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Responding to Swaziland's dual epidemic

They made antiretrovirals free. They ran publicity campaigns, encouraging people to test and to use condoms. They screened donated blood. But still, the dual epidemic persisted.

In the struggle to overcome the world's highest prevalence of both HIV and tuberculosis (TB), the Kingdom of Swaziland was losing ground. Drought in 2004 exacerbated the situation. The prevalence of HIV among pregnant women, Swaziland's benchmark for incidence rates, steadily rose from 3% in 1993, to 38% in 2004. From 2001 to 2009, there was a 38% increase, from 130 000 to 180 000, in the number of Swazis living with HIV, according to the United Nations (www.unaids.org/documents/20101123_globalreport_em.pdf)

In 2007, the Prime Minister invited the humanitarian-aid nongovernmental organization Médecins sans Frontières (MSF) to help out.

"The scope of the problem equaled an emergency," says Elias Pavlopoulos, head of mission for MSF in Swaziland. "It's the biggest disaster I've ever seen."

Compounding the epidemics is an economic crisis, with unemployment of 47% and 69% of Swazis living at or below the poverty line. More than a quarter of Swazis rely on nongovernmental agencies for food.

In collaboration with the Swazi Ministry of Health and Social Welfare, MSF decided to concentrate on two fronts: decentralizing services from health centres and hospitals to smaller clinics, and task shifting to lesser-trained workers to free-up nurses and doctors' time.

MSF isn't alone. Other nongovernmental organizations are also at work, including the United States President's Emergency Plan for AIDS Relief (US$33 million annually), the Clinton Health Access Initiative, the International Center for AIDS Care and Treatment Programs, the Global Fund to Fight AIDS, Tuberculosis and Malaria (US$23 million) and the World Bank (EU$10.7 million).

However, MSF's presence on the ground is strong with 350 staff and an investment of US$10.6 million in fiscal 2012/13. MSF works in two regions/districts: Shiselweni, the hardest hit and most impoverished of the country's four regions, and Manzini, which includes the Kingdom's largest city and nearby Matsapha, a rapidly growing industrial town where 48 000 people live and work.

Although most of the 1.2 million Swazis live within eight kilometres of a health clinic, most of those clinics didn't provide TB or HIV treatment in 2007. That meant patients had to take travel to hospitals or health centres. Many simply didn't or couldn't make the journey. "Clearly that didn't work," says Montréal, Quebec–resident Pieterjan Wouda, field coordinator for MSF's Shiselweni region project. "It's too far to go. And it was a centralized system lacking resources and knowledge."

"We wanted local clinics to initiate treatment," says Dr. Velephi Okello, the ministry of health's national coordinator for the HIV Care and Treatment Programme. "MSF helped to accelerate this process by pushing things to the clinic for HIV and TB."

In Shiselweni, MSF expanded HIV and TB testing from just three facilities to 22 clinics. "When MSF arrived, only a few thousand were on ART [antiretrovirals]. Compliance was poor and there was no capacity," says Wouda.

Testing more than tripled in two years. There are now about 40 000 of the area's 208 000 residents diagnosed with HIV, and 18 000 are on antiretrovirals, Wouda adds.

In 2011, MSF opened a TB ward at the health centre in Nhalngano, Shiselweni's largest town. Previously, very sick TB patients had to travel to a central TB hospital in Manzini. The new ward, operated jointly by MSF and the ministry of health, means patients get care closer to home.

In 2010, MSF's efforts expanded into the Manzini region, where it is fully integrating TB and HIV services at three clinics and Mankayane Hospital. It also opened the Matsapha Comprehensive Health Care Clinic in August 2011 to serve the growing population in the industrial area. The clinic now has 70 staff, including three doctors and 19 nurses, and serves about 5000 clients a month, about half of whom have HIV, with at least 73% coinfected with TB. In its first year, 378 people were treated for TB and 705 were on antiretrovirals.

Of course, there are two other regions of the kingdom where MSF does not work. "We haven't [integrated HIV and TB services in] all the clinics," says Okello, "because of the work in building capacity and putting in infrastructure. It takes time and money and we want to do a good job. … We need partners. The government is looking for a loan from [the] World Bank and will prioritize and speed up work at the clinics."

