BENDING THE CURVES OF THE HIV/TB EPIDEMIC IN KWAZULU-NATAL

"People are not afraid to take their treatment. We used to bury people every Saturday. Now, people are alive."

Babongile Luhlongwane – Community Health Worker

MEDECINS SANS FRONTIERES

BENDING THE CURVES

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2016

Design by Design for development

"Our service is very important for people to test sicknesses like HIV. Places like these have privacy for people to feel free to know their status."

MSF Lay counselor

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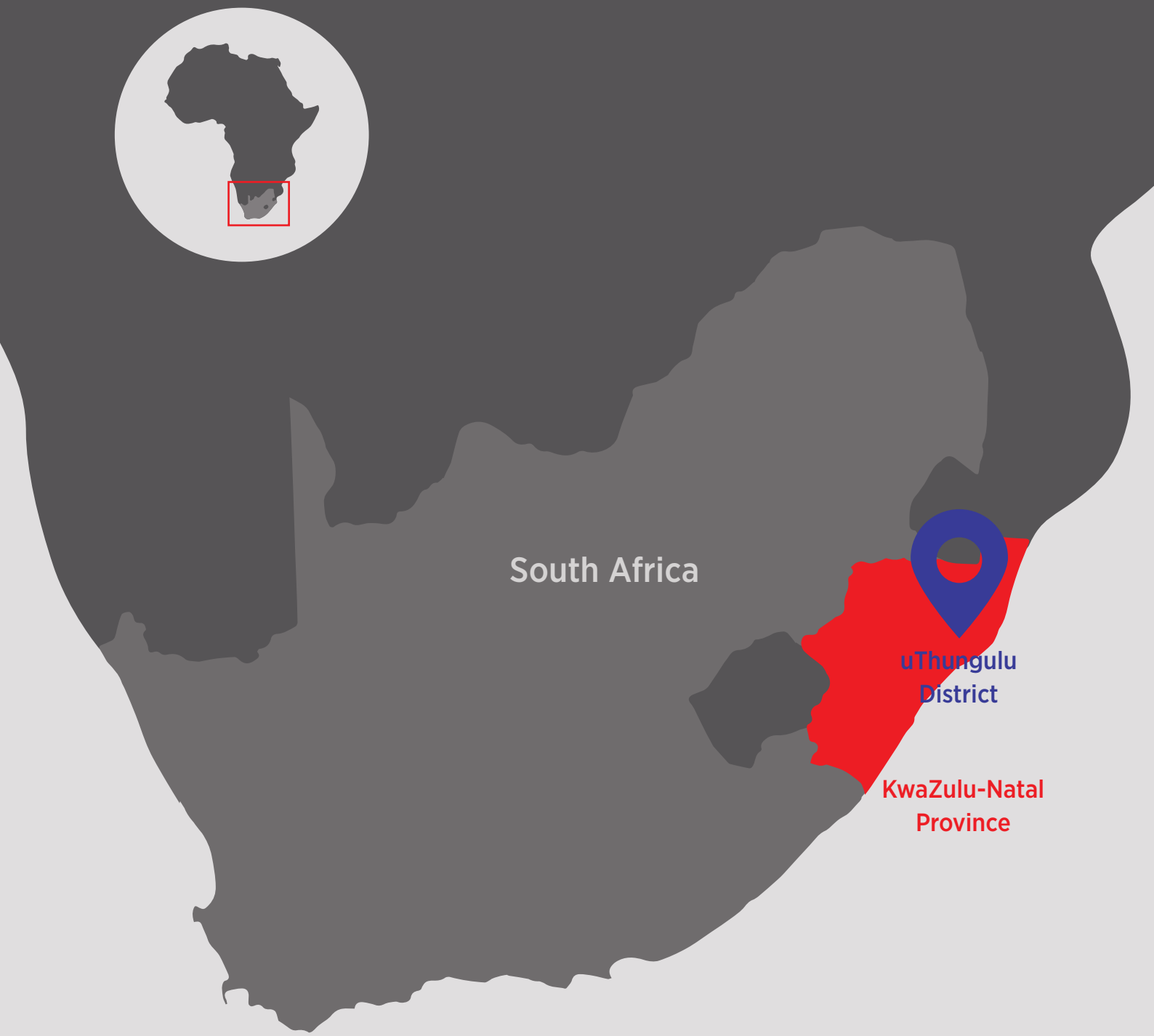


The “Bending the Curves” project aims to decrease the incidence of new HIV and TB infections, while reducing morbidity and mortality associated with both diseases.

BENDING THE CURVES IN KWAZULU-NATAL

Over 6.8 million people in South Africa are living with HIV.[1] KwaZulu-Natal (KZN) province has been particularly impacted by the epidemic—among those aged 15-49 years, 27.9% are HIV-positive[2] and incidence stands at 2.22%.[3] 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.[4]

Doctors Without Borders (MSF) has been providing HIV/TB services in South Africa since 1999. In April 2011, in partnership with the KZN Department of Health (DOH), MSF started an HIV/TB project called "Bending the Curves" in uMlalazi Municipality, uThungulu District. MSF supports nine clinics and three hospitals in an area with a population of 114 000. The coverage zone provides an opportunity to demonstrate the outcomes of activities in both the urban setting of Eshowe and rural setting of Mbongolwane.

Across the HIV care continuum, MSF has rolled out community-based and facility-based activities dedicated to increasing uptake of HIV/TB testing and counselling, and enhancing access to treatment. Moreover, the project promotes a client-centered approach to delivering treatment and improving retention in care, by supporting patient clubs and adherence groups.

This brief outlines innovative strategies that have been undertaken at each stage of the cascade to improve outcomes, presents lessons learned, and recommends interventions that could be replicated or scaled up elsewhere, in order to support the achievement of national and international targets for successfully treating people living with HIV.

HIV POLICY CONTEXT

Since 2011, a substantial body of evidence has shown that taking antiretroviral therapy (ART) to achieve an undetectable viral load (VL) reduces transmission of the virus to others, and also results in better clinical outcomes for people living with HIV.

The HPTN052 study showed a 96% reduction of HIV transmission to an uninfected partner when the infected partner was on ART.[5] These findings led to the promotion of **Treatment as Prevention**. In 2015, the publication of results from the Strategic Timing of AntiRetroviral Treatment (START) study found that **starting HIV-positive individuals on treatment irrespective of their CD4 count** conferred individual health benefits.[6]

2015 guidelines from the World Health Organisation (WHO) draw on this evidence in recommending **"Test and Start"**: the lifelong provision of ART regardless of CD4 cell count to all children, adolescents and adults, and all pregnant and breastfeeding women living with HIV. WHO has also expanded earlier recommendations to offer oral pre-exposure prophylaxis (PrEP) to prevent infections among populations at substantial risk of acquiring HIV.[7]

HIV treatment is a critical tool towards ending the AIDS epidemic, but maximally reducing incidence will also require the scale-up of HIV prevention, testing, linkage to care and life-long adherence strategies, with a particular focus on key populations.

