differentiated models of care. Moreover, major international donors like the Global Fund and PEPFAR have adopted approaches like routine VL monitoring, which will contribute to funding and sustainability. Training and mentoring of health staff, along with

¹⁷ Source: Bedell, 2016.

capacity building of NGO/CBO staff, has contributed to sustainability. **Barriers to sustainability include high-cost interventions, usually involving outreach and transportation, and restrictive national policies, e.g. limiting task-shifting and work by lay counsellors, or integration of service delivery of e.g. NCDs and HIV.**

MSF piloted approaches like routine VL monitoring and the different differentiated models of care, with the intention to develop models that could be adapted and replicated elsewhere. Restrictions to replicability mostly run parallel with restrictions to sustainability.

LESSONS LEARNED

- Implementation of routine VL monitoring is a necessary but insufficient step in improving treatment outcomes for patients. When setting-up routine VL monitoring, it is necessary to ensure that VL results will be used to manage treatment, and switch patients to second line treatment in a timely manner.
- Constant training, mentoring and support of healthcare professionals is essential to increase uptake of VL monitoring.
- Long turnaround times (TAT) of VL results may defeat the purpose of VL monitoring, as results acquired too long after the sample was taken may not accurately reflect the patient's current VL and cannot be relied upon to manage the patient's care. The key lessons regarding TAT that should be considered when implementing routine VL in new settings:
 - Initial implementation of routine VL by the national programs may initially increase TAT, particularly in comparison to the TAT in facilities where VL is implemented by MSF.
 - Rural areas tend to have longer TAT due to transport and infrastructure-related issues.
 - The introduction and/or use of multiple VL testing platforms may slow TAT results.
- CAGs may be more appropriate for implementation in rural settings.
- Most CAGS and clubs require de facto disclosure of HIV status. This may be a barrier to participation.
- Offering a selection of DMOc allows patients to choose the option that suits them best.
- When implementing new approaches aimed at improving access and retention in care for key populations and/or mobile populations, it is necessary to ensure systematic monitoring of results for each population separately. It will permit assessment of the effectiveness of the services for each population, i.e. workplace outreach to increase access for men may work in linking them into care, but the same is not necessarily true for sex workers.
- The perception that healthcare workers are judgemental towards patients is a barrier to retaining patients in care.
- MSF's experience providing HIV care in-country, combined with evidence from operational research, its financial independence, and its capacity to innovate and challenge existing policies, are essential for MSF's credibility and advocacy influence.
- Elements of MSF's approach that yielded successful results in HIV, including differentiated and community models of care, could be applied to DR-TB and DS-TB to improve outcomes.
- Training of MoH trainers helps to establish a cadre of MoH trainers, and has the potential to amplify the sustainability of MSF's approach.

RECOMMENDATIONS

⇒ **Recommendation 1: Address the high HIV prevalence in adolescent girls and young women** by implementing, scaling up and adapting approaches that work in the other projects

- Consider girls-only programming that addresses the unique vulnerabilities that girls face with respect to HIV. Alternatively, look for partner organizations implementing girls-centred programming and support these with modules on HIV and sexual and reproductive health.
- Adolescent girls and young women in school can be addressed through school programs like the one in KZN that includes HIV testing and counselling, access to condoms and links to care.
- Include adolescent girls and young women out-of-school in interventions based on a good needs assessment.
- Programs for adolescent girls and young women need to be accompanied by programs aimed at changing attitudes and practices with regards to safe sex among older men.

⇒ **Recommendation 2: Increase uptake of services in men** throughout the treatment cascade

- Get a better understanding of barriers for men to testing, treatment, disclosure and adherence through focus groups, survey or other suitable operational research methodologies.
- Consider adapting services to cater for men: changing working hours of clinics to be more convenient for men who work; adherence clubs or other differentiated models of care with social activities adapted to the situation of working men; training of male counsellors and male nurses; sensitise men to seek care before they fall ill.

⇒ **Recommendation 3: Address weaknesses in the VL cascade**

- Decrease turnaround time, where applicable, by setting a mutually-agreed goal with all stakeholders and work towards it by selecting a series of measures tailored to agreed problem analysis of long TAT and appropriate to the context e.g.: improving transport efficiency through contracting of commercial courier companies when possible and feasible; by limiting patients coming for VL checks on Fridays or other days on which transport of the samples may not be timely; by improving recording of results e.g. through electronic data recording systems or more stringent procedures; move towards (further) decentralised or point-of-care VL tests using existing decentralised platforms like XPERT; develop SOPs and train nurses such that task shifting to nurses for operating a VL test becomes a reality; reduce maintenance problems and problems replacing broken equipment by leasing machines rather than purchasing them.
- Speed up decision to switch to second line antiretroviral therapy by using best practices like decentralised switch committees; advocating for and improving guidelines, protocols and standard operating procedures about switch decisions; ensure decision support for nurses by having a hotline with a doctor from a switch committee who can authorise to switch; involving patients / peer support regarding increased pill burden and potential new side-effects for those who need to switch.

⇒ **Recommendation 4: Scale-up utilisation of differentiated models of care**

- Pilot a variety of modalities such that patients can choose a modality that fits them and their lifestyle;
- Consider more flexible eligibility criteria for enrolment in DMoC; especially unstable patients with adherence problems potentially benefit from the peer support that the group modalities offer;
- Operational research to demonstrate the positive effect of DMoC on outcomes like VL detectability or retention in care

⇒ **Recommendation 5: Strengthen TB case finding and treatment of DS-TB along DR-TB** with the same level of effort as has been exercised on improving the HIV treatment cascade in order achieve better treatment outcomes for DS-TB and thus have a positive impact on the most important cause of death in PLHIV.

⇒ **Recommendation 6: Continue advocating for formal recognition of lay counsellors** and their incorporation into national human resources for health frameworks.

The projects deserve commendation for the wealth of data they collect and the amount of operational research that is going on; it is truly impressive. The downside of this is that different data sources, time frames and definitions of indicators may cause potential for (perceived or real) inconsistencies in reporting or inappropriate comparison because the indicators have been insufficiently defined. This caused confusion among us as evaluators as we were not sure which data were accurate or could be compared.

As a general recommendation outside the direct scope of this evaluation, we recommend checking data for consistency, and applying uniform and precise definitions of the data such that it is possible to assess what these data represent.

Another recommendation that is within the scope of this evaluation, but that was not specifically addressed in the ToR, is related to the attitude of health staff. Judgmental attitudes of health facility staff, as reported by some patients, might create barriers to visiting health facilities and thus have an impact on RIC. It would therefore be important to explore this issue further and try to document it and find (qualitative) evidence for its impact on RIC. Even without this evidence, preliminary steps can already be taken to include this aspect of care into MSF's mentoring and coaching approach.

ANNEXES

ANNEX I: COUNTRY REPORT, MOZAMBIQUE

1. INTRODUCTION

MSF has been working in Mozambique since 1986, and began working on HIV in Mozambique in 2001, by providing curative treatments and managing symptoms. In 2002, the first patients in Mozambique to receive ARVs did so in MSF clinics. Between 2002-2005, MSF helped to develop a standard package of HIV services, including a focus on HIV/TB co-infection.

Over the years since, MSF has moved away from a model of replacing and supplementing the ministry of health staff with its own personnel, towards a model of providing supporting to ministry staff, and conducting operational research. In this period, MSF has also reduced the reach of its programs significantly and, in 2017, is only active in two districts. Throughout its presence in Mozambique, MSF has advocated at the national level for the government to take on more innovative measures to care for HIV patients.

2. CONTEXT AND DESCRIPTION OF PROJECT

Mozambique is among the 10 countries with the highest HIV prevalence in the world, and due to a mix of factors including a rural population, also struggles with low retention in care. The Tete province, where MSF's DGD-funded project is based, has a prevalence of 5.2%.¹⁸ Tete city lies on a major axis between Zimbabwe, Malawi and Mozambique, that is travelled by many long-distance truck drivers and the sex workers who serve them. The prevalence in Tete city is 19%.¹⁹

MSF's Tete project has four major components: 'light' support including mentoring and training to 13 facilities that provide ARVs in Changara and Marara (general population including PMTCT and paediatric cohort), a mobile clinic and door to door activity for mobile and key populations, operational research (PrEP among SW and MSM, ART resistance study in rural district), and the JAM / Stop Stock Outs advocacy project aimed at increasing civil society's ability to hold the government accountable for stock outs of ARVs.

3. ADAPTATIONS TO THE EVALUATION METHODOLOGY, NOTES AND LIMITATIONS

MSF Belgium and MSF Switzerland work closely together advocating for HIV policy change. The two operational centres share an office and many of their team members. As such, it is impossible to attribute the results of their joint advocacy work to either organization individually.

4. FINDINGS

4.1 Treatment cascade

Tete Province, where MSF is working, is the province that has seen the largest decrease in prevalence in the country. In the 2009 INSIDA report, the prevalence for Tete province was 7%, and in 2017, it was 5.2%, with 71% registered in care, according to IMASIDA.²⁰

MSF's support does not cover the whole of Tete province, and relies on approximations based on its experiences in Changara and Marara, where it does support activities to assess its effectiveness in achieving the first 90 (90% of people living with HIV know their status and are registered in care).

The extensive community testing done by MSF in Changara and Marara showed a significant decline in the positivity rate, from 10.1% in 2013 to 1.8% in 2017, and the positivity rate among pregnant women attending ANC was 2.9% in Q2 of 2017 and has been decreasing. Given these figures, the MSF project team estimates that the prevalence in

¹⁸ Inquérito de Indicadores de Imunização, Malária e HIV/SIDA em Moçambique (IMASIDA) 2015

¹⁹ INSIDA 2009-2010

²⁰ Inquérito de Indicadores de Imunização, Malária e HIV/SIDA em Moçambique (IMASIDA) 2015

Changara and Marara is closer to 4%. With a 4% prevalence, the estimated population of people living with HIV in Changara and Marara would be 9041, and the number among those that know their status and are registered in care is 8034, which is 88.8%.

90-90-90 targets are designed for a setting that is implementing test & treat. While Mozambique has begun rolling out test & treat, it is not yet nation-wide. In provinces where test & treat has not yet started, CD4 500 is still the criteria for starting ART. In these cases, 90% of ART eligible patients who are receiving ART is a more appropriate indicator for ART coverage.

Table 9. Overview of key VL and Treatment cascade figures, Tete project

Active cohort - alive and registered in care (2016)	8034
ART eligible cohort (CD4 500)	5759
% of eligible cohort on ARVs	94%
VL coverage (among eligible patients)	71%
% of ART cohort with undetectable VL	41%
% of patients who have been tested for VL with suppressed VL	66%
% of patients receiving EAC after 1 st detectable VL	82%
% patients switched to second line after 2 nd detectable VL	35% (Q2 2017)
% of eligible ART cohort on CAG	50%
Retention in care after 12M (globally)	83%

In Tete, of those 8034 alive patients ever registered in care, 5759 are eligible to start ARVs, according to CD4 500 guidelines, and 94% of those are on ART. While ART coverage exceeds the 90% target, only 71% of eligible patients have received their VL, and of those, 66% of VL eligible patients have an undetectable VL. This, despite a relatively high retention in care at 12 months (83%).

MSF is conducting the following activities to better understand and address the low percentage of patients with undetectable VL:

- Counselling and patient empowerment trainings to address poor patient literacy;
- Development of new counselling tools and individual adherence plans;
- Supporting the use of routine VL monitoring for the management of HIV patients, as previously there were both interruptions of drugs and changes of regimens without VL monitoring;
- Operational research on possible acquired or transmitted resistance to treatment;
- Children days at HF cover topics of disclosure and work with care providers on adherence plans.

4.2 Routine Viral Load Monitoring

Effectiveness - Routine viral load monitoring

All the eligible patients to whom we spoke knew their viral load. All patients, whether or not they knew their VL, knew that viral load was the amount of the virus in their system, and knew the importance of both aiming to reduce their VL and of knowing their VL to have their care appropriately managed, and when to explore what barriers may exist that are preventing a patient from properly adhering to treatment. Those who did know their viral load referred to it as a source of motivation – they now had something to quantify the amount of disease in their system, and could work towards reducing that number as much as possible.

The project data suggests that only 71% of eligible patients have their VL tested. The project and MoH staff cited a number of challenges in ensuring that all eligible patients receive their VL. Clinical staff at the health facilities are still not consistently requesting VL tests, and a number of reasons have been cited for this, including that the staff is overburdened by a number of competing responsibilities, and there are residual misunderstandings among clinical staff about the value of the VL test, despite ongoing mentoring by MSF. Additionally, there are missed opportunities when patients are requested to return for testing on another day.

To mitigate these challenges, mentoring and case discussion with MoH clinical staff is ongoing. MSF has also supported the implementation of a paper-based alert system, and has had conversations with the district level about the possibility of task shifting VL testing to counsellors who would collect blood via finger pricks. In addition to efforts to increase clinicians requesting the VL test, MSF is working with patients to increase demand by empowering patients to request their VL.

Turnaround time has also been a major challenge. While the target turnaround time is 30-45 days, TAT has at times taken as long as 2-5 months, with only 0.5% of samples arriving in 30 days. When the machine in Maputo was not functional, many samples were lost in transit to or from the lab in South Africa. This had not only created challenges in the effective use of VL tests to manage care, clinicians in some cases not been motivated to request the test, believing that it was not worthwhile as the results would not be available on time. In other cases, there have been difficulties in tracking down the patient to give them their results. This can be particularly problematic among mobile populations.

Some say the TAT is improving, if slowly. The average turnaround time in early 2017 was 41 days, with 21 days being the fastest, and 112 days being the longest.

“Nobody likes getting their bloods drawn and then not getting the results.” – MSF staff member

Enhanced Adherence Counselling

MSF, while currently handing over its VL platform in Maputo to the government, is providing extensive support to improve the TAT for VL, including:

- Transporting the samples from the health centres in Marara and Changara to Tete City;
- Conducting weekly checks to ensure that all samples transported by MSF ultimately reach the Maputo lab;
- Providing weekly support to the Tete Provincial Hospital to accelerate the recording of samples in the MoH books, and proper encoding in their tracking software;
- At the Maputo level, samples for pregnant women and key populations (sex workers from Tete corridor project) are flagged as priorities and requiring fast tracking;
- At Maputo level, results are now sent by email and printed in the MSF office. The results are then distributed to the health centres by the MSF team;
- When there are technical problems with the lab in Maputo, MSF has sent samples to a private lab in South Africa.

A number of respondents requested a viral load machine in Tete, though the feasibility of this, considering the expense and the difficulty in finding adequately trained technicians to do maintenance on these machines makes this possibility unlikely.

Effectiveness - Switch to second line treatment

The number of people who had received two consecutive VL tests of over 1000 copies/ml and who had been switched to second line treatment has also been low: 19% at the end of 2016. By the second quarter of 2017 this had improved to 35%.

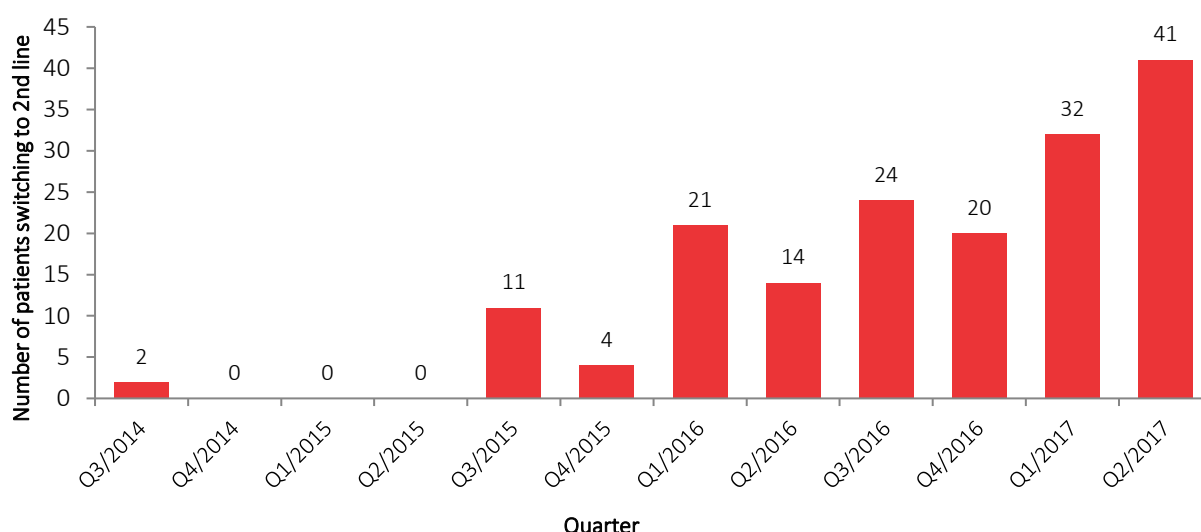


Figure 5: Number of active patients switching to second line, by quarter

The Tete team identified the following bottlenecks in using VL to effectively manage treatment and switch patients to the second line in a timely manner. Getting the health facilities and the ministry of health staff to a point where they were consistently testing VL, discussing possible treatment failures routinely, and switching patients quickly proved challenging at many levels.

Until June of this year, the process for switching patients to the second line was centralized, which required for a paper based request application to be sent for approval by a Maputo-based ART committee. In response to the low number

of patients switched to second line, MSF has successfully advocated for and supported the decentralization of the ART committee at Province level. To do so, the MoH agreed that once a target number of applications submitted from Tete had been approved, they would allow for a provincial ART committee, based in Tete. The target number of approved cases was achieved while the evaluator was present. The provincial ART committee, combined with a new system to input paper based forms in to an electronic system at the district-level, is expected to greatly facilitate the switch from first to second line treatment.

Below are some of the bottlenecks that were identified between the identification of potential treatment failure to the actual switching of the patient to a second line treatment, along with the support that MSF has provided in order to improve this process.

Table 10: MSF's response to challenges in switching eligible patients to the second line, Tete project

Challenge	MSF Response
Late decentralization of the decision for the switch: only recently the provincial committee is authorized to take decision autonomously.	Support at province level to reach the desired level of concordances with national level.
The clinical teams at the health facilities did not have regular scheduled meetings to discuss treatment failures or suspicion of failure.	MSF medical team has created a health facility ARV committee that meets weekly to discuss cases. The schedule is not consistently respected.
Complex cases not were not properly managed.	Mentoring program by MSF expat MD at HF.
There are district level delays – the committee to switch patients to the second line is now at provincial level, but some cases are not registered in the 2nd line website because of disagreements about the case at the district level, which technically does not have the authority to decide on whether or not patients are eligible to be switched.	<ul style="list-style-type: none"> - MSF is still pushing to avoid this unofficial and delaying step at district level in which it is not supposed to exist a committee TARV. - MSF supports with modem and airspace to encode cases online.
Provincial ARV Committee not always motivated and committed. Lack of knowledge on HIV case management (especially treatment failure).	Regular support by expat MD MSF to push for the committee to happen, case discussion, tutoring, trainings (Maputo and Tete level).
Some patients with persistent treatment failure criteria are rejected by the ART committee to change their regimen, due to problems of adherence, even when there is no reliable way to measure adherence and most likely there is a problem of resistance to the first line treatment.	<p>MSF staff to push for re-submission by HFs and MD to push at province level for approval.</p> <p>Resistance study to support the assumption on resistance and as advocacy tool for a faster switch to 2nd line.</p>
Delay in the physical switch (and encoding in our DB) after approval due to: <ul style="list-style-type: none"> - Time for Feed-back to health facilities - Tracing the patient in the community by counsellors - 2nd ARVs availability or supply chain at HF 	<ul style="list-style-type: none"> - Early feed-back by <i>WhatsApp</i> to health facilities - Support to MoH clinician to request 2nd line - ARVs on the same day after approval - Provision of a buffer stock at district level for a prompt switch to 2nd line

Replicability of routine viral load monitoring:

When asked to reflect on what factors need to be in place to make routine viral load monitoring effective in new settings, many variables were mentioned:

- The availability of the machine and the skilled technicians to maintain the machine. A suggestion was that MSF advocate for machines that are leased rather than purchased, as leased machines will be repaired by the owner and replaced when no longer functional.
- The MoH needs to be fully on board, and this requires extensive training of MoH. Many respondents reported a challenge in this domain – that MoH staff often did not offer the test at the appropriate intervals, and others either did not agree with or fully understand the need to switch people with repeat VL of >1000 copies to the second line.
- Decentralized ART committees
- Introduce VL as an MoH intervention, to encourage MoH ownership.
- Logistics of transporting samples
- How to manage the cytotoxic waste products from viral load tests.

4.3 Community models of care & strategies to increase ART coverage and improve retention in care

Effectiveness - GAAC (CAG)

In 2008 MSF first piloted the *grupo de apoio a adesão comunitário* / community adherence group (GAAC) as a means of reducing the number of times that stable patients would need to visit the health centre. The groups consisted of 6 patients with undetectable viral loads, who would alternate visiting the health facility each month. the GAAC reduced

the number of visits to the health centre from once a month to once every 6 months, reducing the burden on patients and the volume of patients that the clinics needed to see any given month. For patients living far from the facility, the GAAC are particularly beneficial, saving transport money and reducing the number of work days missed.

All the patients interviewed knew of the benefits of the GAAC, half of eligible patients are members (36% of active cohort). Non-members cited a number of reasons with the GAAC were not a good fit for them, including that they did not want to disclose their status, did not want to take responsibility for picking up the medicine for other people or cede responsibility to someone else, or had moved frequently and were no longer able to participate. These findings are consistent with the SEU evaluation conducted in early 2016.

Whether in the GAAC or not, in almost every interview, patients complained that, at roughly an hour, the wait times at the pharmacy were too long. Patients and community members requested for their ARVs to be available for collection from the clinic. Mozambique does not have a policy of differentiated care, and some questioned the feasibility / acceptability of having the medicines dispensed at the clinics.

Effectiveness – targeted efforts to improve access to care, adherence and retention

As stated above, while an estimated 89% of HIV-positive people in Changara and Marara know their status and are registered in care, only 66% of patients who have had their VL taken are virally suppressed. To increase access to ART and to improve adherence and retention among priority groups, MSF has a number of strategies:

The Corridor project has a mobile clinic and door-to-door activity which provide SRH services (including HIV) to sex workers, long distance truck drivers and adolescents engaged in transactional sex. In 2016, an estimated 46% of sex workers in Tete city and Moatize were HIV-positive. The sex workers we spoke with reported barriers to care including discrimination by healthcare workers and other patients at health facilities, and difficulty returning to the same facility on time to receive medication due to the mobile nature of their work. MSF has a mobile clinic that does prevention activities, including providing condoms and health information; provides free STI screening and care to sex workers; provides Family Planning options (including long lasting methods) to female SWs; provides HIV counselling/testing; refers and accompanies patients for HIV treatment at city health facilities; and conducts counselling within the SW and long-distance truck driver in the community. There is also provision of HepB testing and vaccination of HepB negative SWs.

There are currently no activities targeted at men who have sex with men (MSM) or people who inject drugs (PWID), though there have been some MSM who have enrolled in the PrEP study. The needs of MSM and IDUs were considered in Tete, but activities have been prioritized in other sites, as neither group is highly visible in Tete. Beira has activities targeted at MSM, and OCG will be opening a project for IDUs in Maputo.

Counsellors and project staff reported that children (including adolescents) and men have worse retention in care than do other groups. Project data shows that HIV-positive men are less likely to be on ART, and when they do receive ART, they are less likely than women to have an undetectable VL. 30.6% of men registered in care have an undetectable viral load, compared to 36% of women; this is a small but significant difference. The MSF team in Tete has not conducted qualitative research to explore the issue, but anecdotal evidence available to them shows that men are less likely to frequent health centres, even when in need; that men seek help less frequently; that men often travel for work and leave home for long periods of time, especially for mining. Women, particularly due to pregnancy, childbirth and childcare responsibilities, are more likely to attend health facilities where they can be registered in care.

Counsellors have reported that they do a considerable amount of counselling with men to inform them of the importance of attending the clinic themselves, and some counsellors have adjusted their working hours to be able to visit men in their homes prior to the work day starting. Still, the men who work in mines appears to be the most troublesome, as there is no current effort in place to improve their retention in care. Furthermore, while men who work in mines reportedly leave home for up to 5 months at a time, Mozambique is only now moving towards a system of 3 months' supply –up from one month– which will still be inadequate to meet the needs of these men. Some have suggested a 6-month supply.

In order to improve adherence and retention, the project has created a special day at the clinic for adolescents, and community groups specifically for children ages 6-11 and adolescents ages 12-18 in order to increase the youths' independence from their parents when it comes to treatment adherence, improving social support, reducing stigma, and educating the youth. For younger children, the education focuses on the discussion of a 'virus' without mention of HIV. In the later ages, the concept of HIV is introduced, as is information about safe sex practices and family planning. The results of these community groups are not yet known. Though the team planned to initiate them earlier this year, their implementation was delayed when MSF responded to a cholera outbreak in the region.

4.4 Impact of MSF's activities

Tete Province, where MSF is working, is one of only three provinces in the country that has seen a decrease in HIV prevalence, and with a 26% reduction, is the province that has seen the largest decrease by far in prevalence in the country. In 8/11 provinces, prevalence continues to increase, and the national prevalence has increased in the 2009 INSIDA report, the prevalence for Tete province was 7%, and in 2015, it was 5.2%. Knowing this alone, respondents within and outside estimated that MSF contributed to this reduction in prevalence, but this contribution has yet to be confirmed with evidence.

Table 11: Changes in Prevalence, by Province, Mozambique

	2009*	2015**	% Change
Cabo Delgado	9.4	13.8	47%
Gaza	25.1	24.4	-3%
Inhamitanga	8.6	14.1	64%
Manica	15.3	13.5	-12%
Maputo Cidade	16.8	16.9	1%
Maputo Province	19.8	22.9	16%
Nampula	4.6	5.7	24%
Niassa	3.7	7.8	111%
Sofala	15.5	16.3	5%
Tete	7	5.2	-26%
Zambezia	12.6	15.1	20%
Mozambique	11.5	13.0	13%

*INSIDA, 2009 **IMASIDA, 2015

The community testing done by MSF in Changara and Marara also showed a significant decline in the positivity rate, from 10.1% in 2013 to 1.8% in 2017, and the positivity rate among pregnant women attending ANC 2.9% in Q2 of 2017 and has been decreasing. Given these figures, the MSF project team estimates that the prevalence in Changara and Marara is closer to 4%.

4.5 MSF influence on HIV policy and practice (quality of care, stigma)

By all accounts, MSF plays an important role in influencing HIV policy in Mozambique, particularly in the development of technical guidelines. MSF has influenced a long list of guidelines, practices and policies (below) and continues to advance a number of different policy objectives with respect to HIV and TB care, drug provision / supply chain, and waste management. Respondents credited MSF with innovating HIV care in the country. All stakeholders spoke of MSF's technical expertise as being instrumental in shaping and influencing HIV policy in the country. When asked what HIV policy would look like without the presence of MSF in recent years, many suggested that MSF's absence would be a major blow to innovation in HIV care, with some even suggesting that there would be no innovation without MSF. Partners spoke of MSF relentlessly pushing for new, more proactive policy. An oft-cited example was the threshold for ARV treatment, which started at a CD4 count of 350, which MSF pushed to have raised to 500, and subsequently pushed for test & treat.

"They are part of the technical working groups and influence all of the national policies." – MoH.

"They can show what they see on the ground. Being there is important for them and showing solutions." – MoH.

Below are the policies that MSF influenced between 2014-2017, according to stakeholders:

- **Implementation guide for Test & Treat, 2016:** MSF Belgium provided important Technical guidance on roll out of routine VL (no guidelines exist for routine VL monitoring).
- **3 months' supply, 2017:** MSF strongly advocated for the implementation of the 3M supply strategy and support the elaboration of MoH 3M supply guidelines in 2016.
- **CD4 500, 2014:** Prior to test & treat, MSF advocated to expand the criteria for starting treatment from below 350 to below 500 CD4 count. CD4 500 is still in place where Test & treat has not started, including in Changara and Marara.
- **Key populations, 2016:** MSF supports the policy, MSF Advising on implementation. Acknowledgement of MSF in the policy (along with CDC and PEPFAR).

- **MoH acceleration plan, 2014:** In strategic national plan for health pn4 2015-2019. Many changes – MSF plays a role in every viral load policy.
- **Switch to second line treatment at viral load above 1000 copies, 2016:** MSF advocated for the implementation of this algorithm. Implemented in the 1st semester of 2016 in MSF supported HCs in Maputo.
- **CAGS, 2015:** MSF invented the CAG model in Tete Province (MSF had performed them since 2008 in Changara District).
- **Universal access to ARVs for pregnant women, 2013:** Option B+ pushed by MSF.
- **Task shifting, 2010:** “*Paragem unica in SMI*”: One stop service in MNCH/PMTCT. MWs responsible for the prescription and management of ARVs.
- **National Guideline for Psychosocial Support and Positive Prevention, 2015.** Acknowledgement of MSF in the policy (along with CDC and PEPFAR).
- **Guideline for Viral Load Implementation, 2015:** Acknowledgement of MSF in the policy (along with CDC and PEPFAR).
- **Universal access to HIV treatment for TB co-infection.**
- **Waterguard/Pure:** MSF has piloted this product recently validated (14 August 2017). It is now possible to import it to Mozambique.

Effectiveness – current policy objectives / Policies in the pipeline:

MSF currently has a number of HIV and TB policy objectives:

- **Adherence clubs:** present in the Global Fund submission and the PEPFAR strategic plan. Designed and piloted by MSF in South Africa.
- **Universal access to HIV treatment for TB co-infection.**
- **Advocating on behalf of TB patients:** to access for GeneXpert, shorter TB regimes, strengthen lab capacity, isoniazid preventive therapy. Advocated for the one stop model, developed the program. ARVs in TB ward.
- **Waste management for cytotoxic and viral load waste:** MSF is writing the protocol, conduct training, advocated for PEPFAR to fund 110,000 USD of waste management pilot.
- **TB nutritional policy.**
- **Pre-exposure prophylaxis:** operational research being conducted in Tete.
- **New HIV guidelines 2017:** MSF’s support has been requested by the MoH.
- **Idart:** Pharmacy management system, adopted in Maputo
- **Starting advocacy for advanced disease.**
- **Stop stock outs**
- **Budget for the last mile:** achieved awareness – put the topics on the agenda.

Effectiveness – MSF’s advocacy strategy

In the eyes of other stakeholders working on HIV, MSF’s strengths is its technical knowledge, which comes from years of providing HIV care on the ‘frontlines’; a key partner at the ministry of health spoke of MSF’s strength being that they are good at managing patients with HIV, and that they like MSF’s model of supporting MoH facilities, and have a good grip on the challenges at the health facility level. Many respondents also spoke of the duration of MSF’s work in Mozambique as a key strength.