A lack of medical staff, both doctors and nurses, is recognised as the main obstacle to expanding health services in Swaziland. MSF was eager to start task-shifting, where lesser-trained people take on specific tasks so that, in the end, more people can receive care.

While the ministry of health was eager to decentralize services, convincing them to shift tasks took a "long time," according to Wouda. In part, MSF's plan meant some of the tasks might be shifted to community-based people who are illiterate. Nonetheless, in 2010, the two parties signed a framework. Now, nurses, rather than doctors, are trained to initiate antiretroviral treatment, and administer drugs for uncomplicated TB, while counsellors are taught how to test people for HIV, thus freeing up nurses for other work.

To meet the growing need for counselling, MSF expanded an existing cadre of expert clients. These HIV-positive community members are trained to provide counselling on testing and adherence to HIV and TB clients. "It's a waste to use doctors for follow-up," says Wouda. Today, in Shiselweni, there are 86 expert clients (earning Can$137 a month), as well as 12 community expert clients working with government-funded rural health motivators in villages and remote areas. "It's a beautiful system," enthuses Wouda.

Since the scheme started, the number of people tested has more than tripled, to over 2300 per month.

"The shortage of staff is our biggest problem," agrees Raquel Gordon, the acting nurse-in-charge at the remote Hluti clinic in Shiselweni. The clinic sees 1600 outpatients a month. A year ago, 380 were on antiretrovirals. By August, the number had risen to 464, but the staffing remained the same. "We are exceptionally busy. The situation is abnormal," says Gordon. The key lay in shifting tasks from nurses to a pharma assistant who dispenses drugs, as well as to expert clients who provide counselling.

"Task shifting doesn't compromise quality because they are well trained," says Gordon. "The core nursing duties stay with us. If it wasn't for [MSF's program], I don't know how bad things would be."

MSF is now collaborating with other nongovernmental organizations and the ministry of health for a big push to expand treatment from 80% to 90% of those who need it.

"It's ambitious," admits Okello. "This is a hard to reach population. People who aren't coming [for testing] and don't want to. We'll need to change our messaging, to mobilize testing and then to get CD4 counts as quickly as possible."

Nearly three-quarters of the population never shows up for free testing, laments Pavlopoulos. "It's time to get all these people tested. Ideally, every sexually active adult should be tested. We should be testing 100 000, not 26 000."

Another challenge is keeping people on antiretrovirals. After six months, 95% are still on antiretrovirals, but this drops to 70% after two years. "People die. There are side-effects, psychological reasons, the burden of distances," says Wouda. MSF is taking a community approach with appointment registers (and reminders) and follow-up home visits by expert clients.

MSF is now treating about 17 000 people. The big question is what happens when MSF leaves, likely in 2016.

"We're at the difficult phase now," says Pavlopoulos. "The Ministry of Health should take over Matsapha [clinic] in 15 months. Can they do it?"

Matsapha is the only health facility run exclusively by MSF; elsewhere it collaborates with the Ministry of Health. But MSF has greatly improved services and expertise. "Every day it makes it more difficult for the ministry to take over and maintain the same levels," says Wouda. "We are walking a thin line between humanitarian aid to treat patients, and changing the system. MSF is having a long-term impact that will change the system structurally."

Minister of Health Benedict Xaba says it will be challenging when the nongovernmental organizations such as MSF start leaving, but the government is formulating a health policy to address issues such as human resources. They hope to roll out that plan in 2017. Meanwhile, they are moving forward with plans to increase enrollment in nursing and establish a medical school within a few years. "Expert clients will be kept on," he adds. "We've started to absorb them."

For its part, MSF is doing operational research to help the transition and in 2013, will hand over the north part of Shiselweni to the ministry. "Usually we put out a fire and then pull out," says Wouda. "But this is a smouldering fire." — Barbara Sibbald, *CMAJ*

Editor's note: Third of a multipart series. Barbara Sibbald's accommodation and transportation while in Swaziland were provided by Médecins sans Frontières.

Part 1: **Making sense of the world's highest HIV rate** (www.cmaj.ca/lookup/doi/10.1503/cmaj.109-4315).

Part 2: **The face of an epidemic** (www.cmaj.ca/lookup/doi/10.1503/cmaj.109-4320).

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