UNAIDS ambitious **90-90-90 strategy** estimates that the AIDS epidemic can be ended by the year 2030 if three targets are achieved by the year 2020[8]:

- **90% of all people living with HIV know their status;**
- **90% of all people diagnosed with HIV receive sustained antiretroviral therapy;**
- **90% of all people receiving antiretroviral therapy are virally suppressed.**

In May 2016, **South Africa** announced that it will begin implementation of "Test and Start" from September 2016. Reaching 90-90-90 targets will guide the development of the country's next **National Strategic Plan on HIV/TB and Sexually Transmitted Infections, 2017-2021.** The recent investment case for HIV and TB conducted in South Africa highlighted that the move towards Test and Start, while requiring an initial outlay of funds, proves cost-effective in the long term through averting incidence of HIV.[9] Test and Start, in conjunction with the preventative cost-saving interventions of condom distribution and male medical circumcision, will be essential for achieving the 90-90-90 targets and improving general health outcomes among the population.

2013 POPULATION SURVEY: KEY FINDINGS

A SURVEY PROVIDING A BASELINE OF THE IMPACT OF HIV IN THE COMMUNITY WAS CONDUCTED BY MSF IN THE ESHOWE/MBONGOLWANE AREA IN 2013.[10]

HIV PREVALENCE

25.2%

for age group 15-59

75%

of HIV-positive individuals were **AWARE OF THEIR HIV STATUS**

ART COVERAGE among HIV-positive patients eligible at the time* was

75%

meaning of all people living with HIV,

53.1%

WERE ON ART

*In 2013, ART initiation was recommended for all individuals with clinical stage 3 or 4 HIV and with CD4 count <350, and all pregnant and breast-feeding women, sero-discordant couples, or individuals co-infected with active TB, regardless of CD4 count.

86%

of people on ART had a

VIRAL LOAD <100 COPIES/ML

SOME POPULATION SUB-GROUPS, ESPECIALLY YOUNG PEOPLE AGE 15-29, ARE AT PARTICULARLY HIGH RISK OF HIV INFECTION AMONG THE PROJECT CATCHMENT POPULATION.

HIV PREVALENCE among ages 15-59 was

women **30.9%**

men **15.9%**

Highest among women 30-39 years old **56.6%**

MEN WERE LESS AWARE OF THEIR HIV STATUS

men **69.8%**

women **88.4%**

Among young people, age 15-29

New infection rates in women (2.9%) were three times higher than in men (0.9%).

The most dramatic increase in HIV incidence in young women occurs from age 15-18 years, with a peak at 19 years of 6.2/100 person years.[11]

SURVEY FINDINGS INFORMED SHIFTS IN STRATEGY TO ENSURE THE PROJECT IS FOCUSED ON THE POPULATIONS THAT ARE MOST AT RISK.

THE HIV TREATMENT CASCADE

The HIV treatment cascade below illustrates how the Bending the Curves project stands in ensuring that individuals living with HIV know their status, are placed on treatment, and retained in care, with a suppressed viral load.

Based on data from the 2013 population survey (see opposite page), 75% of people living with HIV in the project catchment area are aware of their status. It is likely that the true proportion is now higher, given the subsequent widespread roll-out of community-based testing strategies since 2013 (page 12).

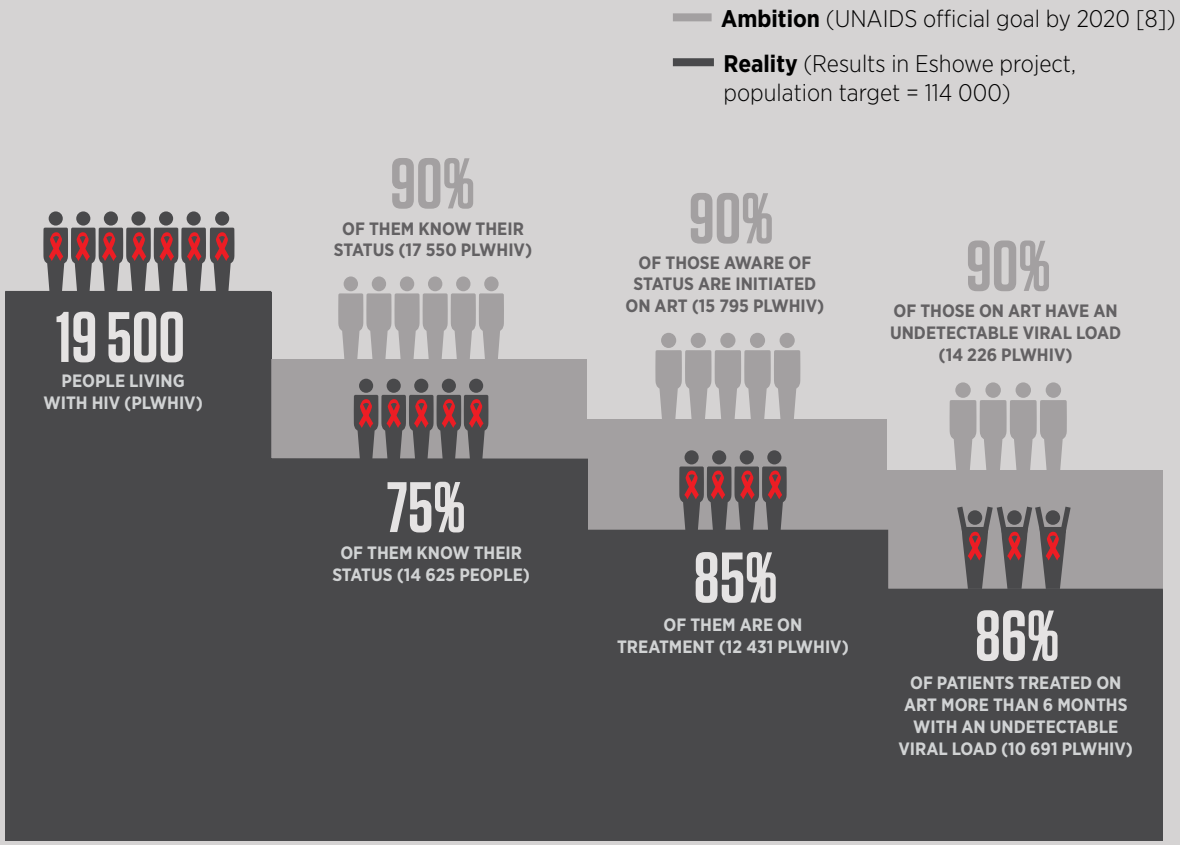
ART coverage among those that know their status stands at 85%. Since the 2013 survey, the project has increased the proportion of all HIV positive people that are on treatment, despite an estimated 2500 new infections in the project area. Lessons learned from previous expansion of ART eligibility (page 18) can facilitate the further treatment scale-up that is to come with the introduction of Test and Start criteria.

At present, 86% of all people on ART in the project area have a viral load count <100 copies/ml. Providing people living with HIV a variety of options for receiving medication and treatment adherence support (page 22) can help to address the progressive losses from the cascade, and support achievement of the third 90. The project offers various programmes to ensure people remain in care, improve implementation of viral load tests and subsequent delivery of results, and address adherence challenges for those who are not virally suppressed.