MSF is the only financially independent organization providing HIV care in Mozambique; all other HIV care providers are funded either by the Global Fund or PEPFAR. This allows MSF a level of freedom that other organizations do not have. Furthermore, MSF’s peers appreciate that MSF does not need to make concessions in order to get a broader package of policies pushed through. One actor spoke of having to occasionally accept details that they perceive as sub-optimal, in order to move a broader set of policy changes made.

“Some partners need to make concessions to get policies pushed through. They might accept something that they think is sub-optimal in order to get a broader package of policy changes made. MSF doesn’t need to do that. MSF will highlight every single detail that they think needs to be changed to combat the epidemic. MSF not in a situation where they need to make trade-offs. They do not need to trade political capital. They are not constrained by bilateral relationships.” – Representative from partner organization.

MSF is a member of a number of technical working groups, and influences policies and technical guidelines through participating in them. MSF’s experience and input are also highly valued by donors. PEPFAR –who funded 78% of HIV care in 2017– regularly seeks MSF’S feedback. A number of respondents within and outside of MSF spoke of civil society

in Mozambique as being weak, and not actively influencing policy. In these cases, MSF –due to its proximity to its patients– is seen by some partners as a proxy for civil society that is highly valued by donors.

When stakeholders were asked about MSF’s strategy, and if there is anything that they would change or advice that they would give to MSF to improve effectiveness, almost all agreed that MSF is perceived as being activist, and this has sometimes created tensions with the MoH. Partners were split, however, on how they perceived this tension.

Some partners perceived MSF as being overly dramatic at times, and as occasionally making statements that were not constructive, or depicting the situation as being worse than it actually was. The *Stop Stock Out* report, for example, was cited as having made questionable extrapolations, that then caused major donors to question what had been happening with their funding in country. Partners spoke of having to do damage control in these circumstances, and that cautioned that the report could have caused harm by deterring donors from investing in Mozambique.

In other cases, stakeholders believed that MSF was too quick to sound the alarm about problems they had seen without contacting the appropriate authorities in order to address the issue in a constructive way. Some partners mentioned PrEP as having been a contentious issue in which MSF defied MoH orders and began conducting research on Pre-exposure prophylaxis (PrEP) without government permission.

Respondents from MSF acknowledge that they have learned lessons from their experience advocating and speaking out in Mozambique, and a number mentioned that MSF had made a more concerted effort than before to have a constructive relationship with the Ministry, and to inform the MoH and other partners prior to releasing advocacy reports.

Some of MSF’s peers, however, appreciated MSF’s willingness to speak out and move quickly without permission from the ministry of health. These partners suggested that in most cases, despite tensions with the ministry, MSF is successful in achieving its objectives.

“It happens sometimes that there can be tension between them and the government. The government will get mad with MSF, be annoyed, and then a few weeks call a meeting to address the issue. This happened with the advocacy for lay counsellors. The MoH was upset, and they then called MSF and asked to harmonize packages. Same thing for PrEP. The MoH was angry about PrEP, but then they wanted to pilot it.” – UNAIDS Mozambique.

“We decide to do a lot of things, and then we go for it. Sometimes we don’t communicate enough because we know it will slow down the process. Even if we know that we will need to ask for forgiveness. “We cannot be loved by Trojans and Greeks.”” – MSF staff member.

4.6 Sustainability

Sustainability is a key priority for the Mozambique mission and the advocacy objectives and strategies above are a cornerstone of their efforts to improve sustainability. Government acceptance and funding of MSF strategies increases the likelihood that those strategies will be sustained by the MoH beyond the life of the project.

MSF provides a considerable amount of training and support to MoH staff at the health facilities in Changara and Marara, particularly with respect to pharmacy management, the treatment cascade, routine viral load monitoring, and switching to second line. Training of MoH staff is considered essential for sustainability, as knowledge will remain beyond the life of the project. Additionally, MSF’s efforts have recently focused on creating systems and improving the processes in the Changara and Marara facilities in order to improve the quality of case management and care. Weekly meetings to discuss complicated cases are one of these examples.

The most common response among MSF staff, the community, and patients, is that if MSF leaves, it will be difficult for the ministry to maintain the quality of care that MSF helps them to provide. In addition to trainings and material support, MSF is constantly present, pushing for things to move faster, for delays to be removed from switch decisions, for ARV committees to meet, and for health facilities to resubmit approvals. Patients in MSF-supported facilities fear that though systems and processes may have been put in place, without MSF’s presence pushing for them to happen as they should, they may fall apart or become less effective.

Another common concern in Changara and that community outreach will suffer, as the health facility there does not have the means or the staff to continue it. The MSF corridor project and activities in Changara and Marara rely heavily on lay counsellors. These counsellors conduct community testing, and provide essential support to patients to help them adhere to their treatment and remain on treatment. The counsellors are trained, supervised and paid. They regularly make home visits to patients and attend the clinic with patients. Lay counsellors are also provided with resources that they need to do their jobs effectively, including a mode of transportation to visit communities, and the

flexibility to adapt their work schedules in order to meet their patient's needs. Lay counsellors are not officially recognized in Mozambique. There is a policy acknowledging the role of health educators, but they do not perform the same functions as lay counsellors, nor do they receive a salary. MSF has secured two partners to take over MSF's lay counsellors until at least 2020, and the majority of their activities, with the exception of outreach and community activities, are likely to be sustained for three more years. Despite this, if lay counsellors do not become MoH employees that are integrated into the health system, their existence will continue to rely on occasionally inconsistent donor funding, and the long-term sustainability of MSF's activities in Tete without official recognition of lay counsellors is in question. Without lay counsellors, these functions will need to be carried out by already overburdened nurses.

Finally, MSF is very highly regarded as an innovator in Mozambique, and respondents credit MSF for much of the progress made in HIV policy and practice in recent years. While the policies already taken on by the government will remain in place, HIV care is continuously evolving and advancing. Many respondents believe that without MSF's presence, innovation in HIV care will suffer.

Sustainability of routine VL monitoring

Mozambique is rolling out test & treat, and with it, routine viral load monitoring. A number of respondents characterized the MoH's efforts to implement routine VL as a "mess", or questioned the readiness of the MoH to take it on. Others questioned that if MSF—with all its expertise and resources—encountered so many challenges in implementing routine viral load, how would the MoH be able to implement it? Most of these questions were about future challenges to implementing routine VL, especially without the extensive support provided by MSF, and not about whether or not routine VL monitoring will continue in MSF's absence. PEPFAR and the Global Fund are committed to supporting routine VL monitoring, and a number of machines have been purchased across the country. This is happening, and will continue to happen with or without MSF's presence.

5. DISCUSSION

5.1 Treatment cascade, achievements and challenges

Since MSF only supports two districts (Changara and Marara) and 13 health facilities in the Tete province, it is hard to accurately assess their achievements with respect to 90-90-90 targets, especially with respect to the first 90. That said, their ballpark estimate of 4% seems plausible given the low positivity rate found in the community testing and among pregnant women. The 4% estimate gives 88.8% of people living with HIV who know their status, and 94 % of eligible patients registered in care at the Changara and Marara health centres are taking ARVs. The major concerns are with making VL accessible (as only 71% of patients have had their VL taken), and with suppressing viral load (as only 66% of patients who have had their VL tested have a suppressed VL) - this despite retention in care at 12 months (83%) being among the highest of the DGD-funded countries.

MSF has made major improvements in the treatment cascade, as demonstrated by there having been no patients switched to the second line in MSF-supported facilities in 2014. Patients also find achieving a lower VL to be a major motivating factor to adhere to their treatment. The major challenges in improving the treatment cascade are:

1. Improving retention in care and adherence in men and children
2. Viral load:
 - a. Long TAT
 - b. Test not sufficiently requested
 - c. Low proportion of switches to 2nd line when indicated
3. Low VL suppression

MSF has made enormous investments in implementing routine VL monitoring in Mozambique. The MSF-supported facilities in Tete continue to have long TAT (41 days), and the actual use of VL to manage care remains limited. The long TAT is likely caused, at least in part, by Changara and Marara's rural locations. Across the five countries evaluated, Gutu, Zimbabwe and Tete, Mozambique have the longest TAT, and they are also the most rural settings. The challenges in accelerating TAT are extensive, and MSF's efforts to mitigate them are comprehensive and ongoing.

The challenges identifying patients with suspected treatment failure switching patients to second line are also extensive, and may also be indicative of some of the challenges of the light approach, whereby MSF does not have its own staff, but provides support to MoH staff. The results achieved by Mozambique by the second quarter of 2017 (35%) is the same as the cumulative percentage other MSF HIV projects (35%).²¹ Like with TAT, MSF has multiple ongoing efforts in

²¹ MSF OCB (2017). MSF UNITAID funded HIV monitoring Project 2016 Annual Report (draft 1)

place to improve patient's clinical management using VL. The most promising of these efforts is likely to be the newly decentralised ART committees, which began in June of 2017.

Targeted efforts to improve access to care, adherence and retention

The work that MSF has done with sex workers is very much appreciated by the target population. MSF counsellors have cobbled together strategies to address individual men when adherence and retention problems arise, but the project lacks a well-defined strategy to meet the needs of men, whose outcomes are significantly worse than women living with HIV. The project has recently started a separate clinic day for children and adolescents, in order to reduce stigma, improve social support, and provide them with information about their disease. Currently, children will be grouped into older and younger children, and the younger ones will not receive sexual education. Young people become sexually active early. The Mozambique DHS from 2011 found that 29% of women ages 20-24 had their first sexual contact by age 15. Current recommendations for sexuality education suggest starting sexuality education early, well before youth begin to engage in sexual relations.

5.2 Community models of care

There is one community model of care in place in Tete: the CAG. 50% of eligible ART patients participate in CAGs. The CAGs benefit the health facilities by reducing the volume of patients to be seen at the facility, saving time and money for patients, and improving the sense of community for the patients who participate in them. The time spent waiting for prescriptions is very long at the Changara facility. While differentiated care is now accepted in Mozambique and MSF is working with the MoH to develop guidelines on DMoC, these models have not yet been fully implemented at the healthcare level.

5.3 Influence on policy and sustainability

MSF is implementing the best known practices for ensuring sustainability: building the capacity of MoH staff and strengthening health system processes. HIV care is continuously evolving and today's innovations might soon be outdated, so it is important not to overstate the sustainability of training results (MSF's or otherwise). While the skills and knowledge acquired by MoH staff through MSF will not go away, healthcare professionals require ongoing training, supervision and support throughout their entire careers in order to remain up to date with new practices. To do so after MSF's departure will require a sustained investment from the ministry of health or other partners.

The positive feedback received by partners indicates that MSF has influenced almost all HIV policy in the country since the beginning of the funding period in 2014. The sheer number of policies that MSF has contributed to, combined with its current aggressive advocacy agenda, makes it a respected and influential innovator for HIV care in the country. While MSF succeeded in securing official recognition of the importance of lay counsellors, the MoH does not yet have a position in their HR framework for lay counsellors, and the function is not budgeted. The failure of MSF to secure official recognition for lay counsellors will have important consequences for the sustainability of MSF's work in Changara and Marara, as they are essential to MSF's outreach, community testing and counselling. Mozambique is currently in the midst of a health financing crisis, and as a result MSF has chosen to deprioritize advocating for the inclusion of lay counsellors in the MoH grid and budget. Despite the health crisis, however, many health systems have a number of inefficiencies, and with reprioritization of the budget, there may still be fiscal space to fund lay counsellors. An analysis of how the MoH allocates its budget and of potential gains in efficiency would be a useful exercise for MSF's prior to determining the value of continuing advocacy for lay counsellors at this point.

6. CONCLUSION

MSF is innovating and improving HIV care in Mozambique.

MSF's quality of care, technical expertise and advocacy in Mozambique are highly valued by its patients, MSF's peers, and by the ministry of health.

The CAGs, invented by MSF, have led to improved efficiency at the clinic level, reduced time in the clinic –and by extension, provided more time at work– for its patients.

Operational research, technical guidance, and ongoing support from MSF have led to better patient case management.

Routine viral load monitoring has led to improvements in the treatment cascade, but they have come slowly and continue to face many challenges, particularly with respect to uptake of the test, turnaround time for results, and the

use of the results to switch patients to the second line. MSF is aware of these challenges, and their efforts to address them are comprehensive. Progress on these issues will take time, though the initial results –especially improvements in the percentage of patients switched to second line– are promising.

Sustaining these gains currently requires extensive support from MSF, and it is unlikely that these changes will be maintained at the same level in the event of MSF's withdrawal without a corresponding and equivalent investment from the government or other partners.

7. RECOMMENDATIONS

- ⇒ Recommendation 1: Create a comprehensive strategy to address adherence and retention in men.
- ⇒ Recommendation 2: Begin sex education with children prior to the age of first sexual contact.
- ⇒ Recommendation 3: Conduct a fiscal space analysis of the national and MoH budgets in order to know if there is any possibility of funding lay counsellors.
- ⇒ Recommendation 4: Continue investigating the causes of low VL suppression despite relatively good retention in care in Changara and Marara.

ANNEX II: COUNTRY REPORT, GUTU, ZIMBABWE

1. SHORT OVERVIEW OF THE MISSION

Since January 2011, MSF has been supporting the Ministry of Health and Child Care (MoHCC) in Gutu District, Masvingo. This resulted from a call from Gutu community leaders, who saw the positive impact of ART on the many patients from Gutu who travelled to Buhera, the neighbouring district, to get themselves treated in the program that MSF was running there at the time. Indeed, mid 2010 Gutu district –with the same population and prevalence as Buhera district – reported only 1800 patients ever initiated on ART in care, while Buhera was reporting 10 times more.

In 2014 - thanks to DGD funding - the project was granted with an additional three years to expand its program. The ambition was to contribute to an improvement of the treatment cascade and achieve 90-90-90 in Gutu district, focusing on the second and third 90. Thus, MSF aimed to make an impact on the progress (incidence) of the HIV epidemic by initiating ART at an earlier stage in the disease process (at CD4 count <500 according to the WHO HIV treatment 2013 guidelines), expand alternative models of HIV service delivery and achieve community undetectable viral load, through close collaboration with MoHCC, using a mentoring of mentors approach. Zimbabwe adopted the test & treat approach in the last quarter of 2016, which increased the number of patients in need of ART and raised the bar to reach the goal of 90-90-90.

Gutu district is situated in Masvingo province, in the South-Eastern part of Zimbabwe. The setting is mostly rural. The target population in Gutu according to the 2012 census is 203,533 people. The adult HIV prevalence rate in Gutu is 15.4%, with higher rates in women than in men (see table 14). Prevalence among adolescents (15-24) is 4.3%. The adult HIV prevalence in Zimbabwe is 14.6%, while national prevalence among adolescents is 4.2%. Gutu district has two major hospitals and has 29 other health facilities, including clinics, rural health centres and rural hospitals.

One of the evaluators (JvdM) visited the mission from 8 May to 17 May 2017. This evaluation report on the Gutu project has been written on the basis of semi-structured key informant interviews and focus group discussions with patients, MSF staff, and partners of MSF, complemented by document study and study of routine quantitative monitoring data. More details about the methodology, including its limitations, can be found in the methodology section of the main report.

2. MAIN FINDINGS

2.1 Treatment cascade

HIV counselling and testing

MSF managed to test increasing numbers of people and thus improve the treatment cascade from the beginning.

The total number of clients tested per year since 2013 shows an increasing trend. An increasing number of people were tested in facilities - from 28,717 in 2014 to 51,458 in 2016. The HIV positivity rate decreased from 10.2% in 2013 to 3.9% by end 2016.

Data from an MSF-led population survey, the Gutu Impact Study, show that 86% of the Gutu population ever got tested. There is a large gender difference; almost 91% of women were ever tested, whereas just under 78% of men underwent a test for HIV. This difference is statistically significant, and likely the result of women getting tested in antenatal care during their pregnancy. At the same time MSF and MoHCC staff notice that men are difficult to reach with prevention and care. The overall percentage of HIV-positive people who are aware of their status is 87.4% (95%CI: 84.7-89.8). This is much higher in women: 92% (95%CI: 88.9-94.2) than in men: 79.8% (95%CI: 74.3-84.4).

Antiretroviral therapy

Overall ART coverage has increased dramatically since 2013, while retention in care (RIC) in certain patient groups (pregnant women, children, young adults, sex workers) is the challenging part of treatment in Gutu.

By the end of 2014 30 of 31 health facilities in Gutu district offered ART, and the number of patients on ART increased from 7,564 in 2014 to 12,114 in 2016. This was partly due to the introduction of the test & treat strategy in the fourth quarter of 2016. Many clients who were still in Pre-ART care were initiated on ART as compared to those testing positive. ART coverage for adults has thus reached 94% based on former eligibility criteria of CD4<500 in Gutu by the end of

2016, whereas according to the test & treat criteria it is now 80,7%. There is a gender imbalance in access to ART; 60% of patients on treatment are female.

It is challenging to keep young women, adult men, children, adolescents, and young adults into care with ART for a prolonged period of time, as table 12 shows. Retention for men > 15yr at month 12 is 67.6 % and at month 24: 60.3%. Retention at 12 months for young women at 24 months is only 58.1% (table 12). Proportions of children, adolescents, young adults and sex workers remaining in care after 12 months are 75%, 92.1%, 54.6% respectively. For sex workers, RIC is 50 % at 24 months.

With a paediatric coverage of 51.5% by the end of June 2016, the coverage in Gutu district remains far below the universal target of 85%.

Table 12: Retention in care at 12 and 24 months, Gutu, various groups

Group	RIC 12 months	RIC 24 months
Adults CD4 350-500	64.5%	58.1%
Women on PMTCT B+	58.6%	-
Men > 15 yrs	67.6%	60.3%
Children < 5 yrs	75.0%	48.8%
Adolescents 10-14 yrs	92.1%	76.5%
Young adults 15-24 yrs	54.6%	47.9%
Serodiscordant couples	-	76.9%
Sex Workers	-	50.0%

Source: Narrative report 4th quarter 2016

Challenges throughout the treatment cascade

As table 14 shows, MSF in Gutu achieved a treatment cascade of 87-98-83, compared to 74-86-90 in Masvingo province. Although Masvingo seems to be doing better in the last 90 by actually achieving it, MSF is closer in meeting the first two 90s which ultimately means a larger coverage. The total MSF cascade implies that 69% of all potential patients are on treatment and virologically suppressed, whereas in Masvingo this is just 57%.

By improving the treatment cascade, MSF has definitely made an impact. Although there are no reliable mortality data for Gutu, reportedly mortality has noticeably declined since MSF came started patients on ART.

“We don’t attend funerals every day anymore” – Community leader, Gutu.

The ultimate indicator to demonstrate impact would be a decline in incidence over and beyond the general trend in e.g. Masvingo province. These data are not available at the time of writing of this report, but will become available as part of the Gutu Impact Study. Even then, it would be hard to prove that the lower incidence rate is attributable to MSF’s activity only. A significant contribution to lower incidence and mortality rates by MSF is more than likely, however, given the large investment that MSF realised in Gutu over the years and results achieved as discussed in this report.

Good results notwithstanding, there are a number of issues that remain challenging in further improving the treatment cascade. These are:

- Men in general do worse than women in terms of accessing services
 - Men do not come forward for testing, or are not being linked into care.
 - Loss-to-follow up (LTFU) risk among men.
- Retention in care and adherence is poor in adolescents
- Retention in care is problematic for a number of patient groups: young women, older men, adolescents, sex workers, etc.
- Adherence among children is poor

Men are not accessing services

“Females are embracing programs but men are hard to get”, was the snappy summary of the situation by one of the MoHCC officials. Men don’t come forward for testing, or are not being linked into care.

Some interviewees see the first 90, men not getting tested, as the biggest problem. One of the explanations is that men are the breadwinners. This means that they are often away from home, working on farms and other places far away in

the district or elsewhere in Zimbabwe or in South Africa. Even if they want to go for a test, queues and waiting times are unattractive for men; the opportunity cost for them is simply too high. In addition, men often believe that they are negative if their wife or girlfriend does not carry the virus.

"They believe that if the test of the woman is negative they are also negative. And men are breadwinners. So as long as they walk around they believe they don't carry the virus. And the queues are a bit long if they come for testing." – MoHCC staff, Gutu.

"From the male side there is still a challenge. Men wait until they become sick. They come when their CD4 is even below 100. Most of women their advantage is PMTCT, they get tested, and they are coming for the services. Men say they have no time; they are busy working. When we started the night clinic the main target was men. It worked." – Nurse, Gutu.

Antenatal care is the entry point into the healthcare system for almost all women. For men, there is no such logical entry point. This is why MSF responded with door-to-door testing, offering testing during events like football matches and starting an outreach night clinic to farms in order to reach working men. The vast majority of HIV tests in that setting were indeed done on men - 77% in the last quarter of 2016. It is too early to say if the IEC efforts by the night clinic improved knowledge about HIV among men.

Men are easily lost to follow up, largely for the same reasons why they don't get tested and their link into care is problematic: opportunity costs to be in care are high, and men are mobile because of work. A positive finding is that once men are in care and on ART, they achieve good results. VL suppression among men and women is very similar. This may be an effect of men getting support from CARGs, although one expects CARG participation in men to be low for work related reasons. Disclosure at work may be problematic for many men.

"But now I am 100% of the time on my job, 7 days a week from 8-8. If I could find a group I would join but my colleagues are older and not HIV-positive, although a few people know my status." – Patient, male, 23 years old, Chimombe, Gutu district.

Retention in care and adherence among adolescents

Poor retention in care and adherence among adolescents has everything to do with the phase of life. Adolescents start discovering their own sexuality, meet with each other, and want to experiment with relationships. Living with HIV makes this all very problematic and generates uncertainty. Adolescents don't want to disclose to their friends, and are afraid that they face discrimination if they would do so. Hence, don't want to be seen taking medication for instance. Of note is that adolescent girls are at particular risk, because of cultural practices: the belief that sex with a virgin can cure a man from HIV/AIDS, and the practice of older men to have relationships with younger women.

"When they want relationships, the adherence drops." – Nurse, Gutu.

According to some patients, guardians do not always understand the situation of children moving into adulthood and may be abusive or not supportive.

"When I counsel young kids how to live on as HIV-positive, in your heart and in your mind is always how to deal with stigma and discrimination. I experience it from my own relatives, they blame me for being HIV-positive. (...) Some kids suffer. They are abused by their guardian." – Patient, male, 20 years old, Chimombe, Gutu district.

The response has been to support or set up a package of measure to improve the *response* to adolescents with HIV with measures that are both facility-based and community-based. For instance, adolescent clubs, support groups with peers and experienced youth, and youth days are organised to better link adolescents into care. A system with SMS messages and reminders has been put into place. Referral slips are being used to monitor better what's happening with this category of patients, and there is close follow-up of the adolescent cohort in the monitoring system. In addition, staff has received a youth friendly training, and partnerships with schools and relevant community NGOs are being developed.

Retention in care for women

Young women receiving ART as option B+ for PMTCT often get lost to follow-up. These women are asymptomatic, often young, newly diagnosed with HIV, and frequently have not disclosed their HIV status to partners, which may explain their increased risk of default, loss to follow-up or poor adherence to ART.

Sex workers have poor retention because they may face discrimination, and are very mobile. So far, the response has been to include sex workers in the night clinic outreach activities for men, to avoid having a special sex worker clinic that may result in extra stigma.

Adherence among children

Access to ART for children is not an exclusive problem to this particular project: it remains a challenge in the entire country. This led to the MoHCC launching the “Accelerated Action Plan for scale up of ART in Infants, Children & Adolescents” in February 2015. Of note is that Zimbabwe is the country with the highest number of AIDS orphans in the world.

Among strategies to improve uptake of very young children (of 0-5 years) is the family approach at health facility level to increase adherence and access to treatment; often parents or guardians need support in disclosing and explaining to children their status, while sometimes they are reluctant to disclose their own HIV status themselves towards the child.

To attract guardians to test their child, links with partner organisations working with orphans and vulnerable children have been established.

2.2 Viral load monitoring

Enormous progress has been made in Gutu district regarding scaling-up routine viral load monitoring among patients on ART, with high proportions of patients showing viral suppression. Challenges exist with long turnaround times of viral load results and switching eligible patients to second line treatment.

In line with the UNAIDS' 90-90-90 target, a key indicator in MSF's Gutu project is for 90% of all patients to have a suppressed viral load (VL). The current threshold in Zimbabwe for suppression is 1000 copies/ml. In Gutu, routine VL screening has been implemented since early 2013.

Enormous progress has been made in Gutu district regarding scaling-up routine viral load monitoring among patients on ART. All ART sites do VL testing, increasing VL coverage from < 5% in 2014-2015 to 75% (or even 84-94%) in 2016.

The proportion of patients with a suppressed VL has reached 85.5% in 2016, with virtually no difference between men and women. This means that the last 90 of the treatment cascade has almost been reached.

The introduction of routine VL measurement expanded the treatment literacy of patients. Patients who were interviewed were aware of their VL, knew when they were tested last time, and knew their results, if available.

A couple of interviewed patients were waiting up to three months for their VL test results, which is exemplary for a more generalised situation regarding VL. The median turnaround time (TAT) for the VL test result, monitored in 6 facilities, was 22 days in the third quarter of 2013, 25 days in the third quarter of 2014, and 40 days in the third quarter of 2015. The situation returned to better TAT times between January and June 2016, only to increase again by the end of that year to 39 days, due to lack of machine service at the right time.

Long TAT was often mentioned by interviewees when discussing VL implementation. Factors contributing to a long TAT in Zimbabwe are:

- delays in maintenance of equipment;
- multiple platforms, using dry blood spots (DBS) as well as plasma - the latter makes higher demands in terms of transport;
- problems with transport of samples;
- rapid scale-up of sample collection while platforms were not prepared for the increased sample load;
- stock ruptures of reagents;
- human resources shortages.

Problems with equipment are most of the time related to maintenance and availability or accessibility of dealers. Usually dealers for VL equipment are not based in Zimbabwe but in South Africa.

The centralised model of VL testing in Harare may require transport of samples of whole blood, depending on the testing platform used. This can be a challenge when MoHCC faces fuel shortage or if there is no vehicle for transport available. In case of transport, blood stored at 2-8 C can be kept for a maximum of 24 hours. This may lead to VL tests not being done if the clinic nurse is not sure that timely transport will be available.

Table 13: Virological suppression distribution in participants HIV infected who reported being on ART for more than 6 months, Gutu District, Zimbabwe 2016

	Virologically suppressed (<1000 copies/ml)		
	n/N	%	(95%CI)
Gender			
Women*	269/321	84.0	79.3- 87.5
Men**	135/160	84.4	77.9- 89.2
Duration of ART			
6m to 12 m	17/21	81.0	58.8- 92.7
12m to 24 m***	40/50	80.0	66.6- 88.9
≥24 m****	347/410	84.6	80.8- 87.8

*13 missing values; ** 4 missing values; ***1 missing value; ****16 missing values

Source: Gutu Population-Based HIV Impact Survey, 2016

Table 13 shows the suppression rates in 2016 for adults tested in the population-based survey conducted by MSF in Gutu district in 2016. The project achieved an average of 84.3% suppression in all 498 participants who reported being on ART for more than 6 months. There is no notable gender difference. Routine monitoring data show that non-suppression is high in the younger age groups. Particularly in children it tends to be around two to three times the rate in adults (MSF UNITAID funded HIV monitoring Project: 2016 Annual Report).

After a detectable VL, all patients should receive Enhance Adherence Counselling (EAC) according to the guidelines. This assumes that a proportion of the high VL stems from poor adherence and not from resistance. A second VL after EAC should verify if indeed VL has come down after EAC, or is still high, in which case resistance to first line drugs is likely and a switch to a second line regimen is indicated.

A VL cascade study, conducted by MSF in Gutu in 2016, reports the EAC coverage: the rate of patients receiving EAC as a proportion of patients having detectable VL results. EAC coverage in Gutu overall was 84% in the cascade study period (October 2015- January 2016), with a range from 54% - 100%.

The cascade study reveals that switching to second line treatment after two or more consecutive high VLs is still a challenge. Of 109 patients with a second consecutive detectable VL, only 18 (16.5%) were switched to second line treatment. Of 30 patients with 3 consecutive high VL, only 9 (30%) were switched to second line treatment.

The nurse mentors are now able to switch to second line by themselves. Nevertheless, this is not happening in all cases, and there are long delays in switching. This defeats the purpose of VL testing, which allows a quick reaction on potential virological failure, in contrast to managing by CD4 count.

The cumulative number switched to 2nd line was 400 by the end of 2016. The average time from high VL2 result to switch date is 142 days. Ideally the switch to second line should be done within a week.

Reasons for slow switches, as suggested in reports as well as by interviewees, include:

- Uncertainty about switching: nurses wait for confirmation of the switch by the doctor, who may be slow in responding or not aware of the case.
- Staff turnover.
- Attitude of doctor and/or MoHCC towards second line might play a role; sometimes the argument is made that after second line no alternative is left.
- Reluctance to switch because of cost implications for MoHCC when patients are increasingly put on second line treatment.
- Fear of second line drug ruptures (and potential increasing of second line resistance as a consequence).
- Actual second line drug ruptures.
- Lengthy TAT.
- Poor documentation in filling out VL results; inadequate usage of the follow-up systems for patients with a high VL.
- Patient-related factors: patient delay, lack of understanding the need to follow-up VL, patient mobility, failure to furnish health facility with correct/updated contact details.

MSF's response to the situation is to continue to support switching through joint mentoring and hosting quarterly district mentor meetings. In addition, MSF will lobby the district doctors to actively engage in high viral load case management at clinics, as well as continue to lobby the DMO to allow trained nurses to switch to second line by themselves.

2.3 Differentiated models of care

Differentiated care is nowadays offered in all but one of 30 Gutu health facilities. This includes not only care and treatment for HIV, but also prevention and treatment of OIs, IPT, TB treatment and cervical cancer screening. Differentiated models of care have been brought to scale with an emphasis on Community ART Refill Groups (CARGs). Challenges occur with establishing properly-working Drug Pickup (DPU) points at hospitals.

Differentiated models of care enhance long-term sustainable HIV service delivery by empowering patients, reduce their burden of clinic visits and consequently reduce health facilities workload. Gutu has two differentiated models of care for HIV. There are Community ART and Refill Groups (CARGs) and Drug Pick-Up points (DPU) in Gutu, alongside standard clinic-based care delivered by nurses.

CARGs, and variations thereof, are partly implemented and supervised by the NGO BHASO, whose staff members were trained by MSF in the CARG approach. The idea of the CARGs came from MSF's project in Tete, Mozambique. MSF subsequently introduced it to Zimbabwe, where the authorities at first were sceptical about its potential because of the different context. However, by the end of 2016, 51% of the ART cohort in the CARG sites is now accessing their drugs via community ART refills models which represents 37% of the total district cohort. Patients using DPU is around 1.1%.

Differentiated care is a fact nowadays in Gutu. In 29 out of 30 Gutu health facilities, nurses now manage their patients on ART through the mentoring approach, and counsellors expanded their knowledge. The clinics offer a comprehensive package of care that includes OI treatment and prevention, IPT, TB, and six clinics in the district offer cervical cancer screening through Visual Inspection with Acetic Acid and Cervicography (VIAC). This decentralisation model implies that access to OI treatment and ART has increased substantially in Gutu.

Nurses and counsellors report that they now have more time per patient, which means they can concentrate on more complicated patients.

CARGs operate largely on their own. Patients are empowered through the CARGs and have increased their treatment literacy and confidence.

"Since they commenced on ART they have to collect their drugs. It was a problem to present themselves to health centre every 3 months. It assisted them to access their drugs more easily. Patients would pay up to \$10 for a single trip, four times a year. It also saves on their time. And it's decongesting the clinic." – MoH staff, Gutu.

Adherence in CARGs is reportedly good. The VL cascade study shows that VL among CARG participants is lower than in non-CARG, but this is likely to be a selection effect as patients need to be stable with an undetectable VL in order to qualify for CARG membership. Finally, CARGs have an unexpected spin-off beyond the direct realm of healthcare. Some CARGs strengthen livelihoods by having group microcredit mechanisms, purchase of a piece of land for CARG members, or support members who fall ill with labour.

"We are also doing projects: growing of crops and rearing of animals, and in this way we can earn money for transport. (...) We give each other money if someone from the group is ill so they can go to the clinic." – CARG member, Gutu district.

While CARGs can be considered a success, it seems to be the only differentiated model that has been implemented to scale in Gutu. With 51% participation, MSF staff feel that this might be the upper limit of what is achievable.

A very small minority of patients uses the DPU. This is due to the limited number of DPU in the district, while this model of care faces challenges because there is no separate pharmacy to pick up the medicines and people still end up waiting in a long queue. MSF is planning to engage a CBO (BHASO) to improve the uptake of DPU at the two urban hospitals that are implementing this approach, in order to arrive at a sustainable DPU model for handover of the program.

Other models exist, such as the Facility Based Adherence Club, where adherence and treatment support is given during clinic visits. These models have not been scaled up in Gutu.

The relatively high proportion of patients in CARGs, the small number of patients in DPU, and the lack of adherence clubs raises the question whether more energy should be put into offering patients a choice in differentiated models to

best suit their needs. Thus, even more patients can be enrolled in a community model of care, with advantages for the patients as well as increased focus and efficiency for the healthcare system. In order to proceed with this question, a better understanding of patient needs and preferences regarding differentiated models of care –and their results in terms of better treatment outcomes– is necessary.

2.4 Other project activities

Besides HIV, the most notable contributions by MSF in Gutu are prevention and treatment of OIs, and decentralising DR-TB treatment. Challenges here occur with roll out of IPT, and transport of sputum samples. The introduction of decentralised cervical cancer screening can be considered as a success. Fairly large numbers of women have been screened and a referral system is in place. Challenges are a shortage of trained staff, high equipment and maintenance costs, and LTFU for referrals.

In order to enhance quality of care and training of staff in good quality HIV care, various components were added onto the program. Some of these components were funded by MSF, others were implemented with DGD funding:

- Pharmacy construction (2015):
- Kaposi Sarcoma management
- TB and DR-TB Management
- Preventative therapy using isoniazid (INH)
- Cervical cancer screening

Pharmacy construction

Based on the increasing demands there was need to construct a pharmacy at Gutu Rural Hospital. Construction took place between March and September 2015.

Kaposi sarcoma management

Chemotherapeutic drugs for the treatment of Kaposi Sarcoma (KS) are centralized only to Parramatta Central Hospital in Harare. Many patients defaulted because they did not have money for bus fare to come for their fortnightly pulses of chemotherapy. A KS clinic was established at Gutu Mission Hospital where patients could get chemotherapy closer to their homes. The expensive drugs were procured through MSF funding

Tuberculosis

The supply of TB drugs is mostly adequate in the country. Challenges remain with diagnosis and care for MDR TB.

In Gutu, MSF has been involved in initiation of all DR-TB cases in the district since 2012. The clinic nurses –with sites having MDR-TB cases– were trained for MDR-TB management through individual trainings and attachments in 2014. The district pharmacy is able to manage DR-TB drugs by themselves.

“There are lots of benefits, it’s the same for decentralisation of TB treatment. Nurses were not allowed to start patients on TB treatment, they were sent to district hospital, but we decentralised everything to the clinic.” – MSF Staff, Harare

A DR-TB committee was established in January 2016 and holds biannual DR-TB review meetings. MSF has been participating at District and Provincial review meetings. Analogous to challenges in VL TAT, monitoring of MDR-TB patients using sputum culture has been challenging as results are not coming back from either of the two labs doing the tests. As a result, treatments get extended and/or patients are declared treatment completed but never cured. MSF is now supporting GeneXpert diagnosis of tuberculosis in the district.

Isoniazid Preventive Therapy

Initially IPT has been limited in Zimbabwe to young children < 5 years and the elderly > 65 years without active TB who were contacts of sputum smear positive index or retreatment cases of drug susceptible pulmonary TB. MSF has assisted MoHCC in rolling out IPT for the HIV cohort at 6 sites as pilot in the districts, and plans to do so in 4 more. The activity is being implemented through joint mentoring activities.

MSF conducted an analysis of its IPT activities between November 2015 and June 2016 in the six sites that implemented IPT. Overall IPT coverage in the HIV cohorts was 15% (range: 3-35%). MOHCC rolled out IPT to all 29 clinics in Gutu,

achieving 3146 PLHIV on IPT, representing a coverage of 26%. Reportedly in 2017 this went up to 38%. The Zimbabwe national average of IPT coverage is 44% among PLHIV.

Cervical cancer screening

It is estimated that each year, approximately 1–2% of women have precancerous lesions in their cervix. This rate is reported to be higher in women of HIV-positive status, at 10%. HIV-positive women may live because of ART, but then may die from cervical cancer.

During 2014-2016, MSF supported MOHCC with its cervical cancer screening program in the district as part of its basic package of HIV care. Until 2014, only Gutu Mission Hospital provided cervical cancer screening through Visual Inspection with Acetic Acid and Cervicography (VIAC). MSF's objective was to improve access through decentralised care, and improve quality of cervical cancer screening activities, including VIAC. MSF –through DGD funding– provided the necessary equipment to set up this service in 3 hospitals and 3 rural health centres in Gutu District. MSF provided training and mentored staff from these hospitals in collaboration with a private not-for-profit hospital in Harare (Newlands).

From its start in August to December 2016, a total of 6446 women were screened; this was about 35% of the eligible population in the catchment area, and represents 10% of the eligible population of Gutu district. Among the 6446 women screened, 630 (11.3%) were found VIAC positive, 75% of VIAC positive accessed cryotherapy within the district and 25% were referred to Central Hospitals for further management. 3% received LEEP (Loop electrosurgical excision procedure) services and 2 patients underwent hysterectomy supported by MSF.

The plan is to scale up access for women with HIV and reach a target of 80% coverage in this group getting at least one VIAC. Currently coverage stands at 30%.

Although the turnout for VIAC proved to be good, interestingly a minority of women (15%) getting screened were HIV-positive. The dilemma the project faces is that this service was intended to improve quality of care for women with HIV, while at the same time one would not want to deny HIV negative women this service. Further mobilisation of women living with HIV in the community has been planned, involving CBOs such as BHASO.

Other challenges encountered in cervical screening include a critical shortage of trained staff due to mobility of health staff, high costs of training and equipment, no local service agent for some equipment, shortage of spare parts, and shortage of VIAC consumables. Finally, not all referrals materialise because of distance, travel costs and service payments.

Against this background, MSF plans to evaluate alternative models of care, such as screening using HPV, as recommended by WHO as most preferred option. This study on the HPV model, utilizing Xpert technology, would be based on the same principles as the currently on-going research: validation of the test, evaluation of feasibility in the field, and an evaluation of cost-effectiveness (VIAC versus HPV).

With regards to HPV vaccination, the MOHCC has rolled out in 2 pilot districts (Murewa and Beitbridge) and is very positive about the need for this to be rolled out in the entire country. At the same time MSF will assist MOHCC with roll out of HPV vaccination to all girls aged 9-13 (through school vaccination program) during 2017-2018 school period.

It is anticipated that the HPV/VIAC study will increase access to cervical cancer screening for women with HIV in the district, whereas at the same time VIAC can be a good entry point for STI detection and HIV testing for women who are not aware of their HIV status.

2.5 MSF and national policy changes

MSF has been able to influence national policies in Zimbabwe through a combination of advocacy and showing evidence from its operational research activities. National policies that MSF influenced include differentiated models of care (particularly CARGs) and the introduction of routine VL monitoring.

One of the evaluation objectives is to determine to what extent MSF has been able to influence national level policies, guidelines, or protocols.

Methodologically it is difficult to tease out what the contribution of MSF is to policy change, because policy making does not happen in a vacuum. MOHCC, as well as other national and international actors, takes initiatives or advocate for certain approaches besides MSF.

From key informant interviews it becomes clear, however, that MSF has a unique position to advocate for policy change because MSF is not only a donor, but also an implementer with significant operational research capacity to boot. This approach to generate evidence about a new approach is very much appreciated by all levels of MOHCC.

"MSF were really like pilots, they even started things before they became policy. It helped us to formulate guidelines." – MOHCC staff, Harare.

"Sometimes they ask to do pilot studies and then influence national policy. They did so with CARG, VL. In Gutu we did everything before any other district. (...) Gutu tended to be a learning ground. Strategies are very much aligned, not offered in isolation, they were complementing government efforts." – MOHCC staff, Gutu,

According to the above quote, MSF has been able to influence adoption of CARGs and VL at national level. Others mentioned that MSF has played a role in the national introduction of TDF/3TC/EFV regimens for ART, 9-month DR TB regimens and strengthening IPT.

Apart from demonstrating good results and feasibility of new approaches like VL monitoring in the Zimbabwean context, MSF was also in the position to become member of a technical working group on VL, and had therefore opportunity to share its experiences in VL monitoring from the Gutu project, along with networking and advocating in many different national level fora.

"Through various forums (including technical working groups, partnership forums, one on one meetings with directors of the National AIDS and TB Unit) MSF has, advocated for the endorsement of routine viral load as part of the national guidelines in preparation of the launch of routine viral load to decentralised districts in 2013. As a result, in 2013, Zimbabwe adopted routine viral load monitoring as the gold standard for ART monitoring. MSF did not only participate in and advocated for the guidelines change, but it also participated in formulation, designing and implementation of the National Viral Load Plan, whose adoption by the country was in 2015. Thus it participated in providing a road map to achieve routine viral load monitoring." – MSF UNITAID funded HIV monitoring Project- 2016 Annual report

"For VL there was nowhere a test done in Zimbabwe. Selling it was to demonstrate the feasibility, that is why we brought the machine, that we can do it even with limited resources. They started paying themselves and now we are in the process of handing it over to the MOH and they start paying the reagents on Global Fund budget." – MSF staff, Harare

Successful lobbying doesn't mean there were no challenges. MSF had to do quite a bit of convincing to introduce CARGs in Zimbabwe. Coming from Mozambique, it was felt that this approach would not work in a different country context. Continuous contact with relevant government actors, sharing documentation and experience, and networking with civil society which was in favour of more community involvement and ownership in HIV care led to success.

"Challenges with differentiated models of care was that MSF was the only one with this vision, it was a challenge and it came from Mozambique, they said no, Zimbabwe is very different. To sell it was challenge, we achieved a breakthrough by piloting it and working with CBOs, they were a mouthpiece of PLHIV who said 'this is what we want'." – MSF staff, Harare.

In addition to achieving national policy change in some fields, MSF on national level (e.g. during CCM meetings) documented and exposed shortages of resources that had a direct impact on patients, and advocated towards donors to adopt innovative approaches, or fund those approaches. In some cases, this led to concrete results:

- CHAI picked up on MSF operational research that proved that GeneXpert can be used to offer both viral load and early infant diagnosis in addition to TB diagnosis and expanded VL testing on the Xpert to 13 districts in Zimbabwe.
- PEPFAR has taken up CARGs and decided to fund its roll out in Zimbabwe in 30 priority districts. As such, sustainability and uptake of this strategy is assured.
- MSF experience in cervical cancer screening influenced MOHCC to include this in the 2018-2020 Global Fund country application.

2.6 Sustainability, transferability

Since the opening of the project, MSF has sought to ensure its approaches are sustainable through the light mentoring approach, as well as ensuring MOHCC covers costs of essential drugs and test kits. Sustainability of activities involving transport are doubtful, e.g. outreach activities. CBOs that depend on MSF financial support might have a difficult time to continue their activities without MSF.

Since the opening of the project, MSF has sought to ensure its approaches are sustainable. To this speaks the fact that MSF made the light mentoring approach the mainstay of its operational model in Zimbabwe, where initially MSF staff took on a mentoring and coaching role, while gradually MOHCC staff were trained as mentors who in turn could mentor and coach their colleagues. Challenges with the mentoring approach include the high turnover of staff, which does not create a stable human resource situation that would be conducive to establishing a well-organised, sustainable system.

Apart from being light in human resources, the mentoring approach also implies less financial input from MSF, as MOHCC covers most human resources. Most of the supplies such as ART, TB drugs, essential basic drugs, HIV test kits and laboratory reagents come from the national pharmacy supply system. Furthermore, most of the current drug delivery is done by National Pharmacy trucks – with MSF's support only in case of need.

Furthermore, MSF earned a lot of praise from the communities involved for its inclusive approach to the project, engaging and informing all actors at an early stage.

"The community is owning it. No one says: 'let's stop the CARGs'. No one says: 'let's revert to CD4 500.'"
– MOHCC staff, Gutu.

The emphasis on national level policy change speaks to an effort to sustain new approaches by anchoring those approaches in the national regulatory and care system. Key to success is an already pro-active MOHCC that is eager to collect evidence on new approaches and introduce them. High staff numbers and good motivation despite the desperate economic situation in Zimbabwe is another success factor.

Interviewees mostly feel indeed that, through the mentoring approach, there would be a basis to sustain most activities in case MSF would leave, or scale down its presence in Gutu.

Some of them mention activities that might not survive long without external support. These were mostly related to the high cost of fuel and/or transport.

Some interviewees feel that the night clinic with mobile outreach to farms and other remote locations would not be sustainable, because MOHCC would not have the means to purchase the large van-type of vehicles needed for this activity, nor would it have the resources to cover the cost of fuel.

For similar reasons, the mentoring approach would have to face some challenges after handover:

".... the transportation of mentors around the district. We are consuming 60 L of fuel per week."
– MOHCC staff, Gutu

For related reasons, outreach models such as the night clinic would not be seamlessly transferable, for instance into remote districts. In these settings, with a poor road network, decentralisation is more challenging to manage and supervise, and results less likely to be good than in a district like Gutu where the road network is relatively good.

Some people express doubts about the efficiency and effectiveness of sample transport without external donor support.

Other interviewees have doubts if maintenance of equipment would be sustainable because of the high costs involved once new spare parts had to be ordered.

Interviewees feel that the Kaposi sarcoma program is not sustainable because of its cost.

After handover, the CARGs will live on as they require no financial resources. However, organisations like BHASO who run and manage differentiated models of care are partly funded by MSF and they will face challenges funding their activities when MSF leaves.

3. CONCLUSIONS

MSF is very well-appreciated in Zimbabwe because of its technical and hands-on expertise, and its inclusive approach engaging all relevant actors, with proper priority given to involvement of the community.

Although MSF always emphasises its work on the last two 90s of the treatment cascade, it made an impact on the entire treatment cascade in Gutu; the cascade overall is better than in the surrounding province, Masvingo.

The impact on mortality, and morbidity (incidence) could not be verified with quantitative data. There are statements by community members that speak to a dramatic decrease of mortality and burden of disease in the district over the past few years.

The introduction of VL has been largely successful in terms of coverage, but faces some problems, such as long TAT, and low rates of switch to second line, along with long lead times to switches.

Differentiated and decentralised care improved access to ART, OI care, cervical cancer screening and (DR) TB.

Roll out of IPT is rather disappointing to date.

The groups that are lagging behind in the cascade achievements are men, adolescents, and children.

MSF has been able to achieve national policy change, particularly with regards to adoption of differentiated models of care through CARGs, VL monitoring and ART protocols.

In addition, MSF has influenced other donors to adopt innovative approaches to VL monitoring or fund initiatives based on its operational research.

With regards to DR TB, results are less tangible and less well-document than the results achieved in HIV.

4. RECOMMENDATIONS

MSF in Gutu has made remarkable achievements, while at the same time it is becoming clear there are several groups facing access challenges. The low hanging fruit has been picked, it is now time to work on the tough cookies.

4.1 Men

Men are not coming forward to test and be linked into care. Outreach to men, like night clinics, needs to continue in order not to lose gains made.

Recommendations

- ⇒ Recommendation 1: Support groups for men in a way that suits their lifestyle (work, mobility) and minimises their opportunity cost in time will need to be developed in a comprehensive package:
 - Introduction of self-testing
 - Changing inconvenient clinic opening times
 - Outreach in dispensing medicines, pickup of medication outside a healthcare facility in the vicinity of the workplace, or a courier system for delivery may be considered
 - Combine all of the above with support mechanisms such as telephone hotline, forms of mobile outreach support
- ⇒ Recommendation 2: A similar approach can be taken to increase the uptake of services among sex workers.

4.2 Adolescent girls

Adolescent girls are at particular risk of contracting HIV, as epidemiological evidence from Gutu shows.

Recommendations

- ⇒ Recommendation 1: It is advisable to focus HIV prevention efforts on adolescent girls, or subgroups within this group, based on available or future assessments. HIV prevention may include innovative methods like PrEP for adolescent girls, but should also include the standard prevention package as per normative guidance, and should empower these young women and girls to negotiate about (no) sex.
- ⇒ Recommendation 2: Similarly, older men need to be accessed with messaging about HIV prevention when intensifying efforts to get them tested and/or link them to care.

4.3 Paediatric HIV

Current attempts to improve the treatment cascade in paediatric HIV care need to continue and be strengthened as necessary in order to achieve the 90-90-90 strategy for these groups. This also goes for adolescents.

Recommendation

- ⇒ Psychosocial support for the child as well as parents or guardians is needed, with special attention on disclosure from parents (for children), and disclosure to family members or friends (for adolescents) is important. Further consultation or advice from specialists with experience with adolescents or children on treatment may be needed.

4.4 Viral Load

Recommendations

- ⇒ Recommendation 1: In order to facilitate switching to second line treatment, enhance the decentralisation of the switch decision with adequate support and coaching of nurses; currently nurses are may switch, but do not feel sufficiently empowered. In addition, ensure that nurses have easy and immediate access to a doctor (through an on-call rota if necessary) if nurses feel they need to consult.
- ⇒ Recommendation 2: Consider and implement recommendations regarding switching to second line of earlier evaluations, such as recommendation three of the report Viral Load Monitoring by Richard Bedell: *"Avoid prolonged treatment on 1st line with sustained viremia – this is associated with double the risk of mortality than observed if ART is switched (Petersen, 2015). Switch to 2nd line unless there is convincing evidence that adherence is poor. Develop an algorithm & mentorship on management of HVL after first response (EAC x 2); clarify grounds for 2nd line ART and teach around interpretation of response to 2nd line ART. Switching rules could be systematically implemented and if this is done it can (and should be) readily be evaluated with follow-up VL data. This should be pursued in collaboration with MOHCC counterparts."*
- ⇒ Recommendation 3: Advocacy at national level about decentralisation of switch decisions and shorter lead times is required to truly support and streamline the process of switching patients with a repeated detectable VL to second line treatment.
- ⇒ Recommendation 4: In order to shorten VL TAT, pilot the introduction of (near) point-of-care VL tests in order to deal with transport and report back challenges. Since GeneXpert is quite widely spread throughout Zimbabwe, it would make sense to start a pilot using the Xpert platform for VL testing.
- ⇒ Recommendation 5: Renting of VL machines with commercial companies, including a maintenance contract, may be a way to tackle the hiccups with maintenance, repair and absence of dealers of VL equipment in Zimbabwe machines.

4.5 Differentiated models of care.

Recommendations

- ⇒ Recommendation 1: Open up CARGs for non-stable patients. In the current setup CARGs are designed for patients who are stable. However, the peer support function of CARGs could be even more beneficial for patients who are not stable. At the same time, patients in a CARG may not be stable for eternity. The question then becomes whether they may stay in their CARG. It seems the wrong incentive if people are forced to leave their group in such a case. Revised CARG eligibility criteria need to be flexible, piloted, and well monitored.
- ⇒ Recommendation 2: CARGs operate autonomously, but may not continue doing so forever if not paid any attention to. In order to optimise retention in care and keep CARGs running in a sustainable manner, they need some supervision, or an update from time to time, or something new, to keep it interesting for members. CBOs like BHASO would be in a good position to continue this.
- ⇒ Recommendation 3: Given the above recommendation, encourage CARGs who have employed livelihood initiatives to continue doing so, by setting up a microcredit scheme or facilitating such microfinancing mechanisms through partnerships with other organisations in the district who have the knowledge to run such schemes.
- ⇒ Recommendation 4: Some CARGs want to 'spread the word' and encourage members of their community to join a CARG; these CARGs may be empowered to do so with a small financial incentive and some practical support in order to facilitate the process.
- ⇒ Recommendation 5: In order to accommodate other population groups, other models of differentiated care need to be developed and piloted.
- ⇒ Recommendation 6: In order to demonstrate the outcomes of differentiated models of care on e.g. individual VL of members of a CARG, an operational study with a design that deals with the selection bias of stable patients in support groups would be desirable in order to compare results between the various differentiated approaches.

4.6 Tuberculosis

Although DR TB treatment is in the process of decentralisation, not the same amount and quality of monitoring data are reported as for HIV.

Recommendations

- ⇒ Recommendation 1: Ensure set up of a DR TB treatment monitoring system that systematically documents outcomes in the same way (e.g. by cohort) as HIV is being monitored.
- ⇒ Recommendation 2: Better utilization of IPT will bring benefits to patients with HIV, and may lead to more case finding of active TB cases; the current poor uptake can be improved by additional coaching and following through on present protocols and SOPs regarding IPT.
- ⇒ Recommendation 3: Analogous to VL, outsourcing transport of lab specimens to a commercial company may be a way to increase efficiency and reliability of sample transport.

Table 14: Comparison of key epidemiological and - program indicators, Gutu vs. Zimbabwe national data or Masvingo province data

Indicator	Gutu	Comparison ⁱ
Absolute size of cohort	12,114	1,200,000 (PLHIV) ⁱⁱ
Population size	203,533	16,8150,362 ⁱⁱ
HIV incidence rate	...	0.45% ⁱⁱⁱ
male	...	0.31% ^{iv}
female	...	0.59%
HIV prevalence rate 15-64 (%)	13.6 ^v	14.6 ^v 14.9 ^{vi}
male	12.3	12.4 vi
female	14.4	16.7
HIV prevalence rate 15-24 (%)	4.3	4.2 ^{vii}
HIV prevalence/incidence ratio	...	32
male	...	40
female	...	30
% Aware of HIV status	72.2 ^v	74.0 ^{viii}
male	64.1	56.7 ^{ix}
female	77.8	79.0 ^{ix}
% People with a positive test who take ART (test & treat)	83.3 ^v	86.8 ^{ix}
male	74.0	86.0
female	88.8	87.9
paediatric	63.6	...
% of ART cohort on any differentiated community care model	51	...
Treatment cascade (90-90-90)	87-98-83 ^v	74.2 - 86.8 - 86.5 (Country) ^x 74-86-90 (Masvingo) ^x
VL coverage (% of ART cohort with VL test)	83 ^{xi} 84 ^{xii}	...
adolescents and young adults (AYA)	46	...
% of ART cohort with undetectable VL	85.5	86.5
men	85.6	84.1% ¹⁷
women	85.4	87.9% ¹⁷
adolescent and young adults 15-24	53.7	48.6% (F) ¹⁷ 40.2%(M) ¹⁷
Median turn-around time (TAT) for VL results (+ range minimum-maximum)	40 days ^{xiii} (33-51)	...
% patients with detectable VL switched to second line after 2 nd detectable VL	16.5 ^{xi}	...
% patients receiving EAC after 1 st detectable VL	84 ^{xi}	...
% patients in ART cohort treated for TB	...	70 ⁱⁱ
% Patients with MDR-TB among new cases	...	4.6 ^{xiv}
% Patients with DR-TB among retreatment	...	14.0 ^{xiv}
TB notification rate	144/100.000	208/100.000 ^{xiv}
TB treatment success rate	...	81 ^{xiv}
% of ART cohort on IPT in 2016	26 ^{xv}	42 ^{xvi}

ⁱ Data comparisons are with national data unless otherwise indicated. Sub-categories use same data source.ⁱⁱ Data source: aidsinfo.unaids.org. Accessed: 9 november 2017.ⁱⁱⁱ Source: ZIMPHIA 2015-2016 summary sheet.^{iv} Male-female difference is statistically significant.^v Epicentre. Study Progress Report (preliminary results) to Medical Research Council of Zimbabwe. Gutu Population- based HIV Impact Survey.

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- ^{vi} Masvingo province, adults 15-49 years. Source: ZIMPHIA 2015-2016 summary sheet.
- ^{vii} Zimbabwe Demographic and Health Survey 2015
- ^{viii} Data for Masvingo province. Source: ZIMPHIA 2015-2016.
- ^{ix} Data for Masvingo province. Zimbabwe Demographic and Health Survey 2015
- ^x ZIMPHIA 2015-2016 summary sheet
- ^{xi} Gutu Viral Load Cascade, February 2016.
- ^{xii} MSF UNITAID funded HIV monitoring Project- 2016 Annual report. The indicator quoted is from 2015.
- ^{xiii} Bedell, Richard. Gutu Viral Load Cascade, February 2016. Data refer to 3rd quarter of 2015
- ^{xiv} WHO 2017. Global Tuberculosis Report. Data are from 2016.
- ^{xv} As reported by medical coordinator MSF OCB in Zimbabwe
- ^{xvi} Choto, R.C. Overview of the National Antiretroviral Therapy Programme in Zimbabwe (PowerPoint presentation).

ANNEX III: COUNTRY REPORT, ESHOWE, KWAZULU NATAL, SOUTH AFRICA

1. SHORT OVERVIEW OF THE MISSION

MSF OCB's Bending the Curves project in Eshowe and Mbongolwane areas, King Cetshwayo district in the province of KwaZulu Natal (KZN), is one of the two HIV projects that MSF OCB currently runs in South Africa.

The catchment area of Eshowe and Mbongolwane has a population of 127.000. Eshowe is a small town and the centre of a mainly rural area with a shopping centre and bus- and taxi stand where people from the surroundings come to do their business and go shopping. Mbongolwane has a real rural character and is further away from main roads and transport hubs.

Involvement of MSF in KZN started in 2011 with the objective to make an impact on the morbidity and mortality of HIV and AIDS in this province by improving the treatment cascade through the demonstration of successful strategies for testing, treatment and prevention of HIV. KZN stands out in terms of severity of the HIV epidemic even in the high-prevalence context of South Africa.

Over 7.1 million people in South Africa are living with HIV. KwaZulu-Natal (KZN) province has been particularly impacted by the epidemic — among those aged 15-49 years, 27.9% are HIV-positive and incidence stands at 2.22%. HIV infections per annum in the general population in KZN increased from 1,550,955 in 2009 to 1,628,536 in 2013, constituting approximately 28% of national infections. Prevalence is four times higher among females than males in the 15-19 year-old age group. Prevalence peaks at 30-34 years for females, at almost 37%, whereas the peak is at 35-39 for males, at almost 24%. Prevalence for males is only higher than for females in the 50-54 and 60+ year age groups. These data reflect that HIV incidence in South Africa is driven by the phenomenon of older men transmitting HIV to younger women, while also sexual gender based violence —a highly prevalent problem in KZN and South Africa in general— plays a role.

The interventions focus on:

- Intensified HIV counselling and testing, getting groups tested and linked into care with approaches that aim to reach people who were not accessing prevention or care services so far.
- The introduction of differentiated models of care in both districts, mainly focusing on adherence clubs, differentiated distribution of medicines (DDMC) and community adherence clubs (CAGs), to retain patients on treatment in the long run.
- Ensure that patients who are on treatment have an undetectable viral load (VL) by introducing rigorous VL monitoring, enhanced adherence counselling and switch to second line regimens if necessary.

In addition, the project aims to look at important co-morbidities such as treatment of tuberculosis, and aims to reduce the incidence in TB while, as in HIV, demonstrating new successful strategies for testing, treatment, and prevention.

Tuberculosis (TB) is the single leading cause of death in South Africa, and efforts to address it are complicated by poverty, poor nutrition, increasing rates of diabetes, and the high number of people co-infected with HIV and TB. About 80% of people who die from AIDS do so because of TB. South Africa has the sixth-highest global TB burden, and the number of drug-resistant TB (DR-TB) cases diagnosed in South Africa account for roughly 82% of disease burden in the WHO's African region.

MSF sees demonstration of results of its new approaches in HIV and TB as an important leverage for technical and public health policy change at the national level.

MSF works in partnership with the Department of Health (DoH) through a memorandum of understanding (MoU). The Department of Health holds overall responsibility for healthcare, with a specific responsibility for the public sector. Provincial health departments provide and manage comprehensive health services, via a district-based, public health-care model. Local hospital management has delegated authority over operational issues, such as the budget and human resources, in theory to facilitate quicker responses to local needs. NGOs also make an essential contribution to HIV, AIDS and TB, mental health, cancer, disability and the development of public health systems. The part played by NGOs from a national level, through to provincial and local, to their role in individual communities, is vitally important to the functioning of the overall public system in the country.

The approach that MSF takes in the partnership is one of mentoring and coaching DoH staff to build their capacity in actually implementing the new approaches, rather than putting in MSF-contracted human resources. The Project has been designed following the major themes of the National Strategic Plan on HIV, STIs and TB 2012-2016 (NSP) and the

Provincial KZN Health Strategic Plan. DoH announced test & treat as a national policy in 2016, necessitating a wider roll out of testing and treatment.