Across the cascade of care, adequate human resources are necessary to ensure people living with HIV receive services and support (page 17). Community mobilization and advocacy work are also essential to encourage behavior that prevents HIV infection (page 8) and reduces stigma. In this respect, MSF and the DOH partner with traditional leadership, civil society organizations, and other non-governmental organizations, to better ensure that project strategies reach further into communities, and will be accepted by the population, to limit the number of people lost from the HIV cascade of care.

CASCADE OF CARE, MSF ESHOWE PROJECT, Q2 2016

HIV CARE FOR EPIDEMIC CONTROL: AMBITIONS VS REALITY



“When we look at the pupils’ behavior since MSF has started, we see a difference and that they now have interest in knowing their status”

Bongiwe Mfeka, Department of Education in Eshowe at Umlalazi Circuit

PREVENTION

MSF has focused significant efforts on increasing access to two cost-saving methods of prevention: medical male circumcision (MMC) and condom distribution.

MMC reduces the risk of sexual transmission of HIV by 60%.[12] The National Strategic Plan 2012-16 has committed to the large-scale national rollout of an MMC programme as part of a package of sexual and reproductive health services. By 2017, the National Department of Health (NDOH) aims to reach 80% MMC coverage among males 18-34.[13] KZN is the country's pilot province for implementation of MMC.

When used correctly and consistently, condoms are ≥80% effective in protecting against HIV and other sexually transmitted infections (STIs).[14] Since 2014, the NDOH has started providing access to colored, flavored condoms across the country—first in tertiary institutions and now more widely—to enhance the appeal of condoms among youth at high risk of HIV infection.[15] While condoms are not routinely available to younger learners in secondary schools, access could be increased by recommending and implementing this practice as part of a national policy on HIV, STIs and TB in secondary schools, which is currently being finalized by the Department of Basic Education.[16]

Community mobilization and partnerships can improve uptake of interventions that reduce the risk of HIV infection.

MEDICAL MALE CIRCUMCISION

There are around 18 000 men in the 15-34 year age group in the project area. At the time of the 2013 survey, approximately 21.7% of eligible males were already circumcised. In early 2014, MSF in collaboration with the DOH, Department of Education, and the South African Clothing and Textile Workers Union (SACTWU) started a partnership to scale up access to MMC in the Eshowe/Mbongolwane areas. Strong support from local traditional leaders has also been essential for promoting MMC among males.

MSF mobilization of young men occurs mostly in local schools, creating a relationship with school principals, teachers, students, and parents. MMC mobilizers from MSF provide health education in schools on why circumcision is important, and recruit the young men willing to undergo the procedure. MMC is typically offered on weekends, with MSF and DOH vehicles providing transport for boys to and from home.

MMC occurs at DOH facilities where SACTWU doctors carry out surgical procedures, with support from DOH nurses and MSF HCT counselors. The DOH provides lunch for boys undergoing the procedure. Information systems record patient eligibility for MMC, results of medical screening for those that qualify, and track data on post-procedure follow-up; these systems have been essential to monitoring progress, and can continue to be enhanced.

Through MSF recruitment, 2 872 circumcisions were performed in 2014, and 2 079 procedures in 2015. The partners are continuing to offer the procedure to all young men and have already witnessed an increase in circumcisions performed in 2016 compared to same period in 2015.

Lessons Learned

- Partnerships are useful in order to generate demand for MMC, and determine appropriate locations for attracting new beneficiaries.
- Roles and responsibilities of partners conducting service delivery activities must be defined, and adequately resourced to meet demand for MMC, and reach targets.
- Information systems that track progress toward reaching MMC coverage targets contribute to programme success.

CONDOM DISTRIBUTION

From 2012 to 2015, MSF distributed **between 800 000 and one million male condoms per year.** In 2016, MSF is on track to exceed this, having already distributed more than 733 000 condoms in the first half of the year.

Distribution of colored, flavored condoms- initially by MSF, and soon to be standard practice by the DoH across the country[17], has proven highly popular in the area.

Lessons Learned

- Condoms should be widely available to all, including youth in secondary schools and tertiary institutions.
- Providing alternatives to standard condoms (i.e. colored, flavored) may make the intervention more appealing to youth or other target populations.
- Accurate forecasting and a strengthened supply chain are important in ensuring consistent availability.

"I'm aware that he is going for circumcision today. That made me happy because it means he is making means to stay healthy. I believe this is going to change his life."

Aron Ntuli, father of circumcised boy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“The teachings by MSF made me see how important to know your status is. It encouraged me to know my status whether positive or negative.”

Lindo, young learner at Hhashi High School

TESTING

New infections can be prevented if people know their HIV status,[18] making testing the first critical step in reaching the maximum number of HIV-positive people.

Testing and counselling is beneficial in linking HIV- negative clients to prevention interventions, helps to reduce stigma and creates awareness about HIV. In April 2010, the South African government's national HIV testing and counselling (HTC) campaign was launched. In uThungulu district, 68 989 people were tested by the end of June 2010, translating into a 133% achievement of the initial goal and indicating widespread demand for and acceptability of testing.[19]

MSF has piloted a number of community-based strategies in Eshowe that create new testing opportunities outside of health facilities. HIV testing can be further individualized and expanded since, as of May 2015, the Pharmacy Council of South-Africa has permitted self-test HIV kits to be sold over-the-counter in pharmacies.[20] People testing positive self-refer to facilities for confirmatory laboratory work.

Community-based strategies improve uptake of testing and increase the diagnosis of hard to reach and priority groups, at an affordable cost.

COMMUNITY TESTING MODALITIES

Mobile Outreach Testing

In late 2011, MSF launched the Mobile 1 Stop Shop (M1SS). These are mobile testing units (tents or a van) providing information, HIV Counselling & Testing (HCT), TB & STI Screening, pregnancy testing, condom distribution, health promotion and mobilisation for MMC. Practice may change with the implementation of Test & Start but currently, those who test positive are provided with a CD4 count point of care test (PIMA), and if necessary a referral form to a health facility. Each team consists of one or more HCT counselors and site mobilisers depending on the location and expected number of beneficiaries. Mobile outreach testing occurs at farms, schools, taxi ranks, churches, local businesses and during community events.

Stand-alone HCT site

In August 2012 MSF established three Fixed Sites (FS) providing the same services as the M1SS sites, and staffed by lay counselors and mobilisers. Two sites are located along the main street in Eshowe, a third at the TVET college in Eshowe and a fourth recently opened in Mamba, in rural Mbongolwane. Some mobile and stand-alone sites have added a nurse to the team in order to treat minor ailments and distribute chronic medications, including ARV drugs.

Door-to-Door Testing

In October 2012, MSF started the Community Health Agents Programme (CHAP), consisting of 33 lay workers providing door-to-door HCT in rural and peri-urban areas. By 2015, the CHAP had grown to 86 Community Health Agents, and services expanded to include TB and STI screening, health promotion, pregnancy testing, defaulter tracing, referral to health facilities, MMC recruitment, and condom distribution. Results of HIV testing are recorded in a mobile app and sent to a central database.

56 183 people were tested for HIV by MSF in 2015, with 1 682 new infections diagnosed; 11 914 people were screened for TB in the last three months of 2015 alone.

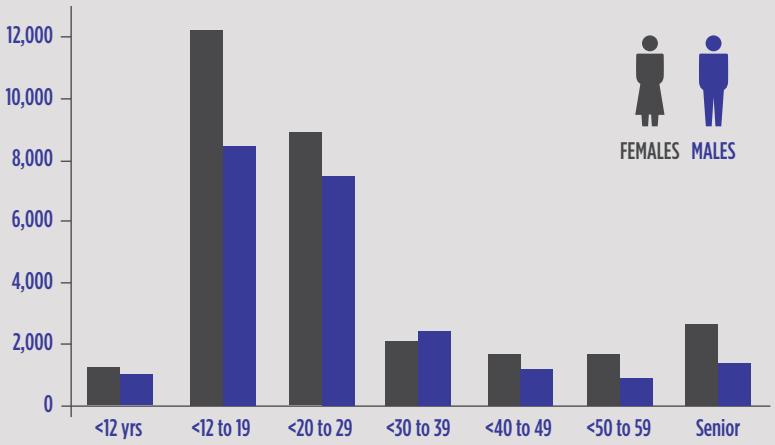
Below, the characteristics of those reached by the different testing modalities are described, as are some of the benefits each helps achieve.

DEMOGRAPHIC CHARACTERISTICS OF POPULATIONS TESTED

- **Mobile and stand-alone sites are particularly effective at reaching young women at risk of HIV, and young men who may not attend health facilities.** Mobile sites see more first-time testers.
- Populations reached by mobile and stand-alone sites vary depending on location:
  - Stand-alone sites on the main street of Eshowe see adult men and women of various ages, whereas the college site sees a younger adult population.
  - Mobile sites in the community reach men and women age 20-44, while school-based visits reach youth of both sexes age 15-19.
- **Door-to-door testing reaches men and women of all ages** and is particularly good at testing children.

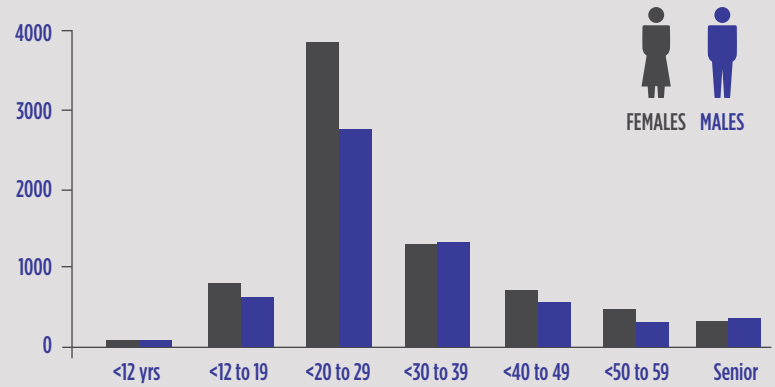
MOBILE SITE

Age Distribution of those tested at mobile sites - 2014



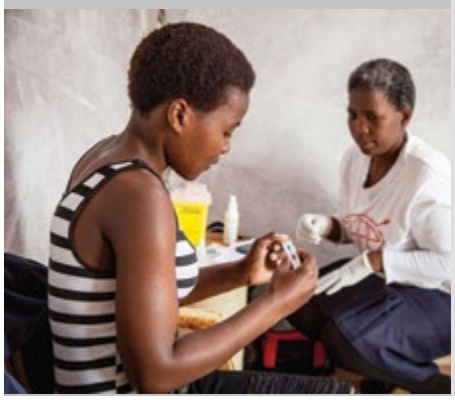
STAND-ALONE SITE

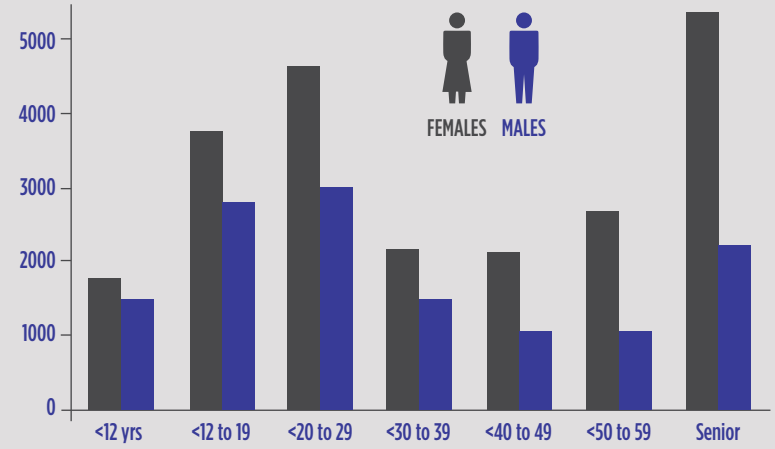
Age Distribution of those tested at fixed sites - 2014



DOOR-TO-DOOR

Age Distribution of those tested door-to-door - 2014





IDENTIFICATION OF HIV+ PERSONS THROUGH TESTING

The positivity from testing, according to testing modality is shown in Figure 4. The proportion of those testing positive at facilities is high, because they are typically testing more ill and symptomatic patients. Of the community testing modalities, stand-alone sites in the community identify the highest proportion of positive cases, followed by mobile sites in the community. Positivity of youth in school was lower than that found outside school.

While door-to-door testing in late 2015 yielded a positivity rate of only 0.9% it should be noted that positivity has declined steadily since the early days of the program, from a peak of 8% in 2013.

Figure 4
Identification of HIV+ Persons according to type of testing (Sept-Oct-Nov 2015)

	NO. OF TESTS	NO. OF HIV+	HIV PREVALENCE AMONG TESTED CLIENTS
HEALTH FACILITIES[1]	2121	368	17.4%
HEALTH FACILITIES-ANC	551	103	18.7%
STAND-ALONE SITES - MIXED ADULTS	2361	160	6.8%
STAND-ALONE SITES- COLLEGE	320	11	3.4%
MOBILE SITES –COMMUNITY[2]	1509	88	5.8%
MOBILE SITES – HIGH SCHOOL[3]	641	15	2.3%
DOOR-TO-DOOR	11984	103	0.9%
TOTALS	19487	848	

1. Does not include Antenatal Care
2. Includes Community Sites (taxi ranks, shopping areas), work sites, farm clinics
3. Includes High Schools, other youth-focused events, youth tested at some MMC events

TARGETING IMMUNOCOMPROMISED HIV-INFECTED PERSONS

- The median CD4 count for newly diagnosed clients at mobile and stand-alone sites in 2015 was 462 cells/mm^3, compared to 363 cells/mm^3 in facilities, meaning **people who test in communities are diagnosed earlier.**
- **Men undertake HCT and link to ART at lower CD4 counts than women** — 35-40% of males and 20-25% of females link to care at CD4 counts <200. At this advanced disease stage the risk of illness and death increase, highlighting that men need continued encouragement to test for HIV. To do this MSF provides conveniently located and time-efficient services, with particular attention to linkage to care for those diagnosed HIV-positive.