Analogous to mentoring and coaching of DoH, MSF mentors NGOs or CBOs that deliver and strengthen community-based care in order to build their capacity.

2. MAIN FINDINGS

2.1 Treatment cascade

"When we started many patients were not properly monitored, they had no viral load etc. so MSF is contributing to 90-90-90." — MSF staff, Eshowe.

"MSF contributed in all 90s. We had huge gains, when MSF started we did not have adherence counselling, for instance." — DoH staff, Eshowe.

The project achieved good results on the treatment cascade overall, based on the project's routine monitoring data.

In total, 81% of the HIV-positive individuals were aware of their HIV status, ART coverage climbed from 75.0% in 2014 to 82% in 2016 and virological suppression at a level of less than 1000 copies/ml was achieved in 79% of the individuals on ART. The sections below will discuss the achievements and challenges of each cascade step in further detail.

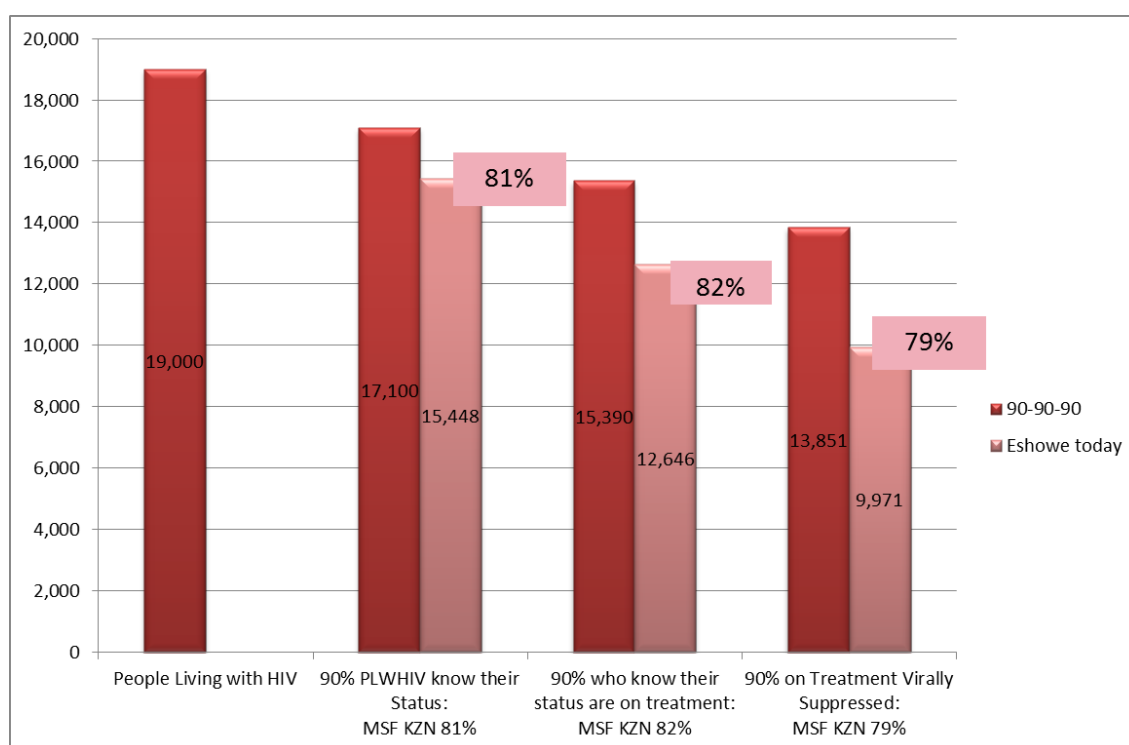


Figure 6. Project progress towards 90-90-90 (2016)

HIV testing and counselling

MSF has massively scaled up, and normalised, HIV testing and counselling (HTC) with various community testing modalities. There are challenges in reaching youth out-of-school, as well as linking people into care who test positive, and monitoring that process.

MSF has implemented several ways of expanding HIV testing and counselling (HTC) in the community: fixed sites (FS), mobile-1-stop-shops (M1SS) and door-to-door (D2D) testing through Community Health Agents (CHAPs).

In August 2012 MSF established its first fixed site in the centre of Eshowe devoted to HTC. It means convenient access for workers and people who are visiting town for shopping and collecting grants. There are several fixed sites across Eshowe and Mbongolwane, including one on the campus of TVET college.

MSF launched M1SS late 2011. The M1SS are mobile testing units providing information, counselling, HIV testing and TB screening, and a pregnancy test if necessary. The M1SS goes to the community, making it easier for people to get tested, know their HIV status, and get referred for treatment and care earlier, and closer to their home or place of work.

D2D testing with CHAPs is really outreach testing where CHAPs go to individual homes in their community to provide testing and counselling, along with other activities such as defaulter tracing.

Despite all these testing services available, many people still prefer to consult a traditional healer in case of health problems. MSF engaged with traditional healers in the community and trained them how to refer for an HIV test.

"MSF piloted testing by traditional healers. The idea for a doctor working with tradition healers ... we could not believe it. They went to the whole course they had to test 50 patients before getting the certificate. (...) MSF has been normalising testing." — MSF partner, Eshowe.

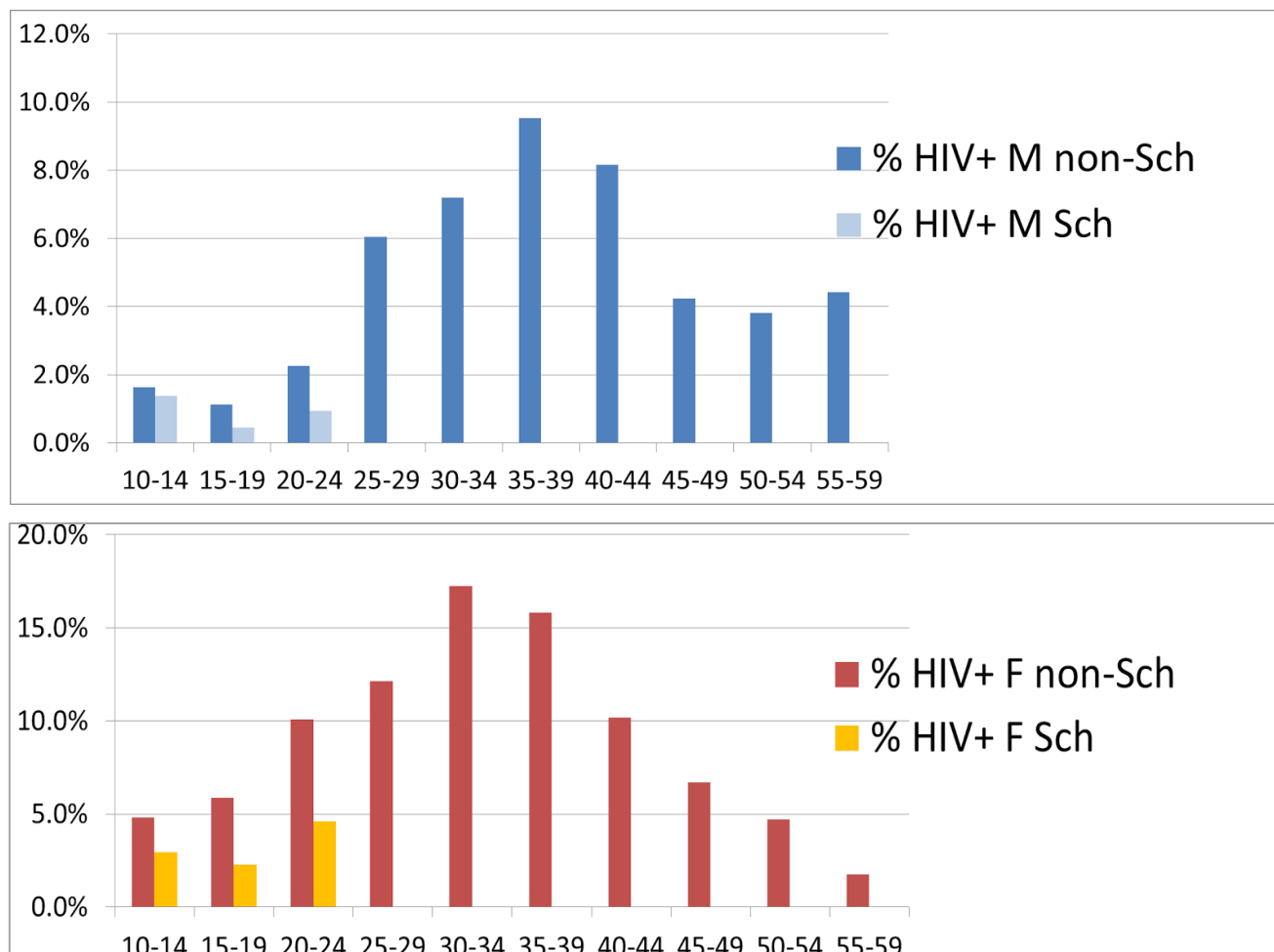


Figure 7. HIV prevalence among youth in-school and out-of-school, by sex

MSF and DoH, in collaboration with the Department of Education (DOE), have been implementing HTC Campaigns in schools since 2012 to reduce HIV infection and risky sexual behaviour among in-school youth.

Figure 7 shows HIV prevalence from community testing by age band, in men and women; the three younger age categories also show the difference between in-school youth and out-of-school youth. Out-of-school youth is at higher risk, especially girls and young women not attending school can be considered a group at elevated risk.

All three community modalities have increased HTC dramatically over the life of the program, whereas testing in the DoH health facilities decreased. All in all, 236,583 tests were done over the period 2013-2016, of which about three-quarters in the community. The decrease of HTC in the health facilities can be explained by the DoH decision in 2014 to phase out lay counsellors at the health facility level. This policy choice reduced access to HTC at facility level. The average HIV tests per month reduced from over 1,300 in 2014 to fewer than 1,000 in 2015. MSF has responded by providing Community Health Agents to conduct HTC at the facilities.

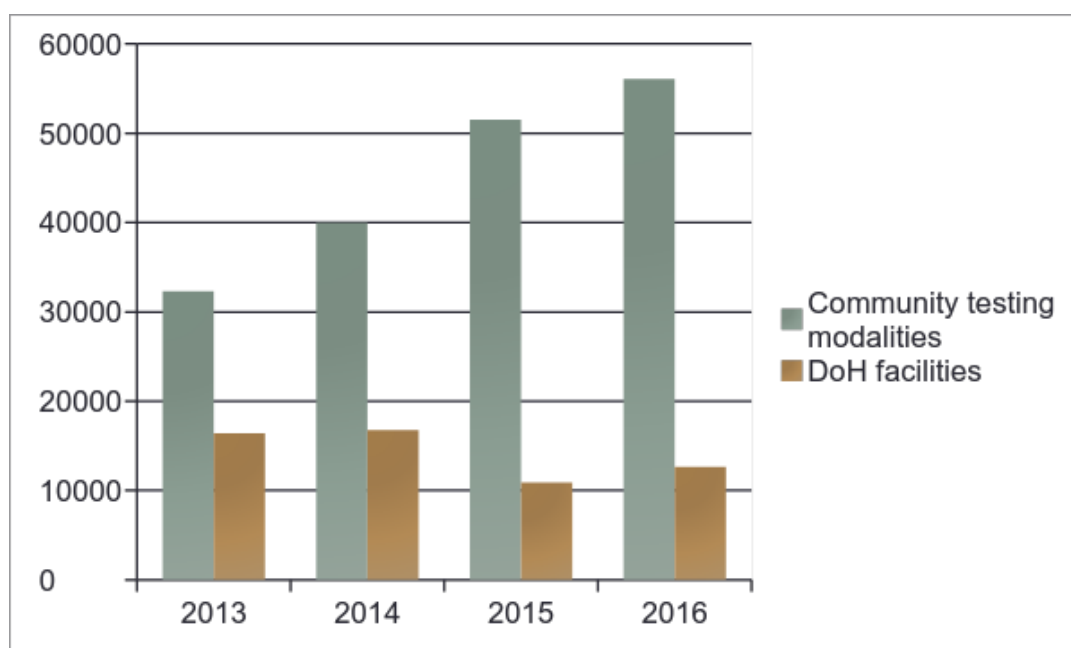


Figure 8: Numbers of tests by various modalities of HTC

Positivity rate varies by testing modality, as Figure 8 shows. Health facilities obviously see most symptomatic HIV-infected persons and include many patients receiving provider-initiated HTC; antenatal clinics see a population with very high HIV prevalence in KZN. Fixed sites and M1SS at taxi ranks and work sites come next in positivity rate, whereas D2D shows a much lower yield. The latter is partly due to testing very young and very old people by CHAPs, which is not sufficiently strategic. More recently, likely due to refocusing of D2D testing concentrating on young men and women of 15-30 years, the positivity rate has become 1.3%.

Table 15: Identification of HIV+ Persons by various modalities of HTC (Sept-Oct-Nov 2015)

	# Tests	# HIV+	HIV Prevalence among tested clients
Health Facility ¹	2121	368	17.4%
Health Facility F-ANC	551	103	18.7%
Fixed Site - Mixed Adults	2361	160	6.8%
Fixed Site- College	320	11	3.4%
M1SS -CS & similar ²	1509	88	5.8%
M1SS - HS & similar ³	641	15	2.3%
D2D (CHAP)	11984	103	0.9%
Totals	19487	848	4.4%

¹Does not include ANC

²Includes CS (taxi ranks, shopping areas), work sites, farm clinics

³Includes HS (high schools), other youth-focused events, youth tested at some MMC events

A challenge with community-based testing is to ensure that those who test positive arrive at a facility where they can be enrolled in HIV care and receive treatment in a timely way (and for those who are HIV-negative to remain negative and come back regularly to re-test). This is where testing really pays off and has the impact to change lives of people.

"I have seen friends and individuals who are on treatment who live a happy life and don't think they would have had that opportunity when MSF had not come. Now there is testing all over, it is in your face." — MSF partner, Eshowe.

Another challenge in community testing is that MSF had some convincing to do before HTC was accepted by the communities. The approach to engage frequently with the communities eventually paid off.

"The first time MSF visited our area, people were not accepting them. People said 'why are they saying we must test?' And only two people were testing. It was a problem. So we come together and we try to convince the community to come to the testing, what is the need and we explain. Now people are coming in numbers. They now just see the tent and come." — MSF partner, Eshowe.

"Many things changed when MSF came. The number of people tested: no-one was calling a person to test. HTC is the best service ever, now people are comfortable to go to the test site, they know the counsellor and they don't wait for a long time. These were all difficulties before MSF came." — MSF partner, Eshowe.

Besides increasing access to HIV care, scale-up of testing has had another positive spin-off. People are no longer afraid to come forward for testing, which some interviewees see as a sign of stigma reduction.

"... we have reduced the stigma, people are coming and get tested if they see the MSF car. Previously HIV was a huge issue around Eshowe and Mbongolwane. Talking about sexuality and condoms, it was unheard of! They ask for condoms now; people ask for testing." — MSF staff, Eshowe.

"We made some changes, we introduced testing in fixed sites and mobile sites and door-to-door testing. This is well accepted in the community. The proportion knowing their status is high here. (...) It decreased stigma." — MSF staff, Eshowe.

Antiretroviral therapy

In the project area, the collaboration between MSF and DoH has resulted in a cohort of over 13,000 patients on antiretroviral therapy. Test & treat simplifies the eligibility of patients (no CD4 anymore), but meeting all the needs (e.g. in terms of training of healthcare personnel) poses a challenge.

As mentioned in the previous section, linkage into care and ART is the ultimate aim of the scale-up of HTC in the project. In a way, the introduction of universal test & treat, announced as national policy in South Africa in May 2016, has made the link easier: there is no longer any need to wait for CD4 count results in everyone with a positive HIV test,²² and there is no pre-ART cohort that needs to be tracked, traced and retained separately. At the same time, test & treat means massive scale-up of ART and VL monitoring, and as such it is a new challenge to the treatment cascade.

In line with the national guidelines and the National Strategic Plan 2012-2016, the KZN DoH is pursuing nurse-initiated and managed ART (NIMART). In the 2014-16 period, MSF has trained and mentored nurses who had not previously received basic NIMART, as well as conducting advanced NIMART training for nurses in the supported facilities in the project area.

Despite the challenges posed by the switch to test & treat, the project put over 13,000 patients on treatment. Although one would expect the initiated patients to increase substantially compared to previous years as a result of the test & treat strategy, this isn't visible yet in the cohort, which increased by 499 patients in 2016 (figure 4). This is due to the relatively short implementation period of test & treat, which started in September 2016.

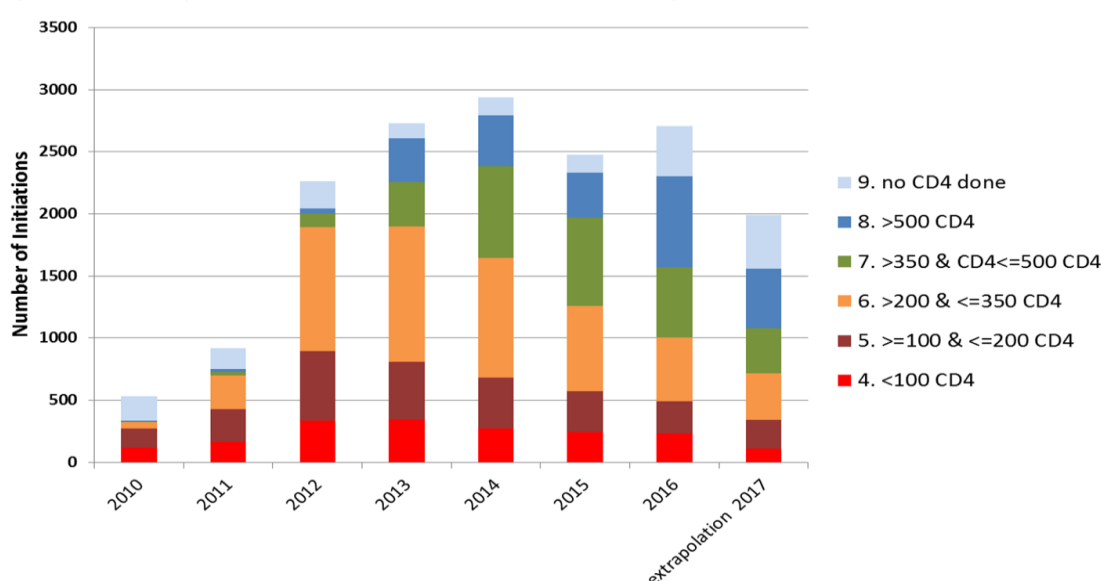


Figure 9. Trends in number of ART initiations in Eshowe and Mbongolwane areas, by CD4 count

²² CD4 is still an important indicator of the status of the immune system in PLHIV, and is still used for further clinical evaluation.

In 2014 2982 patients were initiated on ART, in 2015 2499 and in 2016 2660 patients. The relative proportion of new patients with a CD4 > 500 doubled in 2016 compared to previous year's (Figure 9).

Linking into care works, according to many interviewees, but it is hard to collect evidence and set up a registration system without leakage. Although people get a referral slip if they test positive, they don't always bring such a slip when they go for care. If one could only count those referral slips, referral would be underestimated. A recent study on the linking into care from the various community-based testing modalities concluded that young men and women (15-19 years) are underrepresented in the linked population of people who tested HIV-positive. In addition, M1SS misses out on men 20-29 years, whereas D2D testing misses also men 15-24 years and women of 20-24 years old.

There are other challenges with linkage to treatment, according to one of the medical staff members from the project:

"... if patients have no referral letter and you have to believe them but they don't always tell the truth. They are on 2nd line and say are on 1st line (it's 3 pills a day against 1). Or they are reluctant to get referral letters because they will miss a day of work and get no pay." — MSF staff, Eshowe.

"A challenge is when a client is HIV-positive and not willing to start treatment. They don't come back to the clinic, or don't answer the phone. At the college we try to look for them with the mobiliser or counsellor. For a few that works, for a minority actually." — MSF Employee, Eshowe.

2.2 Viral load monitoring

"I'm proud of seeing someone with very low CD4 first, and later finding out that the CD4 is high and viral load is undetectable. And also to see the change in appearance, the person gaining weight, not looking emaciated ..." — MSF staff, Eshowe

"What convinced me were the results. Retention in care, defaulter rates, VL suppression." — DoH Staff, Eshowe

Viral load monitoring has become routine in the project area. Patients know it is important, and suppression is generally good. Challenges exist in completing VL measurements for all patients and/or recording them in the files. Viral suppression in children and adolescents is below par. Retention in care remains at unsatisfactory levels despite all efforts. Switching patients with detectable VL to second line treatment could be improved.

Viral load (VL) monitoring measures suppression of HIV. This allows patients and clinic staff to assess adherence and become aware of possible treatment failure due to development of resistance against the given ART regimen. Detectability of VL is set at a threshold of 1000 copies of virus per ml. Detectable patients get offered enhanced adherence counselling and will be switched to second line treatment if their VL remains detectable despite good adherence.

Many, if not most, patients are aware of their viral load and know it is important to have it checked. Also, turnaround time is short, reportedly five days. There aren't many challenges regarding maintenance of laboratory equipment in South Africa.

Although table 16 (below) displays a different VL threshold (400 copies/ml) than usual, the overall proportion of patients who are suppressed is just over 83%, which means the project is getting close to achieving the third 90. A further breakdown of VL suppression by sex is provided in table 16a, which shows that changing the threshold of 400 cp/ml to 1000 cp/ml does not fundamentally change the cascade. Table 16a clearly demonstrates the poorer results of viral suppression in men compared to women.

Table 16. Project cascade and VL data, 2016

		<15y	15 to 59 y	>=60y	Total
Population 2016		50623	66244	10744	127611
Prevalence 2013 (%)		2.4	25.2		
Incidence 2013 (%)		0.2	1.2		
PLHIV according to prevalence 2013		1166	16693	804	18663
Additional case according to incidence 2013		294	1619	0	1913
Total PLHIV		1460	18312	804	20576
Active in care end of quarter		972	14581	850	16408
Active with VL < 400 cp / ml		681	12213	765	13659
2nd 90, (target 81%)	Proportion PLHIV in care (%)	66.6	79.6	105.7	79.7
Target = 90%	Proportion Active Suppressed < 400 cp/ml *	70.1	83.8	90.0	83.2
3rd 90, (target = 73%)	Proportion PLHIV Suppressed < 400 cp/ml	46.6	66.7	95.1	66.4

includes total cohort, not only patient started more that 6 month earlier.

Table 16a. Treatment cascade and VL data by sex, different suppression thresholds (second quarter 2017 data, population 15-49 years)

MSF Catchment area – Population 15 to 59 YEARS	Female	Male	Total
Population end 2016 (Stats SA).	37651 (57%)	28593 (43%)	66244 (100%)
PLHIV estimate	12551 (69%)	5603 (31%)	18154 (100%)
Active ART cohort total, (includes 10 clinics + 2 DoH mobiles, 2017 Q2)	10636 (73%)	3945 (27%)	14581 (100%)
% PLHIV on ART	85%	70%	80%
# Active on ART with at least one VL	9668 (73%)	3490 (27%)	13158 (100%)
# Active on ART with VL < 400cp/ml	9086 (74%)	3127 (26%)	12213 (100%)
% Active on ART with VL < 400cp/ml / total active cohort	85%	79%	84%
% Active on ART with VL < 400cp/ml / total active with at least one VL	94%	90%	93%
# Active on ART with VL < 1000 cp/ml	9204 (74%)	3192 (26%)	12396 (100%)
% Active on ART with VL < 1000 cp/ml / total active cohort	86%	80%	85%
% Active on ART with VL < 1000 cp/ml / total active with at least one VL	95%	91%	94%

According to the proposal to DGD, at the end of 2012, 74% of the 5100 people on ART had had at least one viral load done during the year. Of all VL tests done in 2012, only 47% were lower than the detectable limit. Of all patients on ART for more than 6 months who had a VL done, only 49% had <400 copies/ml. This suggests high rates of poor adherence and/or uncontrolled drug resistance. Table 16 shows that VL results have improved dramatically since 2012 in terms of viral suppression. More than 84% of adults active in care have <400 copies/ml. Also VL completion, the VL tests done in the previous 12 months among the active cohort on ART, is improving as Figure 11 shows.

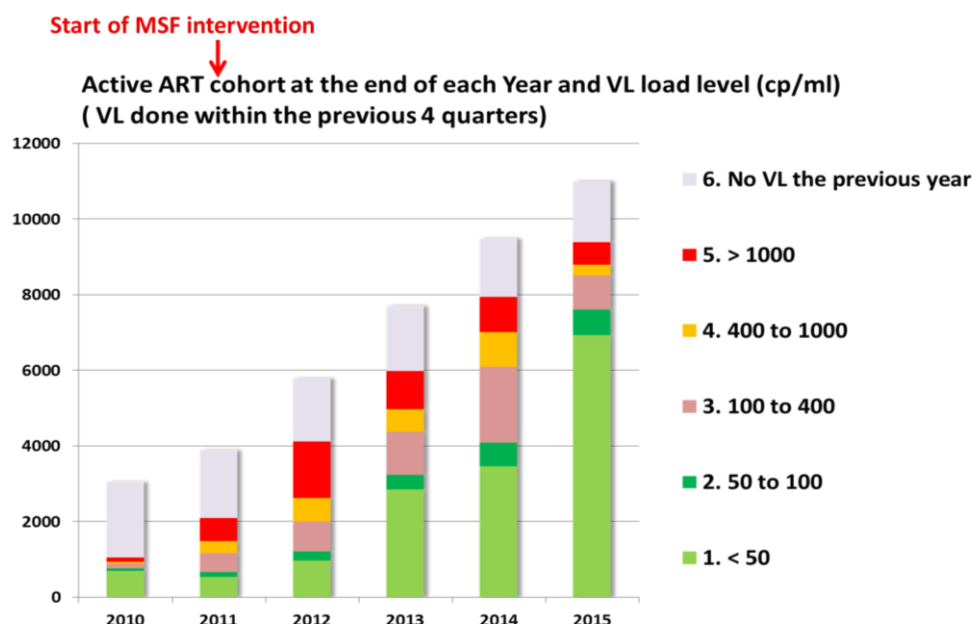


Figure 10. Active ART cohort at the end of each year and VL level done within the past 12 months.

There are many challenges in completion of VL. Interviewees refer to Friday as a problem day because if patients come late, transport to the lab may be a challenge and nurses may skip the test altogether. Also, the high workload of nurses and the absence of a real system to remind nurses to record VL results are mentioned frequently.

"Often the nurses are busy with patients, and do not always check the VL (when in fact it has been done). And there is lack of organisation of the head of the clinic." — MSF staff, Eshowe.

"Viral load is not handled according to guidelines, if we don't push. Nurses are overwhelmed. We put notes on files of paediatric and high CD4 count patients (to remind the nurses - JvdM)". — MSF staff, Eshowe.

"MSF should improve its support to DoH, we check the viral loads ourselves, with DoH. We expressed those problems. We did not get the results or not in time. (...) If MSF could support DoH to improve.... Results don't get there in time or get lost. They are not properly recorded in the patient files." — MSF staff, Eshowe

Although the VL completion has improved in the *total cohort* over the years, the VL completion in recently started cohorts is rather low at around 60% (Table 17).²³ MSF coordination staff admit they are very focused on viral suppression in the VL tests done, but tend to forget to monitor the overall proportion of tests that should have been done.

Retention in care (RIC) after 12 months on treatment is one of the indicators of the treatment cascade. Monitoring data (table 17) indicate that retention of patients in care is 65.1% in adults, and 83.3% in children <15 years. Both data are calculated on the basis of the cohort of patients initiated in the third quarter of 2015. The result in adults is quite unsatisfactory. Project documents and interviewees provide no ready explanation. Assessing reasons for the poor RIC will be necessary but cumbersome. To get the full picture, it will have to include identifying deaths, defaulter tracing with CHAPs, and finding (unrecorded) transfers of patients out of the district.

Table 16 highlights the lower VL suppression rate among patients younger than 15 years, even though MSF developed a special intervention to support children and their caregivers, as well as adolescents. The SMILE (sub-)project was meant to address poor treatment results specifically for children and their parents or guardians. It was implemented by MSF between Oct 2016 and February 2017 in three clinics following an assessment which showed that a significant number of children were failing treatment. The SMILE project entailed enhanced adherence support for children and caregivers, in order to achieve better adherence and consequently viral suppression. It also offered treatment of OIs and TB screening. 82 out of a potential 100 children with two consecutive VL <400 copies/ml within a one-year period were enrolled in the program. With respect to OI's, 72 separate OI's were treated, ten children were found to have drug-sensitive TB and one child had drug-resistant TB. The low suppression rate appeared to be a mix of cases of non-

²³ See e.g. the Q4 2016 narrative report that says "Viral Load completion is ranging around 60%; monitoring needs to be strengthened as almost 40% of our cohort do not have updated Viral Load."

adherence and resistance. After targeted Enhanced Adherence Counselling, 20 children re-suppressed. Three children were failing second line treatment and were switched to third line.

Reasons for poor adherence in children are often related to disclosure. Parents or guardians do not want to disclose to the child that it has HIV, which hampers adherence to the medication. Sometimes they are reluctant to disclose their own positive HIV status to the child. Reasons for poor adherence in adults are also linked to disclosure. Several interviewees quoted high rates of alcohol abuse as one of the important underlying reasons for poor adherence.

Table 17. Retention in care, VL completion and virological suppression in Eshowe and Mbongolwane at 12 months

Cohort initiated 2015 Q3 >= 15y	Initiated	Died	LTFU	TO	RIC	% RIC	VL done at least 9 months after initiation	VL completion	VL<400 cp/ml	Suppressed <400 cp/ml %
Total Eshowe	398	5	128	23	242	64.5	150	62.0	135	90.0
Total Mbongolwane	217	4	64	16	133	66.2	78	58.6	75	96.2
Total Eshowe & Mbongolwane	615	9	192	39	375	65.1	228	60.8	210	92.1
Cohort initiated 2015 Q3 < 15y										
Total Eshowe	16	0	1	1	14	87.5	§§	78.6	5	45.5
Total Mbongolwane	8	0	0	2	6	75.0	2	33.3	2	100.0
Total Eshowe & Mbongolwane	24	0	1	3	20	83.3	13	65.0	7	53.8

Source: data from tier.net reported in MSF KZN monitoring report Q4 2016

Of all patients initiated since 2006 who are still actively monitored, the overall percentage of patients on second line ART is 5%. Changing to second line treatment when the VL remains detectable continues to be a challenge. Conservatism in switching patients to second line treatment is acknowledged on all levels of the project. Underlying reasons quoted by interviewees are: the fear present among nurses to incorrectly switch people; unclear protocols that leave *"too much space for procrastination"* (according to one interviewee). A final possible obstacle to switching to second line treatment may be the patient itself; patients prefer first line treatment because of its lower pill burden - one pill per day. Second line treatment involves taking at least three pills. This is inconvenient, certainly to those patients who don't want to be seen taking medication.