COST OF MODALITIES

The South African HIV & TB Investment Case costs HCT in facilities as R82 for an HIV-negative diagnosis, and R90 for an HIV-positive diagnosis. A costing exercise in the project assessed the cost of community testing for diagnosis of both an HIV-negative and an HIV-positive individual[21] (Figure 5). **Door-to-door testing had the lowest cost per client of the three community testing models, and can even be cheaper than facility-based testing.** While mobile and stand-alone HCT cost more than facility-based testing, they contribute greatly to the overall number of patients tested, and are particularly good at accessing men, young people and other priority groups. Mobile HTC is considered cost-effective in the South African context, as are home-based and mobile testing of adolescents.[9] The real cost of testing is also dependent on the staff that carries out the test—if carried out by nurses, the cost of HCT is higher than when carried out by lay cadres.

Figure 5
Cost per client tested by ingredient category & status in each model

	STAND-ALONE SITES (2014)		MOBILE TESTING (2014)		DOOR TO DOOR (2015)	
	HIV-	HIV+	HIV-	HIV+	HIV-	HIV+
TOTAL TESTED	6613	488	11182	388	36256	502
DIAGNOSTICS	R 17.70	R 36.13	R 17.70	R 36.13	R 17.70	R 36.13
STAFF	R 85.57	R 117.84	R 77.50	R 111.63	R 58.54	R 95.25
SENSITIZATION	R 1.13	R 1.13	R 0.69	R 0.69	R 0.22	R 0.22
INFRASTRUCTURE	R 3.55	R 3.55	-	-	-	-
TRANSPORT	-	-	R 16.99	R 16.99	-	-
COMMUNICATION	R 1.60	R 1.60	R 1.32	R 1.32	R 3.24	R 3.24
EQUIPMENT	R 1.18	R 0.10	R 1.07	R 1.07	R 0.17	R 0.17
UNIT COST PER MODEL	R 110.73	R 160.35	R 115.27	R 167.84	R 79.87	R 135.01
TOTAL COST PER MODEL	R 732 235.84	R 78 776.61	R 1 288 966.97	R 65 120.12	R 2 895 703.09	R 67 579.37

* All costs in South African rand. HIV- individuals have one test, HIV+ individuals have two tests.

SELF-TESTING

MSF has been assessing the feasibility of having individuals use oral self-tests to determine their HIV status. A study conducted in DOH health facilities and stand-alone testing sites in the KZN project area offered clients self-testing supervised by a lay counsellor, followed up with a blood test to confirm self-test findings. Out of 2198 participants, only two had to repeat their self-test due to incorrect use. 98.7% of positive self-tests were confirmed positive through a blood test, and 100% of negative self-tests were confirmed negative through a blood test.[22] These findings suggest that under supervision, **self-tests can be used correctly and return accurate results.** Findings of a pilot conducted by MSF in another South African project in 2014 indicate that users found oral self-tests to be highly acceptable and a good means of testing for men and young women[23]. MSF plan to conduct another pilot in KZN in order to analyse the feasibility and benefits of user-driven home-based self-testing.

Lessons Learned

- Community-based outreach and testing services contribute significantly to overall population testing. The appropriate composition of community testing activities will depend on the setting.
  - Mobile and Stand Alone Testing Sites may be more effective in high-volume locations and in targeting specific populations (e.g. young men and women, school children).
  - Door-to-door testing may be effective for broad-based campaigns at certain time intervals, and/or as part of a package of health services provided by community health workers.
  - Cost assessments of community-based testing services must take into consideration the impact of the modalities at reaching target populations.
- Community testing identifies individuals at an earlier disease stage.
- Additional benefits of community testing include: addressing stigma, education, and linking individuals to treatment or other prevention methods.
- Lay workers can be successfully trained to offer HIV testing and counseling to support testing outreach.
- Further research is required to determine how self-testing can complement other testing modalities to increase population awareness of HIV status.

LINKAGE

Community testing strategies have been successful in outreach to clients who might otherwise have gone undiagnosed. However, linking community-diagnosed individuals to care poses its own set of challenges. Asymptomatic patients may lack the motivation to immediately visit a health facility, and patients may face financial or professional barriers to visiting a clinic, or fear stigma if they disclose their status to family or their partner.

Health promotion activities and other public campaigns have the potential to improve health-seeking behaviors.

High levels of mobile phone ownership in South Africa[24] (82.9%) and mobile network coverage of 98% have led MSF to explore mobile phones as an intervention to support improved linkage, in conjunction with other low tech methods. Lay worker cadres in the facility and communities can emphasize the importance of initiating treatment and achieving viral suppression, during health promotion sessions or while conducting HCT. Without adequate support for these lay cadres, however, countries could lose ground in achieving testing and treatment initiation targets (See opposite page).

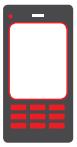
Community-based health promotion and new technology has the potential to motivate and remind people to link to care.

REFERRAL SLIPS

At present, MSF provides patients diagnosed as HIV-positive through community-based testing with a referral slip to visit a facility. A patient is considered linked if the information form is collected at a health facility and subsequently recorded. From project research released in 2013, 42% of patients referred from community testing were recorded as linked to care. As forms may not always be retained by the patient or taken to a facility, even if a patient links to care, linkage is under-estimated by this method.

TEXT MESSAGE REMINDERS

MSF is piloting the use of mobile phone technology to support linkage to facility care for populations testing HIV-positive at community testing sites. Participants receive weekly text messages over a three-month period, and are considered linked if they attend a health facility to register in care within six months. Messages focus primarily on the general health and wellbeing of the participant, in order to avoid involuntary disclosure of a participant's HIV status to others that may be using the phone. Outcomes of this study are still pending.



How are you? Remember to visit your nearest clinic if you have any health concerns to live well. Reply with a SMS if you have questions.

Lessons Learned

- Develop HIV testing and counseling strategies and health promotion activities that encourage linkage for groups that are less likely to obtain care after an HIV-positive diagnosis.
- Consider leveraging mobile technology to capture data and promote linkage to care for patients diagnosed HIV-positive and referred to facilities through community testing.
- Train and utilize lay workers to follow-up on patients who are not linked to care.

"We started receiving news that people go to clinics because they have received assistance from our awareness campaigns."

Sithembile Sibiya, KwaZulu Regional Christian Council

Lay counsellors and the importance of Human Resources for Health

Throughout sub-Saharan Africa, lay counselors have played a critical role in the provision of testing and counseling services in health facilities,[25] though to date, no national policy exists in South Africa to guide employment practices. At the end of 2014, the KwaZulu-Natal Department of Health announced the phasing out of the cadre of lay counsellors, with the stated aim of retraining and identifying new careers for these individuals.

In the uMlalazi municipality, lay counsellors have been withdrawn from nine clinics in the project area in two waves: January 5th, 2015 and June 15th, 2015.

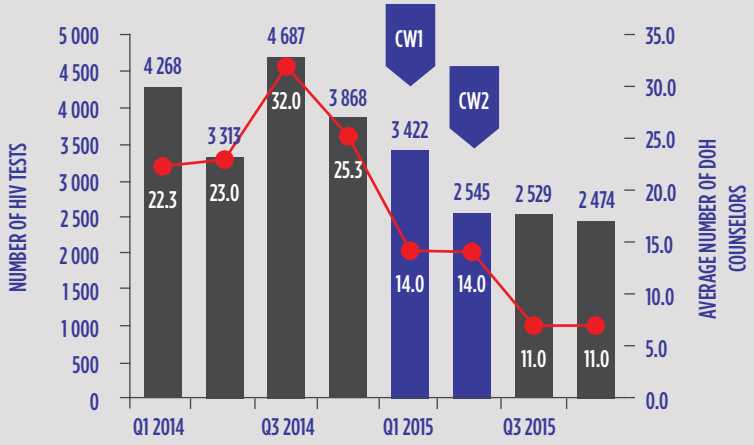
Following the withdrawal of counsellors from facilities in KZN, **the monthly average of HIV tests conducted in facilities in Eshowe/Mbongolwane decreased 25% after the first withdrawal phase, and a further 13% after the second withdrawal.**

- ART initiation at health facilities in the Eshowe/Mbongolwane area has dropped in pace with the decline in HIV testing.[26]
- 842 patients were initiated on ART in project-area health facilities in the first three months of 2015, while only 504 were initiated on ART in the same period in 2016.

If these findings are representative of the experience across the province or in other parts of the country, they imply that lay counselor withdrawal may have a negative influence on the health of the population and jeopardise efforts to deliver on the UNAIDS 90-90-90 strategy.

Figure 6
Number of HIV tests conducted in Eshowe/Mbongolwane health facilities, January 2014-December 2015

Counselor Withdrawal 1 (CW1): January 5, 2015
Counselor Withdrawal 2 (CW2): June 15, 2015



Lessons Learned

- Lay cadres supplement the provision of HCT and health education to the community.
- Donor and government financing of a lay cadre of staff is essential for successful implementation of new policies such as “Test and Start”.
- National guidance and standardized training curriculums, based on best practices, would clarify the role of lay cadres in the HIV response, and ensure that lay workers have the skills they need to carry out required activities.

TREATMENT

In July 2014, MSF and the DOH expanded eligibility for ART initiation in the project area for all patients from ≤350 to ≤500 copies/µl, in line with WHO 2013 treatment guidelines and national policy. As South Africa plans to adopt "Test and Start" from September 2016, data from this experience offers evidence as to how thispolicy change will impact ART scale-up.

Expanding initiation criteria alone is not enough to guarantee successful introduction of "Test and Start". Evidence from South Africa and other countries in the region suggest that medicine supply chains are more vulnerable during periods of treatment scale-up, and without adequate planning, medicine stock outs can occur at facilities during such transition periods.[27] In addition to placing patients at risk of treatment failure, stock outs can create financial and logistical barriers for patients in accessing treatment, and compromise patients' trust in the health care system.

Extended ART initiation criteria can be implemented successfully in rural South Africa

EXTENDING ART ELIGIBILITY CRITERIA

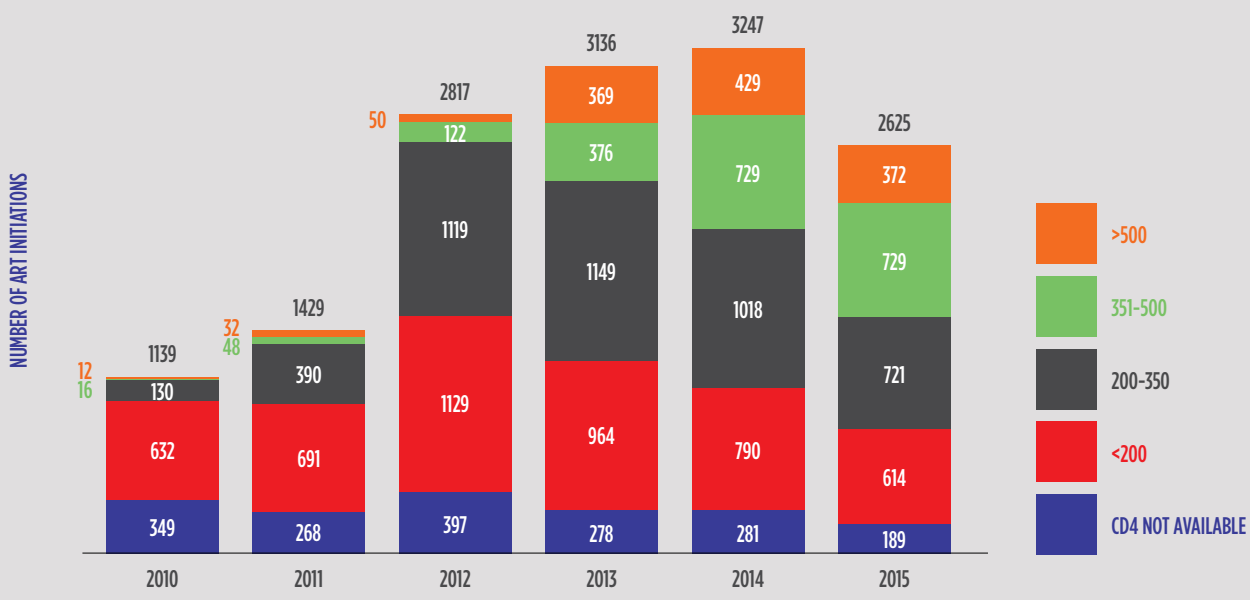
Within three months of the MSF and DOH extending treatment initiation criteria for the general population from CD4≤350 to CD4≤500, the percentage of patients initiated on ART after testing HIV-positive with CD4 counts 351-500 increased tenfold, from 7% to 70%.[28]

In the same time frame, among those testing HIV-positive with CD4 201-350, initiation rates remained unchanged at 75%. Retention in care was similar between CD4 350-500 (82%) and CD4<350 groups (80%).

These findings suggest that **newly eligible patients with higher CD4 counts will initiate and remain on ART** if provided the opportunity. However, the overall increase in patient numbers attributable to newly eligible patients is incremental and manageable, as illustrated by Figure 7. Extended initiation criteria can be implemented **without compromising access to or retention in care for more vulnerable patients.**

Figure 7 illustrates that fewer patients with lower CD4 counts (≤350) were initiated on ART in the project area in 2015 than in previous years. This could be attributed to the removal of facility-based lay counselors in the project area (see page 17), as health facilities in the area diagnose a high proportion of all those positive patients who are eligible to initiate ART.