2.2 Differentiated Models of Care

MSF and DoH in KZN have introduced differentiated, community-based models of care. Patients appreciate their convenience and in facilities there is more time to deal with more complex or new patients. Group modalities (introduced by MSF) are significantly less popular than fast-track drug pick-up (introduced by the government), reportedly because of reluctance to disclose to fellow-group members. Therefore, MSF's contribution in this respect is modest. Intensifying enrolment in differentiated models of care may bring extra benefits for patients and the healthcare system.

MSF in KZN has introduced differentiated, community-based models of care (DMoC) developed in other MSF projects and reoriented them for the project's specific context. MSF, alongside DoH in KZN, has implemented three modalities. DMoC aim to improve adherence among stable patients, and decrease time patients spend on clinic visits, such that care in clinics can focus on unstable and newly initiated patients.

Table 18 presents an overview of the various Differentiated Models of Care.

The concept of adherence clubs and CARGs has been explained in the main part of the report. Pick-up points is another model of care through which patients can obtain their medication via Centralised Chronic Medications Dispensing and Distribution (CCMDD). CCMDD provides pre-packed medications and is an initiative of DoH. Patients whose last 2 VLs have <1000 copies/ml are eligible and get a six-month prescription. Patients must see the nurse every six months. They can then collect their packs with two months of medication at nominated pick-up points, which the patient can choose. There are mobile pick-up points which stay in a particular place on a designated day and time. CCMDD also provides medication for most clubs.

There are special variations on DMoC, such as adherence clubs for pregnant women on Option B+ for PMTCT, the groups for children in the SMILE program, and the schools program. The latter runs in partnership with the Department of

Education (DOE) in 32 secondary schools in the area. The schools program offers HTC, education on sexuality and HIV, HIV prevention (condoms), and linkage to treatment. Camps have been organised to destigmatise and debunk taking ART. MSF implements a program of Learner Support Agents in partnership with the Department of Education in 32 secondary schools in the area. While MSF periodically provides HTC services for students at schools, Learner Support Agents offer support to learners throughout the year and help raise awareness about HIV prevention and testing services among learners, referring patients to services as needed. They also support learners who test positive, and help them develop and maintain adherence plans.

Table 18: Differentiated models of care, per fourth quarter 2016

	Adherence Clubs (Facility Clubs or Community Clubs)	Pick Up Point (PUP)	Community ART Groups (CAGs)
Context	Urban & rural	Urban & rural	Mostly rural
ART refill	2-6 monthly	2-6 monthly	1 to 3 Monthly
Mode	Group	Individual and group	Group
Where	Health facility or community venues	Health facility or community venues	Patients' homes
Led by	CHW	Patients	Expert patients
Clinical consultation	Yearly	Yearly	Yearly
Blood drawing	Yearly viral load	Yearly viral load	Yearly viral load

DMoC are supported and promoted by MSF in 14 out of Eshowe's 27 wards,²⁴ and include outreach to farms, outreach to TVET college, and HTC in schools.

At the end of 2012, around 10% of patients in the Project area were receiving ART through Clubs, with higher rates of participation in urban compared to rural clinics. In 2015 this number rose to about 22%. By the end of 2016, 4424 patients, or about 37% of the total active cohort, were enrolled in a differentiated model of care (Table 20), mostly in Pick up Point or Fast Lane. Figure 11 shows the dynamics over time of the introduction and uptake of various DMoC in KZN.

Table 19. Differentiated models of care (DMoC), per fourth quarter 2016

	Total Numbers	%
# Facility Clubs	50	
# Community Clubs	5	
# Patients in Facility Clubs	945	
# Patients in Community clubs	138	
# CAGs	34	
# Patients in CAGs	156	
# Patients in Pick up point	3289	
# Patients in Fast Lane	442	
Total in DMOC	4970	
Total Active Cohort	13343	
% Clubs AND Cags		9.3
% PuP		24.6
% of cohort in DMOC		37.2

²⁴ All DoH clinics offer some version of DMOC, so also in the other 13 wards there is some form of DMOC.

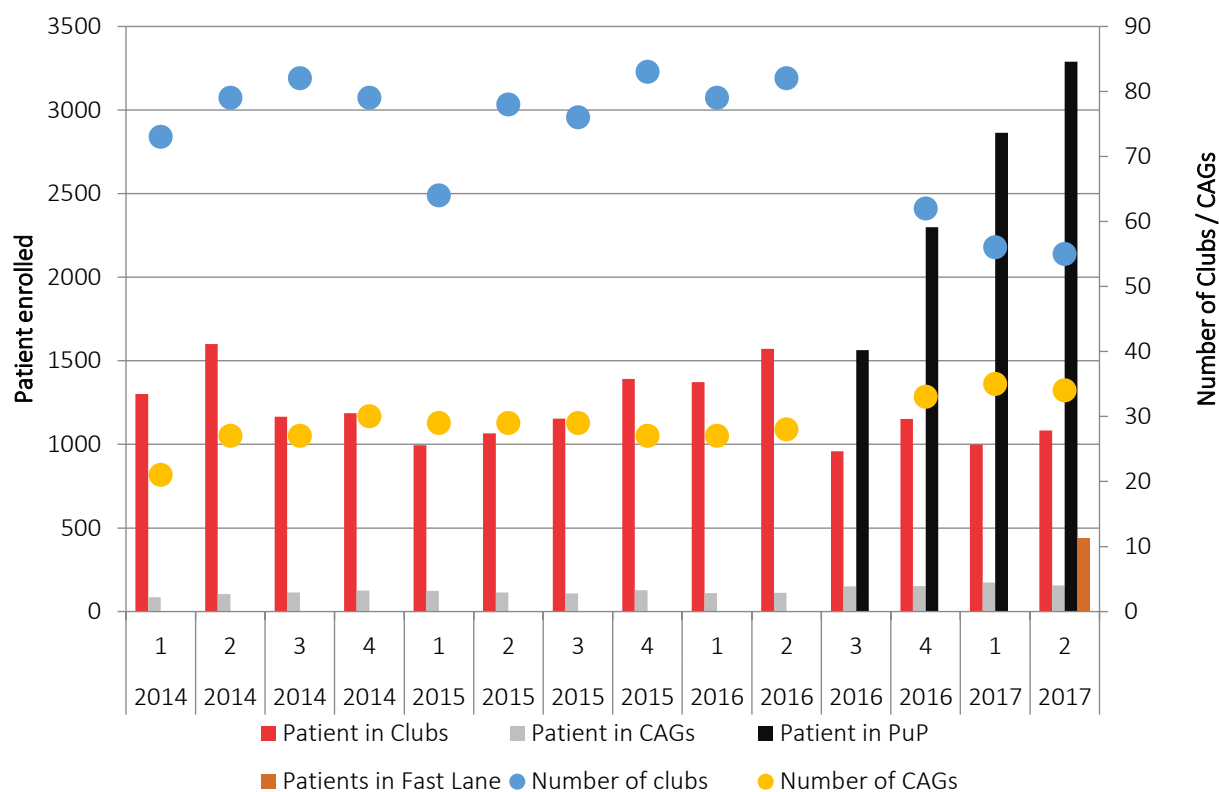


Figure 11. Uptake of Differentiated models of care (DMoC) over time, 2014-2017

The adoption of the National Adherence Guidelines in 2016 has contributed to a wider roll out of various models of care.

The DMoC largely meet the expectations of patients and nurses. Patients say it is convenient and they appreciate the shorter waiting time, which causes less disruption to their daily work. Nurses have more quality time to provide care to the patients.

“Adherence Clubs were something new, clients were happy, waiting time shortened, they were able to ventilate the challenges that they were having in their group. (...) People in CCMDD come every 6 months, they don’t join the queue. Adherence Clubs come to the clinic every two months. And it takes about an hour. It is dignified, you feel like a private patient, you don’t carry the file but just a patient card.” — DoH staff, Eshowe.

“I’m doing temporary work. Being on a CAG I don’t have to queue and can go straight home and do my work.” — Patient, Mbongolwane.

“My sister goes [to pick up medication –JvdM] and then I can look after the children.” — Patient, Mbongolwane.

“Clubs are successful because I have one a day, I have time. We can talk and discuss everything. I am not in a hurry. Even if I am supposed to take the bloods it is easy. (...) Before patients used to come every day, or they would not come. (...) Sometimes I saw 50 patients per day. And they were seen by someone else each time.” — DoH Nurse, Eshowe.

Other forms of treatment support, such as the camps in the school program, are also perceived as successful because they show that being on treatment is nothing unusual. MSF staff see benefits of DMoC in empowering patients and increasing their treatment literacy.

DMoC also faces some challenges:

- Implementation of CCMDD has been challenging in the beginning, as the distribution of medication was often incorrect, and collection points (pick-up points) were poorly managed. In some instances, this led to suspension of the activities or patients being switched back to their Adherence Club or CAG. Most of these problems had been ironed out by the time of the evaluation.

- As the data in table 19 show, coverage of any DMoC is still quite low at 37%. Interviewees attribute this to the culture among patients (*"the nurse is the one who knows best"*). The coverage is even low for South African standards. One interviewee mentioned that coverage of DMoC in the Cape is about 60%.
- Patients are reluctant to disclose their status and for those patients it is a reason to not join a Club or CAG; fear to disclose it is sometimes a reason to not admit any new members to a CAG. Some people have mentioned that men are especially reluctant to disclose and therefore they are less likely to join a DMoC activity.
- Some CAGs are very small with only three patients. This low 'critical mass' makes it more difficult to maintain a CAG, since each CAG member needs to pick up medication more frequently than in larger CAGs, and the support network is quite fragile.
- In the beginning, DMoC were seen as an MSF initiative and the (DoH) nurses did not 'own' it, and therefore did not systematically address Club or CAG membership. Since the release of the Adherence Guidelines, this situation has reportedly improved. Also, more explanation to patients by MSF's partner, CBO SHINE, has improved matters.
- Enrolment into CAGs is low. Reasons given for its low popularity are:
 - Limited need for patients to save on transport time and costs, because Eshowe has a good transport and clinic network. The more rural the setting, the more popular CAGs tend to be.
 - People expected 'projects' from CAGs that would not only help them with adherence, but also with other support in their daily life.
 - People don't want to disclose to their community; when choosing a group setting they prefer meeting fellow patients in the clinics at the Facility Based Clubs.

Based on Table 19 one may conclude that DMoC have been insufficiently rolled out. Especially given the fact that Pick-up points is the model with the highest uptake and is originally a DoH initiative, while only CAGs and Adherence Clubs are MSF initiatives, MSF's contribution to innovative differentiated models of care seems to be modest so far, attracting just under 10% of patients. Some clinics erroneously shifted all their patients from Clubs and CAGs to Pick-up points. This may underestimate the contribution of Clubs and CAGs, a situation that is now being corrected as people are being recruited back into clubs.

2.3 Tuberculosis

MSF addresses the high TB needs in its KZN project by supporting detection of co-infected patients, offering IPT as TB prophylaxis for patients on ART, and supporting DoH in decentralising DR-TB treatment. Intensified case finding has led to detection of additional cases in children, but TB detection in patients on ART has declined recently. Treatment results in co-infected patients leave much to be desired. More attention from the project to bend the curves for TB is warranted.

TB is the leading cause of death in South Africa. This is compounded by the HIV epidemic in the country: about 80% of people with HIV die because of TB. The situation for DR-TB across the country is very concerning: only 2 out of 3 patients with DR-TB are diagnosed; 2 out of 3 diagnosed are put on treatment; and half of those that start treatment are treated successfully, meaning only 17 out of every 100 patients that have DR-TB disease are cured.

MSF addresses these high TB needs in its KZN project by supporting detection of co-infected patients, and offers IPT as TB prophylaxis for patients on ART. Furthermore, MSF supports the on-going decentralisation process to treat DR-TB in uThungulu District. In close collaboration with DoH, the project aims to ensure that decentralised sites in Eshowe and Mbongolwane are able to initiate and manage DR-TB patients. Up to 2016, training on DR-TB has been provided. Actual decentralised case management of DR-TB began in 2017.

MSF focuses in its TB/HIV activities on intensifying case finding of TB for adults and children at every clinical contact. This includes HTC – TB screening is provided at M1SS and fixed sites, for example. Also upon linkage to care and ART initiation, the project offers TB screening, as well as during contact in health facilities or in the community. In addition, MSF has donated a GeneXpert machine to each of the Eshowe and Mbongolwane Hospitals to improve case detection.

Case notification rate for newly registered TB in the Eshowe / Mbongolwane catchment area was 381 / 100,000 in 2015 and 262 / 100,000 per year in 2016. The case notification rate decreased possibly due to a decrease in the incidence, but most probably due to poor screening, case detection and poor contact investigation. The real incidence of TB is likely to be close to 500 / 100,000 according to MSF's epidemiology department in Eshowe, but this figure could not be verified at the time of writing. The TB incidence in the whole province of KZN is 1,090 per 100,000 populations which accounts for 31% of all TB cases reported in the country (KZN DoH, 2012).

The intensified approach has paid off in children with HIV. The SMILE project detected 11 cases of TB (1 case of DR-TB) among 82 children enrolled in the program. Figure 12, however, shows a sharply declining trend from 2013 onwards in TB case detection among adult patients on ART. The explanation might be poor case detection, (e.g. no consistent screening by the nurse for TB at each contact, poor quality of laboratory diagnosis), poor maintenance of clinical files and registers or a combination of both.

TB screening is performed with all community HIV testing. This means high volumes of screening, e.g. 11,914 people were screened for TB by the project in the last three months of 2015 alone. However, in the same period only 1% of clients had referral for TB sputum evaluation. This raises questions about the quality of the screening, as the expected number of referrals should be much higher. Medical team members suggest that leakage may be primarily due to patients that can't produce sputum and are referred for X-ray. Losing a day of work, the opportunity cost of time to have the X-ray taken is very high, along with the transport costs for some patients. MSF does not provide transport fees for referred patients.

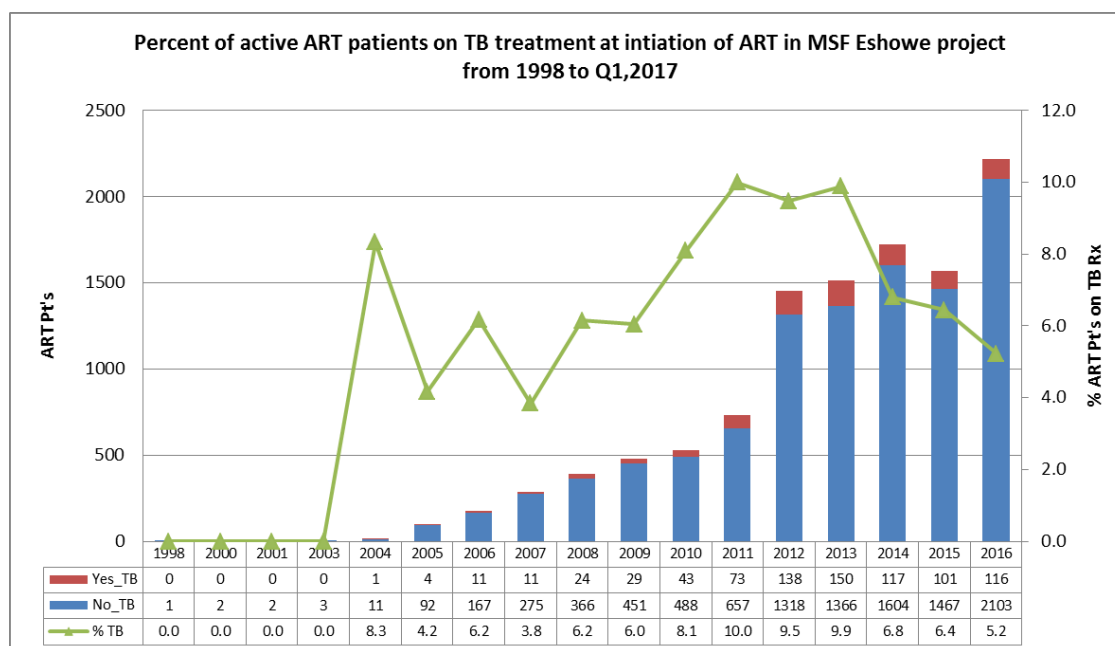


Figure 12. Percentage of ART patients initiated on TB treatment

Table 20 shows the outcomes of treatment of drug sensitive TB for in 2015. In 2015, 650 new patients were initiated. HIV co-infection is up to 67%. Treatment success rates vary from 70.7% to 80.0%. LTFU rates vary between 5.1% and 10.4%, and cases not evaluated from 0.7% to 10.8%.

Treatment success rates do not meet the WHO standard of 85%, and vary from reasonable to suboptimal. The suboptimal results cannot be explained by the high co-infection rates in the cohorts. A study on TB/HIV co-infected patients in KZN achieved a treatment success rate of 82.2%. The suboptimal results are not only due to DR-TB but also due to leakage through varying rates of LTFU and rates of non-evaluation, together up to 15%. Mortality varies from 6% to 11%, which is comparable to the earlier cited TB/HIV study in KZN. The widely varying rates of unevaluated cases may hint at problems in registering cases and completeness of medical files. All in all, there is room for improvement in terms of initiating patients on treatment, achieving treatment success, completeness of registration, and limiting LTFU.

Table 20. Outcomes of drug sensitive TB in four quarterly cohorts, 2015

	Q1	Q2	Q3	Q4
Treatment Success: cured and completed	116	112	114	112
Treatment Success rate	70.7	80.0	75.5	70.9
LTFU	17	11	8	8
LTFU rate	10.4	7.9	5.3	5.1
Died	18	9	9	15
Death rate	11.0	6.4	6.0	9.5
Treatment Failure: (diagnosed as RRTB/MDR-TB and/or last smear positive)	5	7	8	7
Treatment Failure rate	3.0	5.0	5.3	4.4
Not Evaluated	8	1	10	17
Not Evaluated rate	4.9	0.7	6.6	10.8
Transferred Out	12	8	12	5
Denominator (TO): Total TB registered including TO	176	148	163	163
Transfer out rate	6.8	5.4	7.4	3.1

Interviewees acknowledge the need to strengthen MSF's knowledge and attention for TB and TB/HIV, which may be caused by the strong focus on HIV. DoH representatives express their appreciation for MSF's support for the decentralisation of treatment of DR-TB and TB screening, but at the same time note that MSF doesn't give much support for treatment of DS-TB amidst a high disease burden.

"Initially it was more HIV and in door-to-door it was more TB screening. But MSF has done a lot on case detection, though they are not doing much on DS TB. Some docs assisted on case management."

— DoH Staff, Eshowe

The wealth of experience with community involvement, adherence support and decentralised care in HIV could be used to benefit the management of DR-TB and DS-TB, while an increased focus on TB would be appropriate in this high incidence and high prevalence setting. One interviewee also suggested that MSF could raise its advocacy voice on TB, as there are currently not many organisations doing that in South Africa.

2.4 Prevention of Opportunistic Infections

MSF provides support to DoH for screening for and treatment of opportunistic infections. It is difficult to document the results, as record keeping is very poor. IPT coverage is poor and co-trim oxazole prophylaxis could not be assessed. There are multiple explanations for these findings. The high workload of nurses amidst a freeze on human resources by DoH plays a role.

South Africa recommends a minimum package of care for patients with advanced stages of HIV: CD4 < 100 cells/mm³, or staging ≥ 2. On top of rapid ART initiation and screening and treatment for TB, this package includes systematic screening of Cryptococcus antigen, IPT and cotrimoxazole prevention.

Using routine monitoring data, the team has reviewed clinical records of a sample of 208 patients with a CD4 count <100 cells/mm³ with the objective to assess the quality of OI prevention and screening. The study found that clinical record keeping is poor. Physical examination, WHO staging and occurrence of OI are rarely documented at initiation and follow up visits. TB clinical screening was well conducted in all clinics but only 37% (70/191) of eligible patients received IPT. Co-trimoxazole prevention was rarely documented and could not be assessed. Just 65% (134/208) of patients benefited from laboratory testing for cryptococcal antigen.

The conclusion of this clinical record review is that severely immunocompromised patients are poorly managed. The focus on VL load suppression may have come at the cost of looking at CD4 count with the accompanying risks for OIs when CD4 count is low. Additional explanations offered for the low rate of IPT is an ambiguous protocol with unclear guidelines when to stop IPT, making nurses reluctant to put patients on IPT. Follow-up and poor patient motivation present additional explanations for the low IPT rates. A more general explanation for the poor management of OIs is the general workload of nurses. This is partly connected to budget problems with DoH, which has announced a freeze on hiring new staff to cover their fiscal gap.

Workload of nurses notwithstanding, these results indicate that more attention to the prevention and management of OIs, including IPT, is warranted.

2.5 MSF and national policy changes

"Without MSF the acceptance of differentiated models of care would never have happened" — MSF staff member, Cape Town.

Evidence from MSF documents as well as from interviews with MSF staff and people not affiliated to MSF suggest that MSF influenced national policies or guidelines. E.g. by advocating for inclusion of differentiated models of care in the national adherence guidelines. MSF advocates for national policy changes by using its results from the operational research that is going on in South Africa. This strategy is very much appreciated by all stakeholders.

One of the key evaluation questions is to what extent MSF has been able to have an impact on national level guidelines and protocols.

This section will examine this question, but will extend the question to the influence that MSF potentially has on provincial authorities and on other actors at national level such as major international donors.

The underlying reason to evaluate the national level policy influence is to examine the impact that MSF has beyond its own project(s) and thus contributes to national capacity and sustainability. This rationale also holds true when looking at effects on international donors in South Africa and, more geographically confined, advocating towards provincial level authorities.

MSF's approach to advocacy is very much appreciated in the country. MSF's advocacy strategy is perceived as non-adversarial, making the case based on evidence from hands-on experience and operational research.

"They are not seen as particularly pushy but presenting the evidence and raising profile." — MSF partner.

".... Maybe that is why they are successful: they are not adversarial, they stick to the technical." — MSF partner.

"People turn to them as an organisation in implementation that can give guidance to policy. They are quite vocal in what their findings are. They enter new areas." — MSF partner.

"They have never forced issues. They raise issues to be discussed. They have got their mandate to carry." — MSF partner.

A minority of interviewees (external to MSF) feel that presently MSF is less vocal than it used to be, and that MSF should be more at the table in policy discussions. People presenting this view feel they want to see more leadership and a figurehead representing MSF consistently in the policy arena.

Evidence from MSF documents as well as from interviews with MSF staff and people not affiliated to MSF suggest that MSF influenced national policies or guidelines. In addition, MSF has influenced international donors and provincial level authorities.

Virtually all interviewees acknowledged that MSF has influenced the new adherence guidelines, hailed by some partners as *"a big step forward"*. The guidelines were virtually written by a very experienced ex-MSF staff member who participated in the technical working group charged with producing these guidelines. MSF's experience with differentiated models of care in Eshowe has contributed to the guidelines. This means that MSF has had a direct influence on the official adoption and scale-up of linkage procedures, differentiated models of care, adherence strategies such as enhanced adherence counselling, and adherence in children. The adoption of the adherence guidelines attracted funding from major donors like PEPFAR and the Bill and Melinda Gates Foundation, which augmented official buy-in to differentiated models of care. This also had a positive impact on the funding of NGOs and CBOs in KZN who are active in the field of HIV.

Another standard that has changed nationally is the procurement of condoms. MSF has been distributing coloured and flavoured condoms within the community, because the people appeared not to like the standard condoms procured by the government. Based on the experience in the KZN project, the coloured and flavoured condoms are now DoH standard, and since the end of 2016 MSF no longer procures condoms independently, but receives its supply from the DoH.

The National DoH has developed an interest in assessing whether Community Health Workers should be a specific cadre, and if so, what tasks they should (and feasibly can) do within their communities. This discussion is ongoing and MSF is participating at those technical working groups, sharing its experience about the role of CHW and in HIV and DR-TB programs.

More recently, MSF is attempting to influence human resource policies at a provincial level. At the end of 2014, the KZN DoH had announced the phasing out of the cadre of lay counsellors, with the stated aim of retraining them for a new career as nurses. MSF has been working with the Africa Centre to document the impact of the removal of the counsellors on reaching HIV Counselling and Testing targets. Research findings suggest that the counsellor withdrawal substantially decreased clinic-based HIV testing. On the basis of these research findings, MSF is currently advocating for the re-introduction of counsellors, presenting evidence on the International AIDS Conference in 2016 in Durban, and on the national level HIV/AIDS conference in the same city in June 2017. The topic of the importance of lay counsellors in the HIV treatment cascade is of potential interest for the whole of South Africa and is likely to inform national policies also.

Other national level impacts of MSF's work being mentioned are:

- The school project in collaboration with DoH and DoE. MSF began incorporating support for HIV/TB services into the Learner Support Agents (LSA) role within the schools. This initiative has been adopted at both provincial and national level, and MSF has been requested to support trainings of trainers for LSAs within the province. MSF's advocacy for the school program was to a large extent based on the project in Eshowe.
- Advocacy for introducing and scale-up of self-testing for HIV. There is no official guideline, but the South African HIV Clinicians Society issued guidelines last month, with participation of MSF staff in the writing committee.
- Several interviewees mentioned MSF's advocacy for door-to-door testing. First resisted by DoH, now D2D is a well-established testing strategy, for which the Eshowe project provided evidence through operational research²⁵ D2D testing is e.g. funded by PEPFAR.
- Interviewees mention MSF influence on changes in ART eligibility criteria, such as changing from CD4 350 to CD4 500, and from CD4 500 to test & treat, and introducing option B+ in PMTCT.
- Contributions to the Gender-Based Violence working group.
- Some people claim that MSF has also played a role in South Africa's focus on young girls and women for testing.

Policy change doesn't happen in a vacuum and there are lots of other actors involved. It would therefore be impossible and incorrect to attribute policy change to MSF alone. What is possible is to assess MSF's contribution to policy change, and estimate the influence of that contribution.

The evidence of MSF's contribution to policy change or new national guidelines is quite clear in some cases, particularly when (ex-) MSF staff are involved in writing committees which is the case with the NDoH adherence guidelines and the self-testing guidelines of the South Africa HIV Clinical Society.

In other cases, MSF's contribution is less clear-cut, as MSF is by no means the only actor in the South African HIV and TB landscapes. To the question of whether a particular policy change would have happened if MSF had not been there, the answer varies: sometimes the answer is *"without MSF it would never have happened"*; whereas some people acknowledge that policy change might have come about without MSF, *"only it would have taken much longer"*. Although MSF may like to see itself as being always ahead of the troops, this is not consistently the case, and change is sometimes pioneered by DoH.

"We are not always ahead of DoH. in Test & Treat we were never able to be ahead of the guidelines. We managed to do that with option B+ and CD4 500." — MSF Staff, Cape Town.

Therefore, it is more appropriate to see MSF as a catalyst for change, where its research evidence and advocacy messages fall on fertile ground, with a national authority (NDoH) that is willing to move forward and apply new guidelines or policies. The other nuance is that MSF brings in resources which is welcome in cash-strapped environments.

"The problem is the lack of funding of the DoH. They (MSF- JvdM) are coming with funding and that's why it is also accepted." — MSF partner.

Finally, there are some other considerations and nuances on the impact of national level advocacy by MSF.

As some interviewees pointed out, influencing national level policies may be important, but influencing national level *practices* is just as significant. South Africa has a number of good nation-wide policies, but if these policies are not being implemented their practical value is negligible. Therefore, assistance to showcase an implementation strategy, such as decentralizing DR-TB - policy that already exists nationally from 2012 - may equally have an impact on the national level, although formally in the regulatory framework nothing has changed.

²⁵ See the publications of Bedell listed in Annex VIII (Information Sources) regarding HIV-testing

All in all, it is justified to say that MSF clearly has concretely influenced two national level policies or guidelines, and likely has contributed to many more national level policy changes, as well as changes on the provincial level. National level advocacy has also influenced international donor policies, not just national authorities. Although MSF advocacy is based on general program experience in all projects and locations in South Africa, the KZN project has supplied evidence and experience to feed in to some of the policy changes discussed.

2.6 Sustainability, transferability

MSF's approaches in the KZN project have potential for sustainability. Successful advocacy for national policy change has already contributed to sustainability. In addition, the mentoring approach to build capacity of DoH staff is a sustainability strategy, as well as the capacity building of some CBOs. MSF has been substituting staff and crowding out some capacity in the system, partly triggered by DoH's human resource freeze.

This section will examine the extent to which MSF's KZN project will be sustainable. In other words, what activities will remain if MSF were to leave, and which activities are likely to stop or fall apart? Also linked to sustainability is the transferability of project activities. Can they be adapted to other contexts?

Advocacy for national level policy change, as discussed in the previous section, is a strategy for sustainability. Another strategy that MSF has employed in the KZN project is building capacity of DoH staff by a mentoring and coaching approach, along with building the capacity of CBO partners in the area. MSF conducted mentorship modules and trainings on HIV testing, NIMART, Paediatrics, TB and PMTCT B+, Breastfeeding, HIV/TB integration, TB Infection Control, Management of DS & DR-TB, Adherence Guidelines, Youth friendly services, Decentralised Models of Care, CCMDD Trainings, PIMA CD4 point-of-care count machine, Sexual and Reproductive Health (SRH), Health Education with Educators and Learner Support Agents, Paediatrics & SMILE, data capture and analysis, and screening for Cryptococci meningitis. Trainings, patient specific days and skills workshops were also held for TB patients, HIV+ youth, adolescents and children.

Regarding all the training, mentoring and coaching, the idea is that activities that were started can continue, because capacity has been built.

"... Before we were struggling to find people working in HIV and TB. Because of the mentoring staff is more confident to manage HIV and TB. (...) Infrastructure will stay. Skills will stay, it is there now."

— DoH staff, Eshowe.

The mentoring approach has been successful as the quote above shows. Unfortunately, MSF has so far not taken steps to hand over the mentoring and coaching approach, which could in theory replicate sustainability. It is probably still not too late to do so. This is also a necessity as there is a high turnover of staff and therefore skilled staff will not stay on forever.

Interviewees generally confirmed that most activities potentially would continue if MSF were to leave. For instance, the successful schools project with DOE is felt to be sustainable, as there are other parties besides MSF engaged in schools activities and ready to take over. Many people interviewed are confident that Decentralised Models of Care are sustainable, as they cost very little, are managed by the community, and are technically not difficult to do.

The capacity built by MSF of local community-based organisations such as Child Care and SHINE offer opportunities to continue activities in the community, and they feel equipped to do so. The fact that these organisations and the Community Health Agents are from the community in itself are conducive to sustainability. So far, these organisations have heavily relied on MSF funds. Meanwhile, some initiatives are under way by these organisations to obtain funding from other sources. Some people saw a role for Municipalities in funding particular health activities (e.g. those of CBOs, outreach), a role that Municipalities are not taking on at the moment.

"Sustainability is the difficult thing for everyone including DoH, they have no budget at all, they have no budget to hire staff. For us as NGOs it will be difficult. It won't be difficult if MSF could link us with donors and motivating donors to fund these projects." — MSF partner, Eshowe.

However, interviewees do not think all activities will last. In particular, outreach activities, such as outreach to farms and TVET college, are deemed by some interviewees to be not sustainable because of their reliance on extra human resources and good vehicles, something that they think DoH cannot afford. The human resource freeze by DoH is regarded as an extra challenge for sustainability if this freeze were to continue. Others feel outreach could continue if the issue of human resources and vehicles is solved: in other words, in principle the staff know how to continue the

activities. MSF staff have pointed out that MSF handed over a farms project elsewhere in South Africa (in Musina); this project may provide valuable lessons about how the farms outreach in KZN may fare after handover.

"Visiting farms may fall apart, we are already overstretched (...) We don't have enough staff and we don't have enough vehicles, so that one we could not take over if MSF would leave tomorrow. (..) Even the issue of men's health centre, it is a good project targeting men not accessing the health services but we are not satisfying needs of the total population already, we cannot dedicate staff solely to a clinic targeting men even though it is a good project." — DoH staff, Eshowe.

"If MSF would leave it would be very hard for me. We will continue but it won't be the same. E.g. the children support group. MSF helps with transport to the support group, they help with cold drinks and cakes for the children. I don't think we would have transport for the group on Saturdays." — DoH staff, Mbongolwane.

"People are used to outreach now. All of the farms are visited, they get their treatment there. Doctors and nurses go out to the farms, they have not been receiving any services, now they are fully serviced. So those services would collapse, because we do not have the transport." — MSF staff, Mbongolwane.

Some people pointed out that, given the budget constraints, it might be worthwhile to devote operational research to cost studies in order to demonstrate their financial feasibility, as sometimes the perception within DoH is that NGOs have Rolls Royce-type programs with unsustainable funding.

Decentralised Models of Care are regarded as highly replicable, with different models offering enough flexibility for varying contexts. CAGs for instance can be replicated mostly in rural settings, whereas other models of care such as adherence clubs would be better replicable in semi-urban settings. As the concepts are quite flexible, CHAPs can be replicated from the community, as there are no special skills or required knowledge to do the job, and people are not paid highly. The same goes for lay educators —or counsellors— before they were abolished by DoH. Also, community-based testing like D2D was felt to be replicable, although some felt that M1SS would not necessarily be replicable because of its relatively high cost.

Despite all the coaching and mentoring, MSF has substituted staff, certainly in the beginning of the project. There is a realisation that this should not be the case, but some crowding out has happened. The paediatric HIV project was mentioned as an example. MSF has also paid for the data capturers in clinics as DoH could not afford them and MSF felt it needed the data to monitor its programs. Ultimately, this is a DoH responsibility which may become problematic when handover occurs and DoH budgets still rely on substitution of the data capturers.

In general, there is a lot of attention to sustainability in the project, with its focus on mentoring and coaching. Therefore, it is this very element that should also be subject to a sustainability strategy, which is not the case until now. The main challenge to sustainability is the current human resource freeze within DoH. The intention of the project should be to develop a handover strategy early on, so as to prepare all partners well in advance to take over activities.

3. CONCLUSIONS & RECOMMENDATIONS

The impact of the Bending the Curves project in KwaZulu Natal on mortality and on morbidity (HIV prevalence and incidence) could not be ascertained because of lack of recent data to examine trends in these indicators. People from the project area would confirm the visible decline in mortality and change to lives of people thanks to accessibility of treatment. Patients express their appreciation for the Decentralised Models of Care such as adherence clubs and CCMDD because of reduced waiting times and therefore less loss of income or other disruption of their daily lives. The project has indeed succeeded in bending the curves of the treatment cascade, in particular with the respect to the first two 90s, and partly with respect to the third 90.

There are still a number of bottlenecks and challenges that can be addressed to improve the impact of the project on quality of care. The high-level bottlenecks are:

- Stigma
- Tuberculosis
- Quality of patient record keeping

Addressing stigma, more attention to quality of TB care, and improving completion of patient files will have a positive impact across project activities. More specific recommendation in this regard are given below.

A fourth overarching issue is handover. When MSF's time in KZN comes to an end, all the achievements must be sustained as much as possible, and all handover partners should have ample time to prepare themselves to run activities without MSF's support. Handover planning and preparation never starts too early. In that respect it would be extremely valuable if, next to on-going capacity building, the mentoring and coaching approach itself could be handed over in order to create a sustainable system.

3.1 Prevention and testing

One of the major achievements of MSF is the enormous scale-up and normalisation of HIV counselling and testing, including community based testing, to the extent that the stigma around that particular part of the treatment cascade seems to have disappeared. Stigma is still present, as the disappointing participation in some differentiated models of care is reportedly related to people not wanting to disclose their status in the community.

Men are particularly left behind in seeking care, whereas young women are vulnerable to infection. This pattern can be explained by older men having sex with younger women.

Recommendations

- ⇒ Recommendation 1: Continue focusing on adolescent girls and young women, as they are vulnerable, for prevention, testing and treatment. This can be partly realised through the school program.
- ⇒ Recommendation 2: Since youth out-of-school is more at risk than youth in school, pay extra attention to out-of-school adolescent girls and young women by mapping hotspots and performing outreach to those hotspots. Continue initiatives to open up PrEP for categories of young women at highest risk for HIV.
- ⇒ Recommendation 3: Continue to find innovative ways to engage men into testing, treatment, and care. When special initiatives like the men's wellness centre are successful, document lessons learnt and scale up successful approaches that engage men in testing, treatment, and care.
- ⇒ Recommendation 4: Scale-up testing even further than has been the case; this can be done e.g. through introduction of home-based (self) testing, which may attract groups that so far have not tested sufficiently, like men.

3.2 Linkage to care

Linkage to care is a challenge, but it is happening given the scale-up of treatment. There are two main challenges: 1) linkage to care is difficult to ascertain, 2) the number of people initiated is stagnating somewhat despite the adoption of test & treat.

Recommendations

- ⇒ Recommendation 1: Develop a system to better track linkage to care, e.g. through a robust unique identifier system, in order to identify individuals and groups who get lost to follow-up.
- ⇒ Recommendation 2: In combination with the above, ensure improved immediate linkage to care e.g. by setting up a system of same-day initiation.

3.3 Viral Load monitoring

VL monitoring is quite successful in that patients are aware of its importance. Also, more than 92% of adults have a VL < 400 copies/ml. The number of patients who complete a VL test is less satisfactory in the recent cohorts than it has been. Also, switching to second line treatment when VL is repeatedly detectable is unsatisfactory.

Recommendations

- ⇒ Recommendation 1: Identify the causes of the decreasing proportion of patients completing a VL test, e.g. by reviewing records, and mentoring and coaching nurses.
- ⇒ Recommendation 2: Assess quality of VL switching per clinic by looking at proportions of patients with two or more consecutive detectable VL (with or without additional information such as provision of enhanced adherence counselling), and re-coach and mentor nurses, doctors and switch committees if necessary.

3.4 Differentiated models of care

MSF has implemented Decentralised Models of Care, such as CAGs and adherence clubs, and supported DoH with the roll out of CCMDD. Despite all its efforts, at the end of 2016 no more than 37% of patients on ART participated in one of the DMoC, while there must be more stable patients than that who would benefit from being in one of the DMoC. DMoC do impact positively on lives of patients because they feel supported, and cause less disruption to their lives. Although the program has impacted lives of patients by putting them ART, the impact might have been bigger if more patients would experience the advantages of one of the DMoC modalities. This evaluation reveals that stigma or not wanting to disclose HIV status may be one of the bottlenecks to DMoC when it concerns participation in groups.

Recommendations

- ⇒ Recommendation 1: Continue to address stigma (again) in the communities and self-stigma in patients through counsellors, CHAPs, MMC, testing sites and in facilities.
- ⇒ Recommendation 2: The low participation—in particular of CAGs— may have two reasons that can be addressed:
 - People expect 'projects' beyond their health (e.g. livelihood). This may be outside MSF's direct mandate, but there are national or international organisations that may be able to pick this up.
 - CAGs are patient-led, but without any supervision or attention are at risk of falling apart. Assign e.g. CHAPs or other representatives to pay a visit to the CAGs occasionally, and supply the group with new health promotion information on HIV or do another activity that will keep the group engaged and together.

3.5 Tuberculosis

MSF has taken a far less proactive approach on tuberculosis than on HIV. DoH is receiving assistance in decentralising DR-TB treatment. MSF is involved in TB/HIV activities in terms of treatment of co-infection and screening, but results are rather disappointing in terms of TB treatment cascade. Referral rates from screening are below expected numbers, and treatment success of DS-TB in co-infected patients are below what is achievable in this context. Medical record keeping is not consistent. Coverage of IPT for HIV patients who screen negative for TB is low at 37%.

Improved results in TB treatment (both DS-TB and DR-TB) will likely have a positive impact on morbidity (TB and HIV) and mortality in the project areas. Therefore, more attention in the program for TB (both DS-TB and DR-TB) and TB/HIV co-infection is warranted.

Recommendations

- ⇒ Recommendation 1: Work, through the mentoring and coaching approach, with counsellors and nurses to ensure that quality of TB screening is good, and that follow-up be given. Address bottlenecks for referral, like lack of (funds for) transport.
- ⇒ Recommendation 2: Work, through the mentoring and coaching approach, with health facility administration, nurses, counsellors and doctors to ensure that TB screening, results and referrals are properly recorded in patient files and other relevant records. In this respect, it would be interesting to examine the time-to-diagnosis for TB.
- ⇒ Recommendation 3: Limit leakage from the cascade by reducing LTFU (e.g. through the CHAPs) and non-evaluated cases.
- ⇒ Recommendation 4: Encourage improved coverage of IPT by raising confidence in nurses to handle IPT properly, and raise motivation of patients by additional mentoring and coaching of nurses, counsellors and expert patients in adherence clubs and CAGs on the benefits of IPT.

3.6 Other Opportunistic Infections

Project reports indicate that prevention of opportunistic infections is below expectations. Because of challenges in record and data keeping it is reportedly difficult to obtain exact data.

Recommendations

- ⇒ Recommendation 1: Work with all facility staff (administrators, doctors, nurses, counsellors) to ensure proper and complete patient files regarding OIs.
- ⇒ Recommendation 2: Introduction of new formulations such as a new fixed-dose combination with isoniazid and co-trimoxazole, reduce pill burden and therefore patient compliance with prophylaxis of OIs.

3.7 National level policy change

MSF managed to impact on national level policy change, and particularly contributed beyond doubt to the content and adoption of the national adherence guidelines, thereby enabling the roll out of DMoC nationally. People who were interviewed suggested MSF influenced national policy changes in various other areas. Some respondents felt that MSF should raise its profile on the national level and be more consistently at the table when important discussions happen in the field of HIV and TB.

The findings of this evaluation show that at least two guidelines are ambiguous and may cause suboptimal results: changing to second line ART, and indications for IPT.

Recommendations

- ⇒ Recommendation 1: If not already addressed, set up operational research and/or enhance advocacy to simplify ART guidelines on switching to second line treatment.
- ⇒ Recommendation 2: Equally adjust guidelines to simplify the provision of IPT in people with HIV who screen negative for TB.

Table 21. Comparison of key epidemiological indicators. Eshowe/Mbongolwane and South Africa National Data.

Indicators	Eshowe Mbongolwane	South Africa ^{xvii}
Absolute size of cohort	20576	6100000 ^{xviii}
Active end of 2016	16408	3900000
Active end of 2016 (%)	79,7	56
Population size	127611	54490000 ^{xix}
HIV incidence rate (%)	1.2	0.99 ^{xx} / 0.56 ^{xxi}
male	0.6	...
female	1.6	...
HIV incidence 15-29 years	2.0	...
male	0.9	...
female	2.9	...
HIV incidence 30-59 years	0.0	...
HIV prevalence rate 15-64	25.2 ^{xxii}	18.9 ^{xxiii}
male		14.2 ^{xxiii}
female		23.8 ^{xxiii}
HIV prevalence rate <15	2.4 ^{xxiv}	2.4 ^{xxv}
HIV prevalence adolescents number	n/a	
HIV prevalence/incidence ratio	21	19
Treatment cascade (90-90-90)	unknown-79.7-83.2	86-56-45
% People with a positive test who take ART	88.6	63.9
VL coverage (%)	66.4	60 / 92.1 ^{xxvi}
% of active ART cohort who are virally suppressed	83.2	82 / 85.6 ^{xxvi}
% of PLHIV who are virally suppressed	67	45 ^{xxvii}
men	56	...
women	72	...
% of ART cohort on any differentiated community care model	37.2 ^{xxviii}	31.1% ^{xxix}
% of active ART cohort on CAG	1.2	...
% of active ART cohort on Community Club	1.0	...
% of active ART cohort on Facility Club	7.0	10.0
% of active ART cohort on CCMDD	28.0	13.0
Median turn-around time (TAT) for VL results (+ range minimum-maximum)	5 days	...
VL completion, adults >= 15 y (%)	60.8	46.8% ^{xxx}
% patients in ART cohort treated for TB	3.8-10.0 ^{xxxi}	...
Patients on treatment with DR-TB new cases & retreatment	27	11538 ^{xxxii}
TB notification rate	500/100,000 ^{xxxiii}	1090/100,000
TB treatment success rate (%)	74	83
% of ART cohort on IPT	37	51 ^{xxxiv}
Mortality rate MSF cohort (%)	8.3	...
LTFU / attrition rate cohort (%)	7.2	...

^{xvii} Country level data from 2016, unless otherwise indicate

^{xviii} PLHIV who know their status.

^{xix} 2015 data. Source: <http://www.who.int/countries/zaf/en/>

^{xx} Adults 15-49

^{xxi} All ages.

^{xxii} 2013 data.

^{xxiii} Age range: 15-49.

^{xxiv} Epicentre survey, 2013.

^{xxv} South Africa Global AIDS Response Progress Report (GARPR) 2015.

^{xxvi} KwaZulu Natal, 4th quarter 2016. Source: National Institute for Communicable Diseases, South Africa. <http://www.nicd.ac.za/>.

^{xxvii} Country Factsheet South Africa. Source: aidsinfo.unaids.org

^{xxviii} Data as per 2nd quarter 2017.

^{xxix} Selected Districts, E. Cape, Gauteng, Mpumalanga and KZN. Source: Dvora JD, Hamlyn C, Mitchell C. Uptake of HIV differentiated care models for patients on antiretroviral therapy in South Africa. Broadreach, April 2017.

^{xxx} VL completion at 12 months, 2014 data. Source: South Africa Global AIDS Response Progress Report (GARPR) 2015.

^{xxxi} Spread from 2004-2016 per year cohort. 2016: 5.2%.

^{xxxii} 2015 data. Source: South Africa Global AIDS Response Progress Report (GARPR) 2015.

^{xxxiii} World Health Organization. Global Tuberculosis Report 2016.

^{xxxiv} Within the same data source the definition of this indicator is inconsistent: Proportion of people living with HIV newly enrolled in HIV care stated on TB preventive therapy (%). Some pages omit the words 'newly enrolled'. If this figure represents newly enrolled PLHIV, the definition is different from the one in this table and the data cannot be compared.

ANNEX IV: COUNTRY REPORT, CONAKRY, GUINEA

1. INTRODUCTION

Guinea is 183rd on the UNDP Human Development and 50% of its population lives in extreme poverty. Guinea is a low-prevalence country, with an estimated 2% of the population living with HIV, and few international donors or actors have taken interest in supporting HIV care in the country. The low national prevalence also masks very high prevalence in key populations, especially men who have sex with men, (MSM) of whom 56% are estimated to be HIV-positive, sex workers (14% prevalence), and adolescents, among whom incidence doubled between 2005 and 2012. Only 6% of Guineans know their status, and testing remains healthcare provider-directed. As such, many patients discover their status too late, and AIDS-related mortality remains high. In 2015, UNAIDS estimated that there were 4600 deaths due to AIDS in Guinea, compared to 3700 in Swaziland, the country with the highest HIV prevalence in the world.²⁶

The HIV project in Conakry, Guinea's capital, has been operational since 2003. The catchment area of the Conakry project is difficult to define. While the population of Conakry is 1.6 million, the stigma attached to HIV is extreme, and the healthcare system is weak. These two factors lead people from all over the country to travel long distances from their homes to seek care at MSF-supported facilities in Conakry, where the quality of care and confidentiality can be assured. Currently 1/4 of the active cohort in Guinea is managed by MSF.

MSF's approach can be divided into three different categories:

- New, stage 1 HIV cases are seen at Matam, which is a 100% MSF-operated ambulatory treatment centre within a state-run health centre, and is among the busiest HIV clinics in the country, and is the entry point for the vast majority of MSF's patients.
- Once a patient's VL is reduced to below 1000 copies, patients are transferred to 1 of 6 decentralised facilities where MSF provides light support to the facilities, which includes training and support to facility medical staff, occasional ARV and logistical supply.
- Patients in the advanced stages are treated in a 31-bed inpatient facility that is housed in the dermatology department of the Donka hospital. MSF works side by side with MoH staff in the management of this hospital.

In addition to treatment, MSF conducts outreach activities within the community to raise awareness of HIV and encourage testing; conducts testing campaigns in the communities surrounding its centres, and conducts testing, health education and provides referrals to care for key populations.

2. FINDINGS

2.1 Treatment cascade

Table 22: Overview of key VL and treatment cascade figures, Conakry project.

	Male	Female	Total
Active cohort (2016)	=	=	9736
% of active cohort on ARVs	—	—	97.8%
VL coverage	70.21%	81.06%	77.8%
% of ART cohort with undetectable VL	55.56%	65.55%	62.5%
% of patients receiving EAC after 1 st detectable VL	NA	NA	NA
% of patients with missed appointment receiving a phone call	NA	NA	65.3 %
% of patients called who return for care	NA	NA	75%
% patients switched to second line after 2 nd detectable VL	55.17%	46.67%	48%
% of ART cohort on R6M	16.67%	19.03%	18%
% of eligible patients on R6M			80%
Retention in care after 12M (globally)	NA	NA	71%

Test & treat started in February of 2017. MSF has succeeded in putting 97% of its active cohort on ARVs, exceeding the target for the 2nd 90.

²⁶ UNAIDS Guinea, <http://www.unaids.org/en/regionscountries/countries/guinea>; UNAIDS Swaziland <http://www.unaids.org/en/regionscountries/countries/swaziland>

Effectiveness - Routine viral load monitoring

MSF is currently running an MoH-owned viral load platform in the Matam health centre, and using MoH reagents. There have at times been problems with the MoH machine, included shortages of reagents, and cold chain breakdowns. In these cases, MSF is sending the its samples to South Africa, and using GeneXpert to conduct viral load tests for suspicion of failure and urgent cases. This is the process for analysing viral load tests from the six structures that MSF supports. The turnaround time for test results, according to patients and staff, is between 7- 30 days.

Due to the low literacy of many of the patients, many patients are only told that their viral load is detectable or undetectable, without a numeric value. Literate patients, or patients considered to be adequately educated are informed of the number of copies. The patients to whom I spoke who knew the number of copies said that knowing their viral load was empowering and motivated them to adhere to their treatment properly.

Accessing VL remains more challenging in the decentralised facilities than it is at Matam. MSF uses a 'light' mentoring approach in those facilities, and the care is provided by MoH clinicians. MSF is providing those facilities with ongoing coaching in order to increase the ordering of the VL test, but also educating patients to request a VL themselves.

The project faces many challenges in achieving the 3rd 90 (90% of people on ARVs have a suppressed VL), largely due to the many barriers that patients experience in adhering to care far from their homes, in Conakry:

- Stigma and discrimination leads patients to be secretive about their treatment and have little social support.
- Many patients live very far from the clinic, and have difficulty returning on specified dates to receive their second VL test, or to refill their prescriptions.
- Patients may not always give accurate information - at times patients can be difficult to track because they have provided false phone numbers or coordinates.
- In other cases, when the clinic is very busy, patients are told to return the next day for follow up. Because of the distance, they do not return. MSF is working to improve this.
- If there have been troubles or suspected troubles with adherence, the second VL is postponed.

Some of these factors are very difficult, if not impossible, for MSF to control. In order to address them, the patient support team at Matam is extensive, and works with patients to identify all possible barriers to properly adhering to their treatment. There is overlap between the functions of each position. The positions include:

Counsellors who are MSF staff do advanced adherence counselling, provide support to survivors of sexual violence, and conduct group therapeutic education sessions with patients at Matam exclusively.

Mediators are people living with HIV who provide counselling to patients in exchange for a travel stipend. Mediators are more common at the 6 peripheral centres where MSF provides light support.

Social assistants provide various forms of assistance to patients, including tracking down patients who do not attend their appointments.

Peer educators (*Amies de la Santé*) are people living with HIV who provide support to the other roles, including tracing defaulters, conducting home visits to patients in their community, and sensitization in the waiting room.

Tracing defaulters and patients who miss appointments is primarily done by phone, as home visits are not possible with patients who live at a great distance from the health centre. Phones present their own challenges, as many patients do not have phone numbers. Home visits are often not possible, as many patients live at a long distance from the facility. Of patients who had missed appointments in 2016, only 65.3% were reached by phone. Of those reached, 75% returned for treatment.

Switch to second line treatment

Patients are supposed to be switched to the second line after two consecutive detectable viral loads, and the process of validating the changes is done in doctor's meeting at the Matam centre. The percentage of patients switched after two detectable VL is 49%.

A challenge is that although patients with one detectable viral load are supposed to receive a second VL test three months later after at least 3 counselling sessions, many patients have trouble returning to Matam on time to take it. According to respondents, the percentage of patients switched to second line has improved considerably in the past year, largely due to mentoring and support of decentralised centres by MSF employed 'decentralization doctors'. The process for MSF to switch patients has always been decentralised.

Sustainability of routine VL monitoring in Guinea

The viability of routine viral load in Guinea relies on a number of factors. Some respondents suggested that the MoH did not actually know what it was getting into when it accepted to do routine VL, including investigating whether it had the staff available for maintenance of the machines, and ensuring an adequate supply of reagent if they had the means to store the tests.

Currently there is no national policy for test & treat, which requires VL, but respondents believed that test & treat would soon become the national policy. There is also donor support for routine VL. Furthermore, the country received a number of GeneXpert during the Ebola epidemic, and is considering using them for VL testing in rural areas. As it stands however, there are breakdowns in the cold chain, and stock outs of reagents.

Another issue that was raised frequently is that VL tests are not routinely ordered for patients. At MSF, patients are counselled to ask their care provider for the test, as it is possible that it may be forgotten.

2.2 Community models of care & targeted adherence and retention strategies

Clubs (CAG)

MSF attempted to establish community adherence groups (CAG) for patients in rural communities. These groups were made up of 6 stable patients who would each take turns attending the clinic for their 6month appointment, and when doing so, pick up the month's supply of drugs for their group members. These groups were called clubs, but as club has a specific definition used elsewhere in the report, we will refer to them here as CAG. The groups never took off with the majority of patients, because the rural areas have small populations where "everyone knows each other, and everything about each other" and patients feared that joining the CAG would be tantamount to disclosing their status to their entire community.

Another attempt was made to have CAGs with active members of associations of people living with HIV. While these patients very much appreciated the social aspect of the CAG, members did not always reside close to one another, which complicated the timely delivery of drugs from one patient to the others.

Decentralization

Another factor complicating the CAG was the decentralization of patients to health structures across Conakry. The volume of patients at the Matam health centre was – and remains – higher than in any of the other structures supported by MSF or in Guinea. In an effort to reduce the volume of patients in the facility and also to progressively put MSF patients on the national cohort as a part of MSF's longer-term handover strategy, MSF decided to transfer stable patients to MSF-supported MoH facilities around the city, where the patients would officially be considered part of the MoH / Global Fund cohort. The decentralization began as voluntary, and patients could choose whether or not to continue receiving care at Matam; but as many patients opted not to be transferred, MSF began requiring patients to choose a facility other than Matam.

"We congratulate them for having achieved an undetectable viral load, and then we help them to choose another centre." – MSF staffer

Feelings about this decision are mixed, and the subject of decentralization appears to be a topic of debate. Both patients and staff expressed their reservations about making patients leave the clinic where they know and are comfortable with the staff, especially considering the challenges that people face seeking and adhering to care in Guinea. The decentralised facilities do not have the same psychosocial support staff in place. Respondents were at best resigned to decentralization, and at worst outright against it. Some patients preferred Matam so much to other centres that they returned to Matam pretending to be new patients. This is evidenced by the very high positivity rate at Matam (70%) compared to other centres which are 29%.

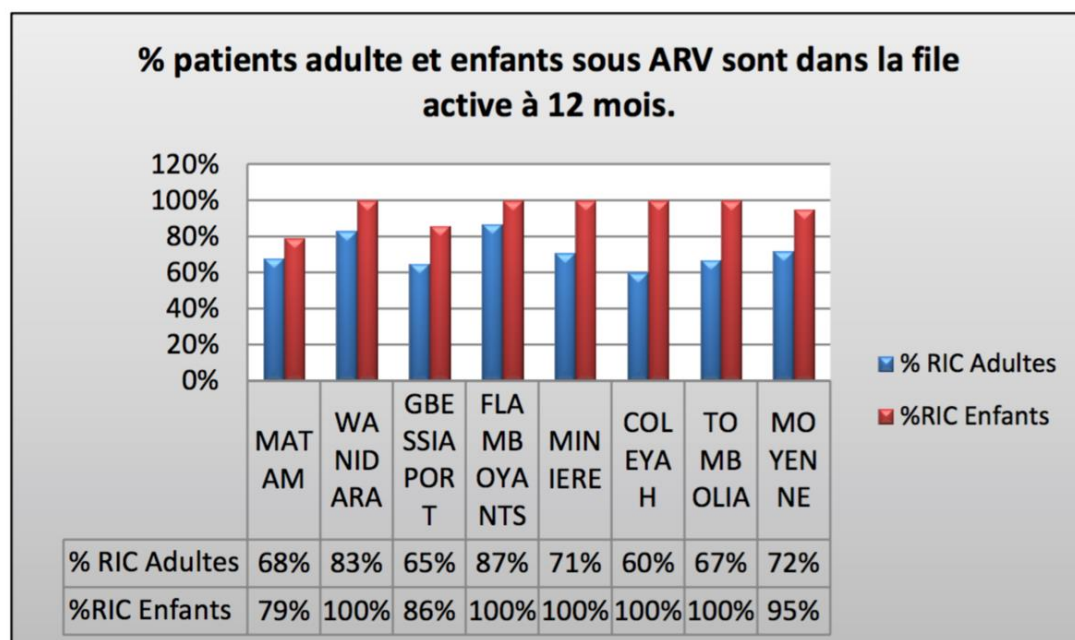


Figure 13. Retention in care at 12 months

Fig. 13 (from the 2016 Annual report): Some of the decentralised facilities have retention in care that is comparable to or lower than Matam, despite the fact that Matam sees a higher proportion of new / unstable patients.

However, others –mainly MSF staff– consider Matam to be at maximum capacity and that it simply cannot keep accepting more patients without a corresponding reduction in its caseload. Furthermore, the government cannot rely on MSF to continuously increase the number of patients in its cohort. The best approach, they believe, is to treat Matam as something of a stabilization centre. New patients arrive, receive a full range of psychosocial support to help them adhere to their treatment and reduce their viral load. Once these patients are stabilized, they are transferred to other centres, where they will only be required to attend appointments every 6 months (R6M). In doing so, MSF places its greatest effort on treating newer, higher-need patients with detectable viral loads, while transferring stable, low maintenance patients to other facilities in the MoH cohort. Currently, MSF has a quota of 50 patients needing to be transferred out per month.

Effectiveness and sustainability – R6M

6 month appointments / *rendez vous 6 mois* (R6M) is a system of differentiated care – patients with an undetectable viral load who have been on ARVs for over 6 months are automatically enrolled in R6M. They can attend the facility at any time in between if they need to. In 2016, 80% of eligible patients were enrolled in R6M. MSF data indicates that stable patients on R6M are more likely to sustain an undetectable viral load than patients who are not on R6M. Additionally, R6M reduces the burden on both patients and health facilities. The MoH is keen to take on this model of care, and in its meeting address to the African Union stated that R6M was already in place in Guinea. It is not. Prior to initiating R6M, the ministry must first ensure the availability of routine viral load monitoring to verify and monitor the eligibility of patients, and the supply mechanisms must be in place to provide patients with 6 months of medications at a time.

Community outreach to key and vulnerable populations

MSF conducts outreach with female sex workers, MSM, fishermen, truck drivers, women who work at markets, young people under the age of 35, and men in uniform. These outreach activities consist primarily of prevention, testing, and referral to care. There are no activities with injection drug users. At present, they do not have peer educators among the key populations to support adherence and retention.

The data shows that once in care, men are significantly less likely to receive VL testing, to have an undetectable VL, and to be in the R6M.

Adolescents

There is no data for adolescents in Guinea. There are only data for children under the age of 15, and adults. Boys under the age of 15 are the least likely of all groups to have an undetectable VL. The adolescents interviewed cited numerous challenges with taking their treatment. Stigma is especially difficult. None of the four adolescents that we spoke to had told any of their friends that they were HIV-positive, and none had HIV-positive friends. The youth complained that

travelling to and from the clinic took a minimum of one hour in each direction, but more often 2-3 hours, and that they missed an entire day of school every time they went for treatment. In addition to missing school, they feared that their friends would take notice and discover their status. One youth's mother was so concerned that his friends might discover his status that she took away his carnet (his health booklet), and he was not able to attend the clinic.

Therapeutic groups are offered for adolescents at Matam, which offer patients social support in addition to providing information about the management of their disease, were highly valued by the youth that were interviewed. The adolescents said they appreciated the social support and the ability to make friends from whom they did not have to hide their status. However, MSF has stopped providing the youth with food when they attend and has stopped paying for their transportation; enrolment in the groups has since declined, and some of the youth to whom we talked spoke as if the groups had been discontinued.