Figure 7: Number of ART initiations in Eshowe/Mbongolwane by CD4 count, 2010-2015

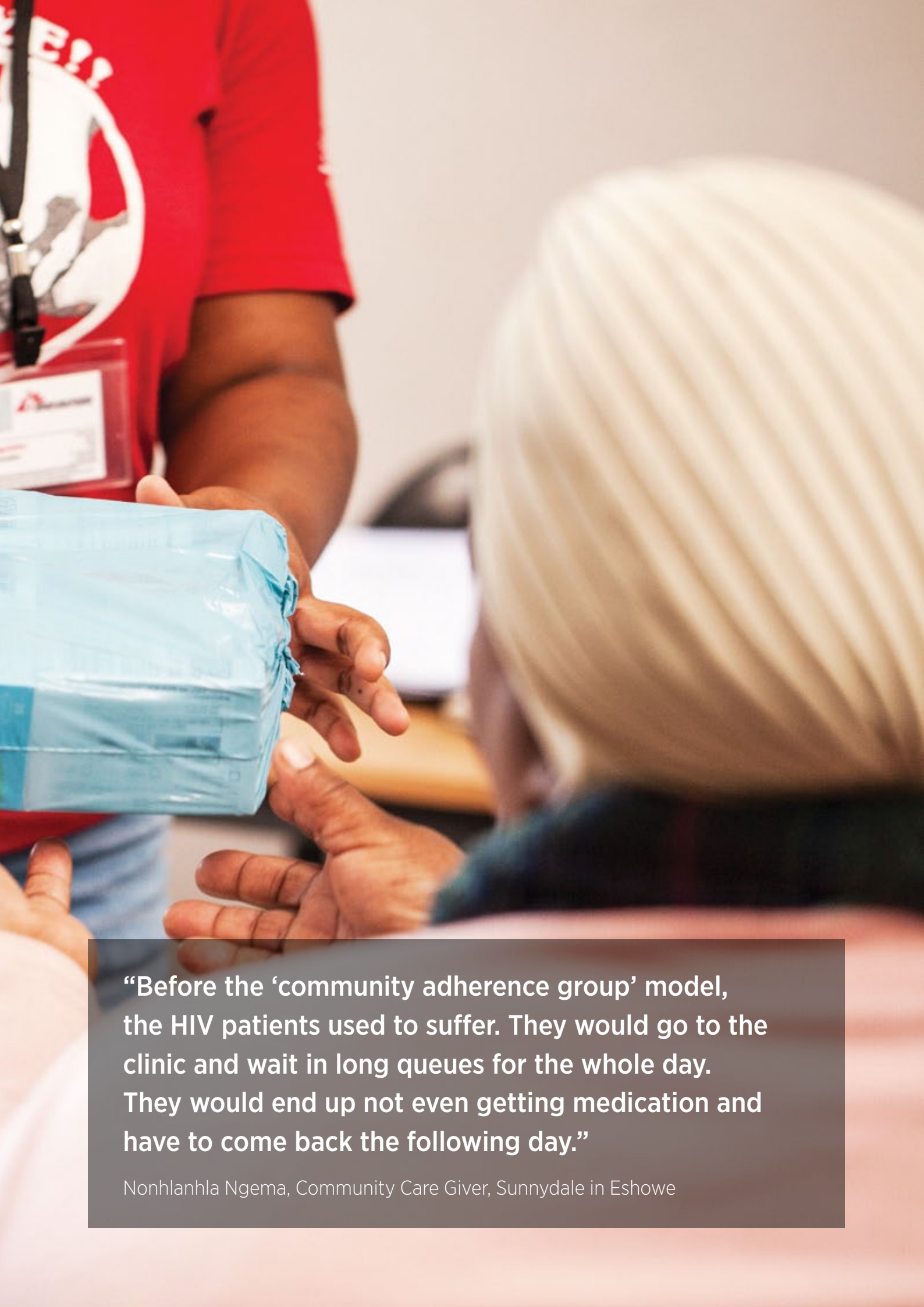


STOCK OUT MONITORING

MSF is one of the six organisations that make up the Stop Stock Outs coalition. The coalition manages a national hotline that patients or healthcare workers can call to report unavailability of medicines at their health facility.[29] Stop Stock Outs also produces annual reports, detailing the results of surveys that attempt to contact every public health facility in South Africa. In 2015, one in five facilities nationwide was experiencing stock outs of ARV or TB medicines on the day of the survey. KZN province has reported lower rates of facilities with stock outs than the national average in two out of three survey years.[30] However, the availability of treatment during the transition to "Test and Start" should be closely monitored. The project will continue reporting to Stop Stock Outs if challenges arise.

Lessons Learned

- Awareness campaigns should inform people of new eligibility criteria for ART initiation.
- As part of the transition toward implementing a "Test and Start" policy, comprehensive plans are necessary at district, provincial and national levels to ensure adequate financing, human resources and a robust supply chain are in place.
- Patient and healthcare worker reporting of stock outs is necessary to monitor the availability of medicines at the end-user level.



“Before the ‘community adherence group’ model, the HIV patients used to suffer. They would go to the clinic and wait in long queues for the whole day. They would end up not even getting medication and have to come back the following day.”

Nonhlanhla Ngema, Community Care Giver, Sunnydale in Eshowe

RETENTION AND ADHERENCE

Since 2012 in the project area, MSF and the DOH have piloted differentiated approaches to community models of care (CMOC) for patients to receive ART. Fast-track ART delivery strategies and longer drug refills can reduce the amount of time health workers must dedicate to healthier patients, and enhance the role of patients to manage their condition themselves.

Patients vulnerable to defaulting treatment or being lost from care--including pregnant women and their babies, children and adolescents – also require options for obtaining appropriate support to achieve viral suppression. Peer support or enhanced adherence counseling for vulnerable patients can help them remain adherent to treatment. Many of the approaches detailed below are also recommended in the National Department of Health's *Adherence Guidelines for HIV, TB and NCDs*, released in February 2016.[31]

Community models of care decongest health clinics and provide patients with a choice of ART delivery and adherence support that works best for them. Preferred models depend on the settings.

ART DELIVERY STRATEGIES

MSF and the DOH offer several ART delivery strategies in Eshowe & Mbongolwane for patients who are stable on treatment:

- **Standard Care:** Clinical consultation and ART collection at the facility every two months.
- **Facility Clubs (FC) and community clubs (CC):** lay counsellor-led groups of up to 30 patients meeting every second month in locations near the facility or based in the community, for ART collection and yearly for clinical consultation.
- **Community ART groups (CAG):** patient-led groups of three to eight HIV-positive patients. Patients rotate visiting the facility for two-monthly ART collection for all members and an annual clinical consultation.
- **Central Chronic Medicine Dispensing and Distribution:** patients receive their medicines on a monthly basis at a DOH-approved "pick-up point" in the community. Introduction is recent, and data is not yet available on the outcomes of this model of ART delivery.