Men

The treatment cascade data shows that men living with HIV are less likely than their female counterparts to receive a VL, and when they do get their VL, it is less likely to be undetectable. Respondents said that men are also less likely to come forward for testing, and that men seem to be more sensitive to stigma than women are. Respondents suggested that men also have different care-seeking behaviours than women, which in part explains why HIV+ men are less likely to remain in care than women and less likely to adhere to their treatment. Unlike in the other countries evaluated, travel for work was not cited as a barrier to care for HIV+ men. On the contrary, women in Conakry are more likely to travel for work, and yet their adherence and retention is better than men.

Key populations

MSF does outreach with female sex workers in Conakry. This work is primarily testing, behaviour change communication and education about how to prevent HIV. MSF also distributes condoms and lubricant and refers HIV+ patients to care.

"Before I knew [MSF], I did not know to use condoms. Now I know to protect myself. Now I bring condoms everywhere. Even for a walk. I might forget my wallet, but I bring condoms." – Sex worker.

MSF does target screening and outreach activities with key populations, including men who have sex with men, sex workers, fishermen, workers at train stations and markets, and sex workers. MSF does not currently conduct activities with injection drug users.

A screening conducted between May and December of 2016 found a positivity rate that is 3.75 times the national prevalence for adults.²⁷ The prevalence in sex workers is 7.5 times that of the national prevalence.

Table 23: Results of HIV testing among key populations in the Guinee project (May-Dec 2016)

	Tested		Positives		%
	M	F	M	F	
MSM	62	0	1	0	2%
Ports (fishermen / women)	403	262	9	18	4%
Train stations, markets, etc.	453	646	17	25	4%
Sex workers and clients	112	471	4	64	12%
Total	1030	1379	31	107	6%
Positivity by sex			3%	8%	

Table adapted from MSF DGD report, 04, 2017

The work that MSF does with sex workers is highly valued by the sex workers, who report that there have been many deaths among them from AIDS. Sex workers also reported that every week there are new women and young girls coming to work as prostitutes, and most of the newcomers do not know about HIV or how to prevent it. One sex worker reported having worked for many years without using a condom, prior to MSF educating her on HIV. All of the sex workers with whom I spoke expressed gratitude for the MSF team's concern for them.

MSF has struggled to connect with men who have sex with men (MSM) community. Initial efforts included working with Afrique Arcenciel –an association of gay men– but turnout for the activities very limited. Some respondents suggested that the people in attendance were not MSM. This is a valid question given that the positivity rate in MSF's screening exercise was 2%; meanwhile, a 2015 study conducted by UNAIDS found 56% of men positive (UNAIDS ESCOMB 2015).

²⁷ Prevalence according to UNAIDS, 2015.

MSF is rethinking its strategy to avoid requiring MSM to meet in groups, but rather to work with trusted people within the community to try to reach individuals. Homosexuality is not legal or accepted in Guinea - men who come out are subject to violence, discrimination and prosecution. Laws prohibiting discrimination do not apply to MSM in Guinea. When discussing groups that are vulnerable to HIV and who may have experience barriers to care, some of the *Amies the la santé* (peer educators provide counselling to patients at MSF clinics) had questions about homosexuality and homosexual acts that indicated they were not accepting of sexuality. For example, two people assumed that a man who has sex when men must be impotent. In other interviews people responded that there were few MSM in Guinea, and/or that there was no market for male prostitutes.

The evaluator spoke with two male sex workers, who were referred by one of the female sex workers. They spoke of extreme hardship from the discrimination that they and other MSM faced, and how their work needs to be much more clandestine than that of their female counterparts. They also spoke of difficulty accessing care, particularly in cases of rape, which do occur. FMG, another clinic that was previously supported by MSF, used to have sessions for MSM, but men complained that the sessions were long and did not cover transportation costs, provide food, nor the costs of medicines or tests, making it difficult for the men to attend. The men agreed that at initial outreach to the MSM community should be done via individuals and expanding to groups could be considered once MSF has built trust within that community.

2.3 Behaviour change communication, advocacy and civil society

In addition to its work with high risk populations, MSF also does outreach with community leaders to increase awareness of HIV and encourage testing. A large part of this is explaining the means of transmission. Extramarital sex is frowned upon in Guinea, and people infected with HIV are presumed to have contracted it through their own “bad” behaviour. MSF works with associations of people living with HIV to promote testing and positive living. Most of this work is done person-to-person within the community, and leaders are trained to replicate the messages from MSF. In the month of December their additional efforts to raise awareness for world AIDS day. Most of the PLHIV whom we spoke to, and the MSF staff doing this outreach, believed that MSF’s work was not sufficiently visible. Many also said that Guineans had never heard of MSF until the Ebola epidemic, and that much more needed to be done to increase awareness and testing, particularly in rural areas. Guinea, unlike higher prevalence countries, according to respondents, has never had a sustained, nation-wide media campaign to reduce the stigma of HIV infection or to encourage testing. Respondents simply did not understand why this had not yet happened, nor did they understand why MSF did not use the radio to promote its testing, as is done for vaccination campaigns. Respondents believed that using the media, especially the radio, would be the most effective way to spread promote testing.

MSF has made a number of efforts to involve PLHIV as advocates. MSF provides advocacy training, support and material resources to associations of PLHIV so that they can then advocate for improved access to treatment. A frequently-cited challenge in doing so is that meetings with these groups often devolve into discussions about financial resources and how the groups need money in order to operate. These conversations have been cited an obstacle to the groups being able to move forward and advocate effectively.

Financial resources, or lack thereof, were a common theme in conversations with PLHIV. PLHIV patients cited difficulties attending therapeutic education sessions when payment for transport and food were not provided. PLHIV peer educators and mediators cited difficulties performing their functions with the incentives that they were receiving, which they do not consider adequate.

MSF respondents were uncomfortable with the idea of providing financial support to patient advocates or associations of people living with HIV, in order to perform advocacy. This is because the efforts to engage civil society are intended as part of a broader sustainability agenda, whereby patients will be advocating on their own behalf after MSF’s departure, and without MSF support.

2.4 MSF influence on HIV policy and practice:

There is a small but proactive number of actors advocating for improved HIV policy in Conakry. Solthis, Population Services International, UNAIDS, WHO, and the government led programs - the CNLS and the national program. Of the three NGOs, MSF is the only NGO providing technical expertise on HIV care, and their contribution is perceived as instrumental. MSF and other actors noted that in recent years, MSF has taken a more collaborative approach to advocacy, working closely with the state actors and NGOs providing services and care to PLHIV.

“That I can say very loudly. MSF has a very good reputation. Their contribution to documents, policies, strategies, the care they provide to patients, their intervention at the community level, they have exceptional results. They are always present. Always. Always present. Their contribution is very, very, very effective. Which is why, we have a large I team, and then a smaller, core one, the core has UNAIDS, MSF, the National Program, CNLS. [MSF’s contribution is] very, very big. Right now, if they left, well, MSF is the technical advisor, the Program and CNLS are the state, so if MSF left, there is no technical advisor.” – MSF partner.

“MSF is a privileged partner; they are involved in all the decisions that we make about HIV.” – Program National.

MSF is also well-respected because of its long history in Guinea and its reputation for providing high quality care. A number of respondents referred to MSF as a privileged partner who is invited to decision making meetings and whose experiences and input are valued. In particular, the national program values MSF’s data.

MSF’s international report, *“le Prix de l’Oubli”* was cited by many partners as a key motivator for the HIV response in Guinea, and led to the *“Plan de rattrapage d’urgence”* (The emergency catch-up plan).

MSF has been working to build the capacity of civil society and groups of PLHIV in particular, to advocate for improved access to care and medicine.

Below are the policies that MSF influenced between 2014-2017, according to stakeholders

- Normes et procédures de l’accompagnement psychosocial des personnes vivant avec le VIH en Guinée
- Guide des Formateurs: L’Accompagnement Psychosocial des PVVIH en Guinée
- Plan de Rattrapage d’Urgence pour Accélérer et Maintenir La Réponse au VIH en République de Guinée
- Option B+
- Inclusion of Routine VL in the Global Fund proposal

Sustainability:

The sustainability of MSF’s activities is at the forefront of its collective mind. In 2012, MSF closed one of its HIV projects in Guékédou that had been open since 2003, and now the facility is no longer functional, and none of the MSF cohort remains. Almost all of the staff members interviewed grappled with the best way to ensure the continuity of MSF’s activities, given the impending handover in 2020. The cell, however, says that it currently has no such handover plans, only that the project’s five-year strategy will come to an end in 2020. This will be welcome news to the majority of staff and partners interviewed, who believed that MSF’s departure any time in the near future would be catastrophic.

“This is not the time for MSF to leave.” – MSF Partner.

“The truth is if they left, it would be catastrophic.” – MSF partner.

MSF’s strategy to improve the sustainability of its clinical activities relies on 4 key approaches:

- MSF is invested in building the capacity of MoH staff, and has a training and mentoring program in place for health workers from partner clinics. MoH healthcare workers from the 6 facilities that MSF supports receive theoretical and practical training from MSF. The practical training is a stage at the MSF-run Matam clinic. Once the MSF-supported facilities attain an acceptable level of quality, MSF will transfer its support to another facility.
- Multiple respondents referred to MSF’s cohort and the Global Fund cohort, which is the national cohort. The two nationally-run HIV programs were, in effect, giving MSF the responsibility for caring for “its” cohort. MSF is also trying to promote the government’s ownership for HIV care in the country and, in particular, the cost and constant supply of ARVs. An objective of decentralization is that the government take on progressive responsibility for the provision of first line ARVs.
- The testing of innovative approaches to providing HIV care and/or other MSF approaches has been proven in other settings, and transferring those programs to the ministry of health.
- Cutting costs: MSF has begun reducing some expenses that it believes are unlikely to be taken on by the MoH, including travel reimbursements and food for therapeutic education sessions.

A key component of MSF activities is the psychosocial support provided by counsellors, social assistants, *Amies de la santé* (peer educators), and mediators (PLHIV who perform a similar function to counsellors). These cadres conduct adherence counselling with patients as well as therapeutic education groups, provide social support and track down patients who miss appointments. The funding for these cadres is not MoH provided, with the exception of mediators who receive a travel stipend. Interviewees believed that these functions are essential to supporting patients in adhering to their treatment, and believe that retention in care will suffer without these cadres in place.

Some respondents even expressed reservations in decentralizing patients to other MSF-supported facilities that do not have the same support functions as Matam. The MSF-supported structures only have mediators, who are PLHIV who provide counselling for a transport stipend, which they complain is insufficient. When asked why MSF did not pay mediators salaries, interviewees suggested that MSF thought the government would be more likely to take on mediators if they did not receive a salary.

MSF has made important contributions to policy documents outlining the norms and procedures for psychosocial support of HIV patients, and the training guide for psychosocial support. The *“Normes et procédures”* recognizes the essential role of psychosocial support in HIV care. The document defines a minimum package of psychosocial support to be provided by clinicians, and a complete package which includes the use of mediators. The document also includes a job description for mediators along with guidelines for how many patients should be assigned to each mediator, and calls for harmonization of the remuneration for mediators, without providing guidance on what they consider an appropriate salary or where this cadre would fit in their human resources for health. The fact that the minimum package exists and does not include mediators suggests that mediators, at this stage, are still not considered essential to HIV treatment.

3. DISCUSSION AND CONCLUSIONS

3.1 Treatment cascade

The availability of routine VL monitoring has improved MSF’s ability to manage their patients care, and it has been empowering to patients to understand the extent to which their virus is being controlled. MSF has made important improvements in the treatment cascade, especially in getting HIV+ patients on ARVs (98%). There is still work to be done to ensure that all eligible patients have had their VL taken, as currently 77.8 % have.

3.2 Stigma, decentralization and barriers to care

Prior reports have characterized decentralization as a differentiated model of care. While this may have been the case, it is no longer accurate. Decentralization serves two primary purposes: to reduce the oversized and growing cohort at Matam, and to progressively give the MoH responsibility for managing the treatment of patients previously on MSF’s cohort. Though it is understandable to presume that it would be in the patient’s interest to go to be transferred to a clinic that is closer to their homes, this is not the primary objective, nor do the patients actually appear to want care near their homes. Stigma is so severe in Guinea that many patients prefer to receive care far from their homes where their confidentiality can be assured. As a result, Matam, one of —if not the— most reputed HIV clinics in the country, continues to passively receive more patients than it can accommodate. The combined factors of the limited capacity of Matam to take on more patients, the reputation for high quality care that is provided at Matam and the desire of patients to be cared for at a location far from their homes leave MSF without many other options but to force stable patients to choose other facilities.

The evaluators agree with the staff’s concerns about sending patients to facilities that do not have adequate psychosocial support for patients, especially in light of the retention in care figures for decentralised facilities. In place of full time lay counsellors, the decentralised facilities have part-time PLHIV volunteering to do counselling work in exchange for a travel stipend. While it may be true that the government will be more likely to take on the mediators if they are not salaried, the rationale is out of synch with MSF’s broader push to have lay counsellors recognized as essential in improving access, adherence and retention, and deserving of formal recognition and adequate remuneration.²⁸

Stigma also exacerbates the financial barriers to receiving care - many cited a trip to MSF’s facilities in Conakry as a full day affair, with commutes upwards of 3 hours. When this is taken into account, it is clear why many patients have difficulty remaining in care, and entirely understandable that patients would need food and travel support for attending therapeutic education sessions which are centralized in the capital.

The steady stream of patients arriving at Matam, and the subsequent need to reduce the cohort there is unlikely to go away without 1) the government or other actors providing high quality care throughout the country 2) without a massive effort to reduce the stigma of HIV infection and increase testing. MSF’s efforts, particularly those to combat stigma and discrimination, appear to be a drop in the bucket of what is needed in the country. All of the other countries supported

²⁸ MSF Analysis & Advocacy Unit, Brussels with Southern Africa Medical Unit (2015) HIV/TB Counselling: Who's Doing the Job? Time for Recognition of Lay Counsellors. http://cdn.doctorswithoutborders.org/sites/usa/files/attachments/hiv_tb_counselling_2015_final_report.pdf

by the DGD have experienced widespread public health campaigns to promote testing and reduce stigma, either led by the NGO community or MoH. I agree with respondents that this is necessary in Guinea. Whether it is MSF's role to implement such a campaign is up for debate, but at minimum could be an advocacy objective.

3.3 Key populations

Despite the challenges that it has faced, MSF should continue expanding its efforts to work with MSM, who expressed a need for support, and who are at a very high risk for HIV infection, according to UNAIDS data. In order to do so, MSF should ensure that all of its staff and volunteers are adequately trained and know how to address MSM in an appropriate, non-stigmatizing way, and consider hiring an openly gay staff member.

3.4 Policy change and sustainability

MSF is very active in all national policy discussions with respect to HIV, and is recognized by all partners as a valuable technical expert in HIV care. MSF has, in recent years, influenced a number of important policy advances in the country, covering care for pregnant women, routine VL monitoring, the Country's emergency HIV response plan, and policies for psychosocial support of patients. The policies that MSF has helped influence are likely MSF's most sustainable contribution to HIV care in Guinea, as they indicate the government's commitment to the HIV response.

The MoH's capacity to provide free, high-quality HIV care after MSF leaves is unlikely to be increased by MSF's current efforts to reduce costs that will not be taken on by the government, namely not paying salaries for mediators (lay counsellors), efforts to minimize the costs of reimbursements for transportation and eliminating snacks for the beneficiaries who attend therapeutic groups. Combatting the small but growing AIDS epidemic in Guinea will require sustained financial investment from the MoH to hire and train counsellors, replace user fees for testing and opportunistic infections. It will require steady supply of medicines, reagents and equipment, as well as on-going professional development opportunities for its staff and an expansion of these services to rural areas. Many respondents believe that it will also require a massive public health campaign that uses media to reduce stigma and increased testing. None of these are likely to exist in the near future without external funding.

Planning a handover for 2020 is at odds with MSF's vigorous advocacy to increase donor engagement in West Africa. MSF's departure in 2020 would leave the country without its biggest and one of its best service providers, and without a technical expert to influence policy. If MSF were to leave at this stage, it would also be an outlier in terms of strategy among DGD funded countries. In the other countries being evaluated, with the exception of Kenya, MSF has had a clear strategy for reducing its presence in-country. In most cases, a light approach was taken on, whereby MSF has assumed a monitoring and coaching role, and as MSF reduced the number of facilities that it supports, it maintained a presence for operational research. While the Kibera project maintained a heavier model until its handover this year, MSF's presence and role in HIV care will be maintained by OCP.

RECOMMENDATIONS

- ⇒ Recommendation 1: Continue efforts to reach MSM:
 - Consider hiring an MSM staff member, to show MSF's acceptance of MSM
 - Provide all staff who come in contact with patients (including guards, drivers) with training on sexual diversity and how to appropriately receive LGBT patients
- ⇒ Recommendation 2: Develop a strategy to improve testing, adherence, retention and ultimately treatment outcomes in men.
- ⇒ Recommendation 3: Advocate that the government HIV programs include reducing stigma among their priorities in the HIV response.
- ⇒ Recommendation 4: Assess the role of mediators in comparison to MSF counsellors. If they perform the same functions, they should receive equal pay for equal work. If the mediators are not capable of performing the same functions, investigate staff concerns that the mediators at decentralised facilities are not capable of providing adequate counselling and support to patients in order to ensure that these essential functions are in place.
- ⇒ Recommendation 5: Continue to provide HIV care or support the ministry of health via a light approach, in Guinea beyond 2020.

ANNEX V: COUNTRY REPORT, KIBERA, KENYA

1. CONTEXT AND DESCRIPTION OF PROJECT

MSF Belgium (OCB) has been providing healthcare to the people of Kibera for 20 years, and was among the first organizations providing ARVs in the country. In 1997, OCB, at its centre in Mbagathi, began to see HIV patients who were arriving at the facility too late and in advanced stages of the disease. In the years to come, OCB moved from supporting AIDS patients via home based care to comprehensive HIV, NCD and primary healthcare in the Kibera Project. The Kibera project is the only project among the 5 DGD-funded HIV projects to integrate NCD patients with HIV patients in its medicine adherence clubs. In June 2017, OCB completed the handover of the Kibera project to the Nairobi county government and, as of then, MSF France will be the only remaining MSF section providing HIV care in the country. OCB's focus will now shift to developing a model of care for non-communicable diseases in its new project in Embu county.

2. ADAPTATIONS TO THE EVALUATION METHODOLOGY, NOTES AND LIMITATIONS

The time in the project was limited to four and a half days. Furthermore, the project has already been handed over to the Nairobi county government and AMREF. Much had been written about the project and the integrated MAC model, and the project is conducting a simultaneous capitalization exercise. As such, the evaluators chose not to duplicate existing efforts, and to focus primarily on the topics not covered by existing research – namely the sustainability of the MACS models and the effect of MSF's advocacy.

3. FINDINGS

3.1 Treatment cascade

Table 24. Overview of key VL figures, Kibera project

Active Cohort (end of 2016)	54707
Cohort on ARVs	5086 (94%)
VL Coverage	5035 (99%) among active ART patients
% of ART cohort with undetectable VL	4769 (92%)
Average turnaround time	2014 14 Days (KEMRI) 2015 55 Days (National Reference Lab) 2016 14 Days (National Reference Lab)
% of detectable VL switched to second line after 2 nd detectable VL	Number switched/Total detectable VL =130/180 (72%)
% receiving EAC after 1 st detectable VL	100%

Kibera is a large, informal settlement with both a transient population and other organizations providing HIV and NCD care. This presents difficulties in accurately estimating MSF's catchment area and target population size. Furthermore, since the announcement of MSF's handover, many patients have sought care elsewhere. That said, among 5407 active patients registered in care at the end of 2016, 5086 were receiving ART (94%), 5035 (99%) had their VL monitored, and 4679 (92%) have an undetectable VL. This indicates that MSF has achieved the UNAIDS targets for the second and third 90s.

Effectiveness – Turnaround time (TAT)

MSF was the first organization in the country to provide routine VL monitoring. Samples were initially sent to a private lab in South Africa, after MSF assessed that this would be the least expensive option and would guarantee high quality results. After that, they were sent to the Kenya Medical Research Institute (KEMRI), and in 2015 MSF began sending its samples to the National HIV Reference Lab (NHRL). The NHRL was initially overwhelmed by the volume of tests, and there were long delays in receiving the results, some results were lost, and still others were incorrect. At the time, MSF staff had to physically go to the reference lab and manually search the data base for their patients' results.

At that point, the NHRL began receiving extensive support from the CDC and Clinton Health Access Initiative. Among others, the lab increased the number of VL machines, and automated the dispatching of results, and an online data transmission system allowing health facilities to receive results electronically. For facilities without internet access, an SMS system was put in place, allowing care providers to simply text the patients number and receive the VL results instantly by text.

While the majority of these changes were not MSF-led, respondents did say that MSF did have many meetings with the NHRL lab to discuss their concerns and to look for solutions together, and that this approach was beneficial for MSF, which was given permission to search the NHRL databases to find its patients.

Effectiveness - Switch to second line treatment

72% of patients with a second detectable viral load were switched to the second line. The percentage of patients switched to the second line is 72%, which is the highest among the 5 countries supported by the DGD. The % switched also exceeds that of Unitaids funded VL projects in the Democratic Republic of the Congo, Kenya (OCP), Lesotho, Malawi, Swaziland, and Uganda.

The MoH initially believed that the switch to second line needed to be overseen by specialists, and the process of switching patients was centralized, with MSF participating in the therapeutic committees. This process caused delays. MSF advocated for decentralised switch committees to the facility / clinic level.

There are a number of factors that facilitated Kibera's switching process. The Kibera South Health Centre had its own multidisciplinary switch committee, with the MSF HIV / TB activity manager acting as chair. The committee also included the clinician managing the patients, the counsellor following the patients, and the social workers. Someone from the county may also be invited at MSF's discretion. The switching process did not rely on the approval of an external ART committee within the ministry of health, thereby streamlining the process for approving switches.

Effectiveness – MAC & 1-year appointments / prescriptions

The Medicine Adherence Club (MAC) model in Kibera is a system of medicine refills for patients with HIV, diabetes myelitis, and hypertension. Participants met once quarterly, and attended a 60-90-minute health education and support sessions in a dedicated space. Blood pressure and weight were measured. Patients also received their pre-prepared medicines in a discreet paper bag labelled with the patient's name. Prior to leaving, patients could, ask questions, discuss, any voice concerns that they might have.

The MAC model was designed with the objective of retaining stable patients to care, while minimizing the amount of time that patients spent at the health facility, thereby reducing the opportunity costs including missed work, time away from family, travel expenses, etc.; and in doing so, also reduce the workload of clinic staff, allowing them to prioritize needier patients.

The club model was chosen over CAGs in Kibera for a number of reasons. First, Kibera is a densely populated informal settlement in Nairobi. The urban setting meant that patients did not have to travel long distances to attend the clinic. The CAG model also requires patients to meet regularly, though typically in the community outside the clinic. In the case of the KSHC, the project team believed that the most convenient meeting location would be at the clinic itself. At the time of the MAC development, there were also questions about the extent to which the government would accept giving patients medicines for other patients, and sending them out into the community. Some respondents did however suggest that the CAG model may be appropriate for NCD care if the treatment of NCD care remains centralized, requiring all patients to travel longer distances to a central hospital.

Table 25. Proportion of eligible patients enrolled in MAC

	N.	%
Active cohort 2016	5086	
Eligible Cohort 2016	4079	80%
Active HIV Patients who have ever enrolled in MAC	1176	29%
Referred back the system	303	26%
Currently enrolled in MAC	858	21%

The sentiments expressed by focus group participants who were MAC members echoed the results of the qualitative study of MACs, published in 2016.²⁹ The patients whom we interviewed spoke highly of the clubs for their convenience and the social support that they received. Prior to joining the MAC, many complained of having to miss an entire day of work every three months simply to pick up their refill; the MAC reduced the time at the clinic to as little as 60 minutes for some patients.

²⁹ Venables E, Edwards JK, Baert S, Etienne W, Khabala K, Bygrave H. "They just come, pick and go." The acceptability of integrated medication adherence clubs for HIV and non-communicable disease (NCD) patients in Kibera, Kenya. Plos One. 2016;11(10):e0164634.

The system was also set up so that patients did not have to disclose their status to other members. While disclosure was not required, the interviewees to whom we spoke said that, after having known other club members for some time, they felt comfortable opening up about their illness with other members. Members also said that the clubs, by treating HIV as any other chronic disease, helped to reduce stigma of HIV infection.

Patients who were eligible for the MAC but were not interested in participating a group had the option of attending yearly appointments and being given an automatic refill for their prescription that could be picked up every three months.

The data for participation in the Club suggests that, despite its members appreciation for it, only 29% participated in the MAC. Some interviewees suggested that alternative models, in addition to the MAC, would be of interest to patients as well.

3.2 Impact of MSF's activities

Partners from the MoH believe that MSF has had an impact on incidence and prevalence in Kibera. All responded that MSF had a major impact on mortality when it first began providing ARVs. Partners from the MoH believe that MSF has contributed to lowering the incidence rate in Kibera and Langata. Many respondents cited that MSF was the first to bring free ARVs to the public, and so its impact has been invaluable.

3.3 MSF influence on HIV policy and practice

MSF was the first organization to provide free ARVs to the public system in Kenya, and at its peak was the third biggest HIV care provider in the country. MSF is now only one among many NGOs providing HIV care, and respondents believed that MSF is no longer the advocacy heavyweight that it once was. MSF is highly regarded as expert in technical issues and for innovation in HIV and NCD care. Major donors —the WHO, and CDC— are now the most influential when it comes to national policy decisions. Despite not funding government programs, and a being a relatively small service provider, MSF is listed among the top key partners supporting NASCOP. Other key stakeholders are PEPFAR and its subsidiaries, the Global Fund, Clinton Access Initiative, and the United Nations.

Among these partners, MSF sees its role as influencing the implementation of policies rather than the development of the policies themselves, particularly in the development of technical guidelines and of practices at the Nairobi County level. MSF can do so because it is often the first organization to implement new strategies. It was the first to provide routine VL, to implement differentiated models of care, to task shift HIV and NCD care in Kibera, and to integrate NCD care with primary care, among others. It also has a body of operational research on its new approaches, as well as data, guidelines and experiences to share with the government and with other care providers. Non-MSF stakeholders whom we interviewed saw MSF as an innovator and pioneer in HIV and NCD care, and highly value MSF's technical knowledge and input into guideline development.

An oft-cited example of MSF's influence on technical guidelines is in the implementation of routine viral load monitoring. When National AIDS and STI Control Program (NASCOP) decided to implement routine VL, they were deciding on which guidelines to adapt. WHO at the time had multiple guidelines, but nothing yet existed that was based on the experience of implementing routine VL in the country. The treatment and care working group was looking for evidence from Kenya on its implementation. As MSF had already been implementing routine VL, and already developed its own guidelines for Kenya, the Treatment and Care working group decided to adapt MSF's guidelines, and the guidelines – other than PMTCT - according to many respondents, are a “copy + paste” of MSF's guidelines.

As mentioned above, the adherence club model for HIV and the yearly appointment system have been adopted by the Nairobi City County Health services and other service providers in Nairobi, with support from MSF.

Between 2014-2016, MSF Belgium has advocated for the integration of NCD care in primary healthcare centres, and task shifting of routine NCD care from clinical officers to nurses. These changes have not yet been accepted.

3.4 MSF's advocacy strategy – Effectiveness, Connectedness & Sustainability

As MSF refocuses on NCD care, and despite its self-perception as having lost prominence as a policy-influencer in HIV, it continues to push progressive advocacy objectives on a number of fronts. Its current advocacy objectives are:

1. Integration of quality care, affordability, and accessibility of medical treatment for NCDs at PHC level by 2022;

2. The government develops/implements policies and allocates budgetary resources towards accessibility and affordability of NCDs treatment and care services at PHC level by 2022;
3. Creation of platforms of mobilization to push the NCD treatment at PHC level issue on the agenda of health authorities;
4. Initiation of the discussions at all medical authority levels on the NCD management at PHC level in the country;
5. Raising awareness on NCD-related health problem and the viability of models of care initiated by MSF.

MSF's advocacy strategy relies heavily on participation in Technical Working Groups, particularly with respect to non-communicable diseases. In 2014 and 2015, MSF France and MSF Belgium shared an advocacy officer who worked on advancing HIV policy, and in 2015, the two sections decided that MSF France would take over all HIV advocacy, and that MSF Belgium would focus exclusively on advancing NCD policy. This said, the two sections still collaborate, and much of the data used by MSF France for HIV advocacy is taken from the Kibera project.

Building the capacity of civil society has been a pillar of MSF's work since it began providing curative treatment in 2003. In the early days of the project, MSF helped to form post-test clubs (PTC) to advocate for increased access to treatment for HIV patients. Two networks of PTCs, the Kibera Post Test Club Network for People Living with HIV/AIDS (KIPOTEC), and the Nairobi Network of Post Test Clubs (NNEPOTEC), received extensive support from MSF and now function independently of MSF, and the groups sit in the national task force and have representatives in all national fora.

More recently, MSF helped to develop COSAT, a patient advocacy group. MSF has provided this group with advocacy training, and support so that the group can effectively react to future stock outs of ARVs. The group also has plans to create a community pharmacy, whereby the group negotiates collectively for NCD and OI drugs in order to reduce the price.

A lasting effect of MSF's efforts to build the capacity of civil society, coupled with its work in the community, has been reducing the stigma of HIV infection. All of the PLHIV whom we spoke talked about how much MSF has helped to empower PLHIV through support groups and hiring PLHIV to be role models and conduct education in the community. One respondent suggested that the Nubian (predominantly Muslim) community in Kibera initially did not want to be associated with HIV, or HIV education, and that MSF had helped to bring the community around and accept PLHIV.

Looking forward, MSF's strategy for increasing access to NCD care includes building the capacity of the NCD Alliance Kenya (NCDAK) at national level and in Embu county and conducting trainings for patient advocacy groups.

Below are the advances that MSF has contributed to in HIV / NCD care since 2014, according to interviewees.^{30,31}

- National Plan for Accelerating HIV Care and Treatment NASCOP, 2015-2017. MSF listed as a contributor.
- Guidelines on the Use of Antiretroviral drugs for treating and preventing HIV in Kenya, 2016. Multiple chapters. MSF listed as a contributor.
- National Isoniazid Preventive Therapy Standard Operating Procedure March 2015.
- Asthma (draft guideline).
- Sickle cell (draft guideline): There is a draft that exists, the TWG borrowed heavily from MSF's guidelines.
- Epilepsy (final guideline): National guidelines for epilepsy management, borrowed heavily MSF treatment guidelines.
- Mental health (final policy, draft guidelines) MSF psychiatrist participated in the development of the policy.
- National Curriculum for the training of paramedical staff on the management of Non-Communicable Diseases.
- Kenya National Strategy for the Prevention and Control of Non-Communicable Diseases 2015 – 2020.

3.5 Replicability & Sustainability

MSF has recently handed over the Kibera project, and the extent to which it will be sustained is a big question for the team and for MSF's former patients. Prior to its departure, the Nairobi City County Health Services took strides to ensuring adequate staffing of the health centre, by fulfilling a request for additional personnel for the HC, and allocating five doctors, two clinical officers, seven nurse/midwives, and a pharmacist to the facility, a sign of its commitment to sustaining the activities initiated by MSF. These staff members will be further supported by AMREF who will employ over 30 of MSF's former staff.

The integrated NCD / HIV MAC model relied on a number of practices which are unique to MSF:

³⁰ This is not an exhaustive list of the policies and practices that MSF has influenced.

³¹ This list does not distinguish between MSF Belgium and MSF France

- **Individual healthcare providers provide integrated care for NCDs and primary care.** This is essential to eliminating the need for patients to be seen by one consultant, rather than attending separate consultations for the HIV and for their NCDs. This is not yet common practice in Kenya.
- **Nurses manage uncomplicated NCD and HIV cases.** While this practice is common in Kenya for HIV, it is not yet widely used for NCDs. The new NCD strategy recognizes the need for task shifting of HIV care, but as of yet it is not in practice; urban settings where doctors are present may be particularly slow to delegate responsibility to nurses.
- **Lay cadres conduct counselling, facilitate MAC sessions, dispense drugs for both HIV and NCD patients, under the supervision of a nurse.** Lay cadres in Kenya are only authorized to conduct testing for HIV, and have no official role for NCDs.
- **NCD drugs are available free-of-charge and in sufficient supply to be dispensed every three months.** NCD drugs are not provided free-of-charge, and currently Amref is not able to provide a three-month supply.

As Amref is unable to provide free NCD drugs or NCD drugs in three month quantities, NCD patients have to return for monthly consultations for their medication. The possibility of having patients to be both members of MAC and return for separate NCD care was considered, but ultimately it would create a time burden for the patients. As a result, all patients with NCDs have been removed from Amref's MAC. Amref will continue the HIV MAC model, but nurse-counsellors will be responsible for facilitating the MACs and for dispensing drugs.

Though not all of the required policies are in place (or implemented) for the replication of MSF's integrated MAC model, respondents believed that many of them would soon be in place, particularly with respect to task shifting and the recognition of lay cadres. Currently however, there is interest from other counties and from other organizations to implement adaptations of MSF's HIV MAC model.

The patients interviewed expressed anxiety about MSF's departure from Kibera. Some complained that the wait times had already increased, and that they had been charged for medicines that they should not be charged for.

In addition to the gratuity of medicines, a number of respondents, including patients, MoH personnel, partners, and MSF staff mentioned some key differences in the way that MSF works in comparison to MoH staff. Respondents noted that the Kibera South Health Centre (KSHC) now has daily quotas for patients that cannot be exceeded, requiring some patients to have to return to the facility the next day to receive their care, and causing complications for patients whose work precludes them from attending the clinic in the mornings.

"Programs have to come to an end, but please don't pull out entirely. Stay and do research. Help us do research, and learn new things. The research is very good. I know their strengths. Let them come back! MSF is part of Kibera, and Kibera is part of MSF. They need to rethink their decision to leave."
– MoH partner.

Just a few months after MSF's departure, patients are already seeing a decline in the quality of care that they are receiving at the centre. The MoH staff also admit that this is likely, noting that what distinguishes MSF from the MoH is the constant drive and willingness to do whatever it takes to improve the comfort of their patients.

4. DISCUSSION AND CONCLUSION

Routine VL is in place in Kibera, with 99% of patients having their VL monitored. There have been problems and subsequently significant improvements in the turnaround time for treatment when the national reference lab took over VL testing in 2015.

Of the three 90s, the first —that 90% of PLHIV know their status— is hard to calculate, particularly in an informal settlement like Kibera where MSF is not the only care provider. However, MSF has surpassed the targets for the % of eligible patients on ART (94%) and for the % of ART patients with undetectable VL (92%).

The % of patients switched to the second line after two detectable VL was, at 72%, higher at Kibera than in 10 other projects evaluated this year. The fact that the clinics were MSF-operated and did not have to seek MoH approval for these switches likely greatly improved the likelihood of their patients being switched. The other DGD projects, which have much lower switch rates, either have centralized ART committees, requiring patient files to be sent to the capital or regional capital for approval, and/or if the switch is done at facility level, it requires approval from MoH personnel.

The NCD / HIV MAC model was well appreciated by clinicians and patients at the Kibera South Health Centre, as it reduced the workload for clinical staff at the KSHC, reduced the time that patients needed to spend at the clinic, and

maintained high quality care. The sustainability and replicability of this model requires a number of changes in the policies and practices of HIV and NCD care in Kenya. It does not appear, at this moment, that the HIV/NCD MAC model, as implemented by MSF, is sustainable or replicable. That said, Amref is implementing an adapted MAC model for HIV, and others within the country are interested in doing the same - which is evidence of the sustainability of the concept, if not the exact replica of the model.

MSF, being the first organizing providing free ARVs in the public system, has clearly made a great impact on the trajectory of HIV care in Kenya. This has given MSF excellent credibility among HIV donors, care providers and the MoH in Kenya. MSF's influence on national level policies has diminished over time as other organizations take over the funding and implementation of HIV care in the country. MSF remains an important player in the development of strategies and technical guidelines for the implementation of national policies.

MSF has helped to reduce the stigma of HIV infection, and to build active networks of PLHIV, with the development of KIPOTEC, NEPOTEC and COSAT, to advocate on behalf of HIV and NCD patients. These groups will continue to operate independently of MSF.

ANNEX VI: TERMS OF REFERENCE

TERMS OF REFERENCE

Subject/Mission	Evaluation of DGD funded (2014-2016) projects: Optimizing HIV/TB & NCD treatment in 5 Subsaharan Africa countries <i>Guinée, Kenya, Mozambique, South Africa, Zimbabwe</i>
Evaluation Sponsor/ Owner	OCB- Cells 5, 3 & 1
Evaluation Focal Points	Marc Biot, CO Cell 5; William Etienne Dep. CO Cell 3; Vincent Lambert, Med. Off Cell1.
Primary Stakeholders/ Evaluation Communication Group	HoM and MedCos of Guinée, Kenya, Mozambique, South Africa, Zimbabwe
Starting Date	March 2017
Duration	3 months

MEDICAL HUMANITARIAN CONTEXT

MSF OCB has been involved since 1999 in various Southern, Eastern and Western African countries in developing programs intended to decreasing the incidence of HIV, by putting patients on treatment and helping them to remain adherent.

The strategies designed in the various programs focus mainly on how to deliver quality and affordable care & treatment to a large number of people living with chronic condition while controlling the attrition along the care continuum.

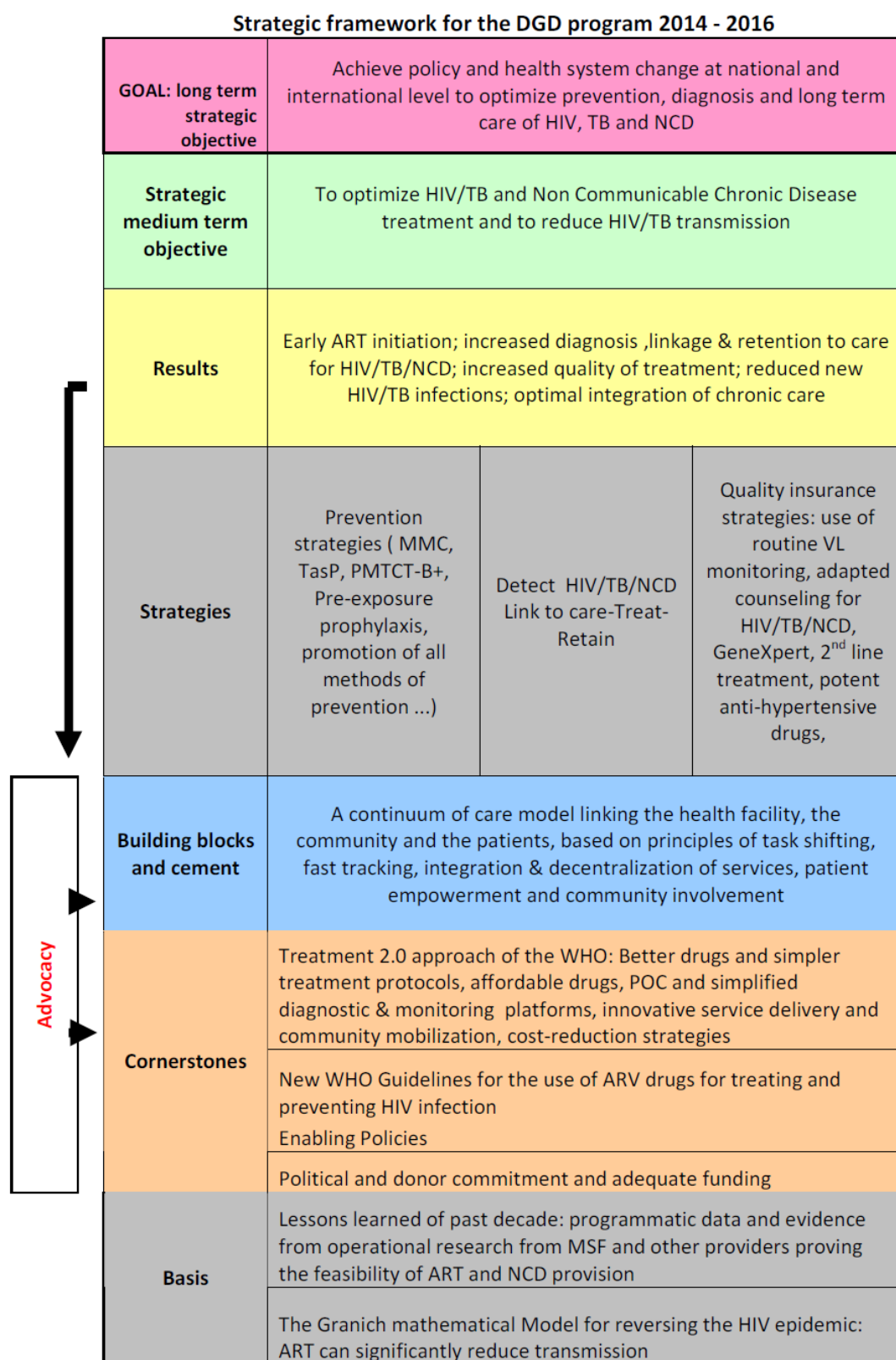
If these strategies were designed primarily for patients with *communicable* chronic diseases (such as HIV, TB, MDR-TB, hepatitis C), it became obvious that the same strategies could be adapted to some *non-communicable* chronic conditions (such as hypertension, diabetes) etc.

By optimizing HIV/TB & Non-Communicable Chronic Disease treatment the strategies also aim at reducing HIV/TB transmission at population level and designing integrated models of care for chronic diseases at community, patient and health facility.

The long-term objective of this heavy involvement by MSF OCB is to achieve policy and health system change at national and international level to optimize prevention, diagnosis & long-term care of HIV, TB & NCD.

In this perspective MSF OCB received continuous support by the Belgian General Directorate for Development (DGD) in 3 separate periods of 3 years: 2008-2010; 2011-2013 and lastly 2014-2016. The different programs benefiting the DGD funding were located in South Africa, Mozambique and Mozambique (2008-16), Malawi (2008-2013) and Guinée (2011-2016). Some projects were however closed while others were added from the subsequent DGD findings in this 9-year period.

For the last funding period ranging from 2014-2016, following operational strategy was proposed to DGD:



Information about specific DR TB / HCV / NCD approach/focus of each of the projects to be evaluated will be provided to the evaluators, before drafting the inception report.

REASON FOR EVALUATION / RATIONALE

As the last funding DGD cycle has come to an end, MSF OCB is contractually obliged to provide an external evaluation on the progress of the different projects included in this large funding program. As all projects were also based on a same rationale and common strategy, it was therefore thought of high interest to have a comparison of the treatment cascades between the different projects, as well as the activities, successes and challenges of the different strategies.

In order to be able to have a more in-depth analysis, it was proposed to choose among a wide variety of angles & questions on following points (*reflected as focus areas of the expected results section*):

- A focus on the viral load cascade, providing a description of successes and challenges from viral load completion up to suppression, with a special focus on switch to second line - what works where and why.
- The political leverage obtained in the different projects towards national authorities and the international community.
- Comparison between successes and challenges encountered in NCD-(DR)TB as compared to HIV programs

OVERALL OBJECTIVE AND PURPOSE

Provide a general and independent assessment of the extent to which the 5 DGD supported sites were successful in achieving their objectives (specific focus during the last funding period (2014-2016)), including their respective impact on national and international policies and practice, as well as understand what lessons can be drawn through a comparison on the relative success of the different approaches.

SPECIFIC OBJECTIVES

The following are the suggested evaluation questions to be used and adapted per project. The evaluation team is requested to critically appraise these in terms of achieving the overall objective above.

RELEVANCE:

- *Do project objectives correspond with identified needs? Are our intervention choices appropriately prioritised to meet the most urgent needs first?*

APPROPRIATENESS:

- *Is the strategy appropriate in order to achieve the objectives?*

EFFECTIVENESS:

- *To what extent have the agreed objectives been achieved?*
- *Were the activities carried out as originally planned?*
- *What were reasons for achievement or non-achievement of objectives?*
- *What are the limitations/opportunities inherent in the approach?*
- *What can be done to make the intervention more effective?*

IMPACT:

- *Can relevant changes in national and international policy & practice be attributed to the project?*
- *Does our presence have any unforeseen positive or negative impact?*
- *Were any differences in the impact between adult and paediatric population? Which ones?*

CONNECTEDNESS:

- *What long-term problems can be identified, and how have they been taken into consideration?*

EXPECTED RESULTS

- Maximum of 5 key recommendations to each project aimed at streamlining the success of the initiatives post-DGD funding
- Inception Report prior to implementation and field visits, as per SEU standard
- Final report of maximum 30-50 pages, as per SEU standard
- Restitution of preliminary observations at field level prior to leaving each field site
- Presentation and discussion of evaluation outcomes (timing to be discussed)
- Specific focus areas:
 - An understanding of the successes & challenges from viral load completion up to suppression, with a special focus on switch to second line;
 - Description of main differences & challenges encountered in DR TB & NCD treatment (where applicable)
 - The political leverage obtained in the different projects towards national authorities and the international community.
 - Other? (to be checked with evaluation owner at inception)

TOOLS AND METHODOLOGY PROPOSED

The following list is not exhaustive. The evaluation team should propose their own methodological approach that achieves the objectives set. Innovative approaches are welcomed:

- Review and analysis of project documents
- Meeting/discussion/interviews with key-team members at HQ and field levels
- Meeting/discussion/interviews with key-authorities
- Meeting/discussion/interviews with patients/former patients
- Natural group discussions or focus groups
- Analysis of national policies, media etc. to assess policy change impact
- Observation

RECOMMENDED DOCUMENTATION

- *Annual reports of 2014-15;*
- *Draft annual reports of 2016;*
- *Previous 3-years periods were already subsequently evaluated during or at the closure of the funding period.*

Previous evaluations performed in the period 2014-2016:

South Africa:

<http://evaluation.msf.org/evaluation-report/evaluation-of-community-hiv-testing-modalities-msf-ocb-in-kwazulu-natal-south>

Guinea:

<http://evaluation.msf.org/evaluation-report/evaluation-of-decentralisation-to-and-strengthening-of-peripheral-health>
<http://evaluation.msf.org/evaluation-report/msf-ocb-matam-project-guinea-evaluation-improving-access-care-people-aids-and-or>

Mozambique:

<http://evaluation.msf.org/evaluation-report/evaluation-of-hiv-counselling-msf-ocb-tete-mozambique-2016>

Kenya:

<http://evaluation.msf.org/evaluation-report/evaluation-of-the-ocb-kibera-project-handover-process-kenya-2015>
<http://evaluation.msf.org/evaluation-report/providing-comprehensive-health-care-in-a-slum-setting-external-evaluation-of>

Zimbabwe:

<http://evaluation.msf.org/evaluation-report/evaluation-of-viral-load-monitoring-msf-ocb-gutu-district-zimbabwe-2016>

PRACTICAL IMPLICATION OF THE EVALUATION

Number of evaluators	Two
Timing of the evaluation	
Required amount of time (Days);	
• For preparation (Days)	10
• For field visit & interviews (Days)	50
• For analysis (Days)	10
• For writing up report (Days)	10
Total time required (Days)	80 (40 days per consultant)

Notes: *Any additional criteria relevant to the selection of evaluation consultants*

PROFILE/REQUIREMENTS: EVALUATOR(S)

The mixed team (one with MSF experience and one without) should collectively contain the following competencies:

- Master in Public Health and/or Epidemiology
- Knowledge of HIV and TB programming
- Previous experience in managing public health programs in Africa
- Relevant and proven skills to evaluate advocacy (policy change) initiatives
- Ability to work in French and English, Portuguese is an asset
- Availability between March/April and June...

ANNEX VII: LIST OF INTERVIEWEES

OCB HEADQUARTERS and SOUTH AFRICAN MEDICAL UNIT		
First name	Last name	Function
Saar	Baert	Former HIV/TB Patients & Community Support, MSF OCB, South Africa
Richard	Veerman	Former Operations Coordinator Cell 3, MSf OCB Brussels
Eric	Goemaere	HIV/TB Coordinator, SAMU, MSF OCB, South Africa
Marc	Biot	Operations Coordinator Cell 5, MSF OCB, Brussels
Mit	Philips	Health Policy Advisor Coordinator, MSF OCB, Brussels
Vincent	Lambert	Medical Officer, Cell 1, MSF OCB, Brussels
ZIMBABWE		
First name	Last name	Function
Shepherd	Kuchcha	District Nursing Officer, Ministry of Health and Child Care, Gutu district, Zimbabwe
Lovemore	Cihsema	District Administrator, Ministry of Health and Child Care, Gutu district, Zimbabwe
Ireen	Matingwina	Nurse Mentor, Ministry of Health and Child Care, Nurse Mentor, Gutu district, Zimbabwe
Monica	Ushendibaba	Consellor Mentor, Ministry of Health and Child Care, Gutu district, Zimbabwe.
(Dr.) Tapiwa	Mupepe	Acting District Medical Officer, Ministry of Health and Child Care, Gutu district, Zimbabwe
A. Edmund	Masanganile	Chief Gutu, Patron Gutu Development, Gutu district, Zimbabwe
Charles	Mushangwe	Chairman, Gutu Development Forum, Gutu district, Zimbabwe
Christopher	Kanyenga	Finance and Admin Officer, NGO BHASO, Gutu district, Zimbabwe
Morris	Vernge	Human Resources Manager, NGO BHASO, Gutu district, Zimbabwe
(Dr.) Abraham	Mapfumo	Deputy Field Co, MSF OCB, Gutu district, Zimbabwe
Celani	Mutatiwa	Primary Care Nurse, Ministry of Health and Child Care, Gutu district, Zimbabwe
Mukute	Stabile	Primary Counsellor, Ministry of Health and Child Care, Gutu district, Zimbabwe
Stephen	Mushaike	Patient, Gutu district, Zimbabwe
Davison	Nkingo	Patient, Gutu district, Zimbabwe
Manyere	Milker Takwiri	Patient, Gutu district, Zimbabwe
Sipelile	Manyenga	Patient, Gutu district, Zimbabwe
Exactly	Mukomondera	Patient, Gutu district, Zimbabwe
Sylvia	Mandigo	Patient, Gutu district, Zimbabwe
Sharon	Musiwa	Patient, Gutu district, Zimbabwe
Reves	Mberengwa	Patient, Gutu district, Zimbabwe
Paul	Matsinise	CARG/HP Assistant Coordinator, Ministry of Health and Child Care, Gutu district,
(Dr.) J.	Apollo	Deputy Director National AIDS Program, Ministry of Health and Child Care, Harare,

Kuziwa	Kuwenyi	Deputy Medical Coordinator, MSF OCB, Harare, Zimbabwe
Daniela	Belen Garone	Medical Coordinator, MSF OCB Harare, Zimbabwe
Bjørn	Nissen	Head of Mission, MSF OCB, Harare, Zimbabwe
SOUTH AFRICA		
First name	Last name	Function
(Dr.) B.	Gergonne	Medical Epidemiologist, Epidemiology Activity Manager, MSF OCB, Eshowe project
Viwe	Matutyana	Epidemiologist, MSF OCB, Eshowe project, South Africa
Linda	Dlamini	ART Manager, Department of Health (DoH), KwaZulu Natal, South Africa
Mduduzi Nicol	Mbatha	King Cetshwayo Health District, District TB manager, DoH, KwaZulu Natal, South Africa
Lwazi	Finida	Director, NGO Child Care South Africa
Thule	Mthimlutulu	Programs Manager, NGO Child Care South Africa, South Africa
Celiwe	Ndlovu	Counsellor Supervisor, Community Models of Care, MSF OCB, Eshowe project, South
Nosicelo	Ntumase	Community Models of Care Supervisor, MSF OCB, Eshowe project, South Africa
Busi	Ndlovu	Community Health Agents Coordinator, MSF OCB, Eshowe project, South Africa
Siphile	Mbambo	Community Mobilisation Coordinator, MSF OCB, Eshowe project, South Africa
Gloria	Galela	Clinical Nurse Practitioner HTA- farms, MSF OCB, Eshowe project, South Africa
Thethwayo	Bongani	Clinical Nurse Practitioner, HTA-College, MSF OCB, Eshowe project, South Africa
S.M.	Zungu	Acting CEO, Mbongolwane Hospital, Department of Health, KwaZulu Natal, South Africa
Nomvula	Nzuza	HAST, Mbongolwane Hospital, Department of Health, KwaZulu Natal, South Africa
VH	Zutali	PHC Supervisor, Mbongolwane Hospital, Department of Health, KwaZulu Natal, South
Noypho N.C.	Zwani	Clubs, Mbongolwane Hospital, Department of Health, KwaZulu Natal, South Africa
P.N.	Sangweni	CEO, Eshowe Hospital, Department of Health, KwaZulu Natal, South Africa
(Dr.) F.W.	Dube-Mathonsi	Nurse Manager, Eshowe Hospital, Department of Health, KwaZulu Natal, South Africa
P.L.	Bhengu	HAST Operational Manager, Eshowe Hospital, DoH, KwaZulu Natal, South Africa
P.T.	Mthabera	PHC management/Supervisor, Eshowe Hospital, DoH, KwaZulu Natal, South Africa
Musa	Ndlovu	Deputy Project Coordinator, MSF OCB, Eshowe project, South Africa
Ellie	Ford Kamara	Project Coordinator, MSF OCB, Eshowe project, South Africa
Liesbeth	Ohler	Project Medical Referent, MSF OCB, Eshowe project, South Africa
W.T.F.	Dlamini	Operational Manager, King Dinezulu Clinic, DoH, KwaZulu Natal, South Africa
Philisiwe	Mhlongo	Patient, KwaZulu Natal, South Africa
Victoria	Mhlongo	Patient, KwaZulu Natal, South Africa
Ayanda	Nyandeni	Patient, KwaZulu Natal, South Africa
Mfeka	Bongiwe	Community Advisory Board, Eshowe, KwaZulu Natal, South Africa
Queen	Xulu	Community Advisory Board, Eshowe, KwaZulu Natal, South Africa

Carlos	Arias Vicente	HTA Medical Doctor, MSF OCB, Eshowe project, South Africa
Bonisiwe	Mhlongo	HTS Counsellor, MSF OCB, Eshowe project, South Africa
Singobile	Nzama	HTS Lay Counsellor, MSF OCB, Eshowe project, South Africa
Nhlkanipho	Mkhize	CHAP, KwaZulu Natal, South Africa
Constance	Ngubo	CHAP, KwaZulu Natal, South Africa
Flora	Bertizzolo	EEAS, South Africa
Gilles	Van Cutsem	HIV & TB adviser, SAMU, MSF OCB, South Africa
Amir	Shroufi	Medical Coordinator, MSF OCB, South Africa
Rodd	Gerstenhaber	Head of Mission, MSF OCB, South Africa
Tom	Ellman	Head, SAMU, MSF OCB, South Africa
Neviline	Slingers	Manager, South Africa National AIDS Council
Nancy	Fee	UNAIDS, South Africa
Laura	Lopez Gonzalez	Journalist, Mail and Guardian South Africa
MOZAMBIQUE		
First Name	Last name	Function
Mariano J.	Guillerme	Nurse Supervisor, MSF OCB, – Changara, Tete Project, Mozambique
Adamo Y.	Mahala	Lab supervisor, MSF OCB, Tete Project, Mozambique
Raja Simone	Reis	CAG supervisor, MSF OCB, Tete Project, Mozambique
Jessie	Kurnurkar	Fieldco, MSF OCB, Tete Project, Mozambique
Gianluca	Ferrario	Medical Coordinator, MSF OCB, Mozambique (previously PMR)
Humberto	Jassitene	Advocacy Manager, MSF OCB, Tete Project, Mozambique
Julia	Tedesco	Patient Support Manager, MSF OCB, Tete Project, Mozambique
Maria	Candida	Counsellor for Sex Workers, MSF OCB, Tete Project, Mozambique
Emma	Gibson	PEER EDUCATOR –sex workers, MSF OCB, Tete Project, Mozambique
Marta	Ngange	PEER EDUCATOR – sex workers, MSF OCB, Tete Project, Mozambique
Stella Inatio	Shayna	Supervisor of health promotion for sex workers, MSF OCB, Tete Project
Evelise Jesus	Conrado	NURSE FOR MATERNAL HEALTH, MSF OCB, Tete Project, Mozambique
Caroline	Rose	Head of Mission OCB, MSF OCB, Mozambique
Lucas	Molfino	Head of Mission / Medical Coordinator OCG, MSF OCB, Mozambique
Chemonix		Partner
PEPFAR		Partner
UNAIDS		Partner
Village-Reach		Partner
Centers for Disease Control		Partner

Rosa		Tete DPS, MSF OCB, Mozambique
7 sex workers		Patients
2 Adolescents		Patients
Church leader		Community member
Community leader		Community member
3 female CAG members		Patients
4 CAG Members		Patients
1 Male non-CAG member		Patient
4 female non-CAG members		Patients
KENYA		
First name	Last name	Function
Beatrice	Gachambi	NCD Advocacy Manager, MSF OCB, Kenya
Dr. C.B.	Mbombo	PMR for Handover, MSF OCB, Kibera project, Kenya
David	Bole	Deputy PMR, MSF OCB, Kibera project, Kenya
Dr. Denis	Wanyama	Partner, Amref
Stella	Kisoi	Medical Officer in charge NCHHS, Ministry of Health, Kenya
Dr. Kiplagat	Anthony	Sub-county HIV coordinator for Langata Ministy of Health, Kenya
Sara	Chandi	Sub-county TB coordinator Ministry of Health, Kenya
Kelly	Khabala	HIV-TB Activity Manager, MSF OCB, Kibera project, Kenya
Jerouen	Matthys	Fieldco, MSF OCB, Kibera project, Kenya
Daniel	von Rège	HoM, MSF OCB, Kenya
Lilie Marie	Wangari	NCD Coordinator, MSF OCB, Kenya
Sheila		Acting County HIV Coordinator, Ministry of Health, Kenya
Siama	Musine	Health Promoter, MSF OCB, Kibera Project, Kenya
Walter	Kizito	Epidemiologist, MSF OCB, Kenya mission, Kenya
4 patients, COSAT		Patient advocacy group, Patients (FGD)
GUINEA		
First name	Last name	Function
Marcos J.	Tamariz	Advocacy Manager, MSF OCB, Guinea
Dr. Fabien	Kabongo	Fieldco, MSF OCB, Conakry HIV project, Guinea
Kandian I.	Diallo	HoM, MSF OCB, Guinea
Dr. Ismael I.	Adjaho	Medco, MSF OCB, Guinea
Dr. Benoit	Haba	Deputy Medco, MSF OCB, Guinea
Toussaint	Mukelenge	Nurse in Activity Manager, MSF OCB, Matam, Conakry HIV project, Guinea

Dr.El Hadj M.	Bah	Médecins chef de prise en charge, MSF OCB, Matam, Conakry HIV project, Guinea
Barri Mama	Do Bella	Social assistant, MSF OCB, Matam, Conakry HIV project, Guinea
Tonkara	Alexi	Social assistant, MSF OCB, Matam, Conakry HIV project, Guinea
Alpha O.D.	Diallo	Patient support supervisor, MSF OCB, Matam, Conakry HIV project, Guinea
Mouna		Patient Expert Coordinator, MSF OCB, Conakry HIV project, Guinea
Bountou	Koutaté	Health Promoter, MSF OCB, Matam, Conakry HIV project, Guinea
Mabinty	Touré	Health Promoter, MSF OCB, Matam, Conakry HIV project, Guinea
Baldé	Boubacar	Health Promoter, MSF OCB, Matam, Conakry HIV project, Guinea
Diallo M.D.	Our	Health Promoter, MSF OCB, Matam, Conakry HIV project, Guinea
Sow	Oumar	Patient Support, MSF OCB, Donka, Conakry HIV project, Guinea
Tima		Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Gjenabougbe		Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Diallo	Boubacar	Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Nanoumassare		Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Fatou	Silla	Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Kajatou	Oudgié	Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Kadiatou	Kamara	Amie de la santé, MSF OCB, Matam, Conakry HIV project, Guinea
Dr. Yussuf	Koita	Coordonateur Program National de Prévention et de Prise en Charge des PVVIH, MoH
Ahiatsi	Arnold	Assistent Technique PNPPC des PVVIH, Ministry of Health, Guinea
Guilavogui	Foromo	Chef de l'unité de prise en charge, PNPPC des PVVIH, Ministry of Health, Guinea
Dr. M.	Cissé	Coordonnateur Centre de Traitement Ambulatoire de l'hôpital national de Donka, MoH
2 Mediateurs de Santé		Centres de santé Gbessia, Beneficiary and community interview
3 Adult patients		Patients
2 Adolescent patients, female		Patients
2 Adolescent patients, male		Patients
Presidents associations of PLHIV		Partner (FGD)
3 Sex Workers, female		Patients
2 Sex Workers, male		Patients
ONUSIDA		Partner
Dream		Partner
Solthis		Partner
PSI		Partner

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