By the end of 2015 in the project area over 21% of eligible patients were receiving ART refills and adherence support through either a club or CAG. The figure below illustrates how enrolment varies between rural and urban settings, with more patients opting for community-based models in rural settings. CMOC tend to be more popular at facilities with larger patient cohorts on ART. There was a steady increase in adherence club enrolment over the course of 2015, from 64 clubs in Q1 2015 to 83 clubs in Q4 2015. CAG enrolment remained constant over 2015.[32]

Figure 8
Total CMOC enrolment (clubs and CAGs) with percentage of patient cohort currently enrolled in CMOC care, as of end 2015

	URBAN FACILITIES	RURAL FACILITIES	TOTAL
ENROLLED IN FACILITY CLUBS	864	417	1281
ENROLLED IN COMMUNITY CLUBS	20	91	111
ENROLLED IN CAGS	12	108	120
TOTAL ENROLLED	896	616	1512
ELIGIBLE CLIENTS	4734	2169	6903
% ENROLMENT	18.9%	28.4%	21.9%

ADHERENCE SUPPORT

Several project activities are being piloted by MSF and the DOH to provide more comprehensive services or enhanced adherence support for patients or vulnerable sub-groups that are at higher risk of being lost from care or defaulting on treatment. These include:

- **Adherence Counseling:** Patients initiating ART receive two counseling sessions on the first day, and two additional sessions during the first months of treatment. A key component of the initiation counseling is to motivate the patient to take their medication, to develop and maintain a medication schedule and adherence plan for their treatment that fits the patient's lifestyle and socioeconomic situation. Patients also learn about the importance of taking their treatment, challenges that could arise while taking treatment, and viral load monitoring.
- **Enhanced Adherence Support:** For patients on treatment with a high viral load, patient files are flagged for counselors to follow up for enhanced adherence counseling sessions. Initial sessions attempt to address any adherence problems the patient might be facing, and adjust the treatment plan accordingly. If patients have a second high viral load at the next visit, the counselor consults with clinicians and will again discuss with the patient about adherence challenges, and second-line treatment options, if necessary.
- **Prevention of Mother-to-Child Transmission / Post Natal Support Groups:** MSF runs two clubs, similar to support groups, for post-natal women. In the clubs the mothers receive their ART and get support in maintaining their adherence plans. The clubs also build in a more holistic package of services for mothers and their babies, including health services for infants and sexual and reproductive health services for mothers. Eligible women remain in the club until the child is 20 months old, and can then transfer to a normal club.
- **Children's Support Groups:** Counselors run monthly support groups on weekends for children between the ages 7-18, stratified by age and (ideally) disclosure status. Children may be fully or partially aware of their status, and are eligible regardless of viral load. Children receive a clinical assessment, medication, and individual consultations with caregivers if necessary, to support them through the process of status disclosure and maintaining treatment adherence. Those aged 13-18, also receive sexual and reproductive health services in their specific clubs.
- **Learner Support Agents:** MSF currently pilots this program with the Department of Education in 32 secondary schools in the area. While MSF periodically provides HCT 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. The program also aims to extend support to learners testing positive, to help them develop and maintain adherence plans, both during secondary school and after matriculation.

As South Africa transitions to "Test & Start," MSF and the DOH will focus on providing enhanced preparation and early ART support to patients during the first three months of treatment—known to be one of the highest risk periods for defaulting— provide treatment and prevention literacy to improve awareness of the individual and community benefits of starting ART at higher CD4 counts, and continue to develop specific adherence strategies for sub-groups that are at high risk of defaulting.

Lessons Learned

- Give patients a choice of the ART delivery model that best suits them and their lives. Preferences for certain models will depend on the setting, so qualitative research looking at patient and health care workers preferences is needed to ensure models best fit patients' needs in a given context.
- Expand models of care for ART delivery to include community ART refill pick up points for individual or adherence club patients; quick pick up services for 'fast lane' ART refills; and extended supply of ART for up to six months in some settings.
- Enhanced adherence counseling and support strategies tailored to vulnerable patients can help patients achieve viral suppression.

THE FUTURE: IMPLEMENTING TEST AND START, IN SOUTH AFRICA AND BEYOND

Bending the curves of the HIV epidemic requires placing individual choice and patient-friendly options at the centre of programme strategies. The introduction of "Test and Start" policies will allow all people living with HIV to receive access to the complete continuum of care.

The experience of MSF and the KZN DOH in uThungulu district, at the heart of the epidemic, has demonstrated the feasibility and acceptability of a wide range of strategies that contribute to reducing HIV incidence: from scaling up preventative interventions, diagnosis and treatment initiation efforts, to giving people living with HIV the support they need to reach viral suppression. As South Africa and other countries start the transition toward implementing Test & Start, and strive toward 90-90-90 targets, a strong focus on the following key enablers will be vital to maintaining a healthy treatment cascade:

1

Community engagement and mobilization

Successful programme interventions heavily depend on partnerships with local government, traditional leadership, civil society and community-based organizations, and other stakeholders—including people living with HIV and their communities. Partnerships improve programme intervention choices, reduce stigma in the community and contribute to health promotion and large-scale awareness campaigns that increase individuals' knowledge of the HIV epidemic and its management.

2

Prevention

Use every opportunity to inform people about how to prevent HIV infection. Testing makes people aware of their status, allowing people living with HIV to link to "Treatment as Prevention", and HIV-negative individuals to link to other interventions. Cost saving activities such as condom distribution and MMC must be scaled up. New tools such as PrEP offer additional prevention choices.

3

Community testing

Community-based testing strategies can expand the reach of services to populations that do not visit health facilities, including high-priority age groups at a high risk of HIV infection. Community-based testing models often reach people living with HIV earlier in their disease progression, and allow HIV-negative people to be linked to prevention options to maintain their status. Future exploration of effective self-testing strategies with new tools could improve uptake of testing among an even wider population base.

4

Last-mile drug delivery

Countries must establish robust pharmaceutical supply chains and distribution systems to successfully scale up treatment to all people living with HIV. Communities and healthcare workers should be included in strategies to report on, and address stock outs at health facilities, to ensure that the system is working at the end-user level. Health facilities, governments, global health bodies, pharmaceutical companies, and other stakeholders must work together to ensure accurate supply forecasting, and ensure adequate production to meet increased demand for ARVs.

5

Differentiated models of ART delivery

Providing people living with HIV with a variety of convenient options for receiving medicine increases the likelihood of retaining patients in care and helping them adhere to treatment. Importantly, differentiated models of ART delivery outside health facilities can relieve the burden on overwhelmed health systems in high-burden countries. Rollout of enhanced adherence support for patients (as is underway in South Africa) can be further complemented by other support mechanisms targeted at populations vulnerable to defaulting on treatment.

6

Lay worker cadres

Lay counselors and community health workers are essential for testing and treatment in facilities and communities, and guiding people through the cascade of care. National guidance on best practices in lay worker employment, and establishment of standardized job descriptions and training curriculum can better ensure the retention and recognition of lay cadres in the health system.

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Doctors Without Borders/Médecins Sans Frontières (MSF) is an international, independent, medical humanitarian organization that delivers emergency aid to people affected by armed conflict, epidemics, natural disasters, and exclusion from health care.

MSF offers assistance to people based on need, irrespective of race, religion, gender, or political affiliation. MSF actions are guided by medical ethics and the principles of neutrality and impartiality. MSF has been working in response to the HIV epidemic in South Africa since 1999.