



## Fighting AIDS with evidence

How can you get AIDS treatment to those who urgently need it where medical expertise is scarce, patient information is fragmented, and the public is wary of testing? IDRC-supported research teams are working with public health authorities in South Africa's Free State province to design a rollout of antiretroviral therapy that will strengthen the public health system.

"We feel we are going to go far compared to other provinces. We have a broader picture of the challenges."

– Portia Shai-Mhatu,  
Senior Manager,  
Free State Department  
of Health

# RESEARCH THAT MATTERS

IDRC: Charlié Lombard



A data-entry worker logs the file number of a patient enrolled in the province's ART program.

slums that ring South Africa's cities. This leaves the poorest and most AIDS-affected populations with limited access to transportation to treatment sites.

For years, the population has received mixed messages on the seriousness and causes of the epidemic. Many are sceptical of "Western" treatment therapies, including ART. Traditional healers and remedies are seen by many as more accessible, affordable, and reliable than doctors and nurses. And there are concerns in the medical community that some traditional remedies interact negatively with ART.

## **The Development Challenge:** Ensure quality treatment for all who need care

In 2002, an estimated 487 000<sup>1</sup> of Free State province's 3 million inhabitants were HIV infected. In late 2003, the Government of South Africa introduced a national strategy for the comprehensive care, management, and treatment of HIV and AIDS (CCMT). That year, the Free State Department of Health estimated that some 31 000 people province-wide would be eligible for treatment with antiretroviral therapy (ART).

Though rich in comparison with many of its neighbours, South Africa's public health system faces too many competing demands, with too few resources. Doctors, pharmacists, and nurses trained to diagnose and treat HIV/AIDS are in short supply. Many of the best qualified find higher-paying positions in wealthy countries.

In South Africa's health system, basic information on patients' health status and treatment history is not routinely captured in the form of patient profiles. This poses risks for a wide scale rollout of ART, which entails a demanding and complex treatment regime. If poorly implemented, the rollout could increase the risk of drug resistance.

The post-apartheid landscape of South Africa also sees vast numbers of the black majority living in outlying rural areas or the semi-urban

## **The Idea:** A treatment model informed by research

Early on, the Free State Department of Health decided to approach its ART rollout with careful monitoring and feedback. The aim was to ensure that the delivery of ART would strengthen, rather than overwhelm, the province's health system and its users.

Since early 2004, Canada's International Development Research Centre (IDRC) has supported a number of research teams collaborating with health department officials to scale up AIDS treatment in the province. This twinning of researchers and research users has seen innovations emerge in the areas of nurse training and support, the use of information technologies for patient monitoring, and community outreach. It also provides a steady flow of feedback — sometimes critical — so that the department can constantly refine its approaches based on evidence.

## **The Research:** A "moving picture" of the rollout to shape better choices

### **Snapshot 1:**

In districts across the Free State, patients, nurses, and community health workers are asked a battery of questions on their experiences with the CCMT program: Are patients following their treatment regime? How are

<sup>1</sup> Actuarial Society of South Africa.



nurses and other health workers coping with their workload? What effects do they see treatment having on patients?

Researchers with the University of the Free State Centre for Health Systems Research and Development harvest the information from these regular surveys to develop a baseline picture and subsequent reports on how the model of care is seen by those providing and accessing health services. They also carry out appraisals of ART health facilities to verify such things as whether treatment sites have refrigerators for storing medication, whether clinics have space to counsel clients in private, and whether nutrition supplements are available to patients.

#### **Snapshot 2:**

Behind the reception counter, a data-entry worker logs the file number of a patient enrolled in the province's ART program. She opens a profile displaying a care and treatment history dating back to the patient's original HIV-positive blood test. The clerk adds new information provided by a nurse who has just done the latest assessment.

Using a standardized input form, this electronic data capture feeds a warehouse of information on the first two years of the Free State ART rollout, replacing an unreliable patchwork of hard copy records that would have been lost to analysis. Developed and tested by the University of Cape Town (UCT) Lung Institute and South Africa's Medical Research Council, this integrated database now works hand in hand with the Free State Department of Health Meditech computerized record system to monitor patient progress and the overall rollout in a number of critical areas.

#### **Snapshot 3:**

In a community health clinic, a nurse examines a patient who has been coughing steadily for several weeks, has a high fever and a rash that won't heal. The nurse consults a set of guidelines, illustrated with graphic images of HIV/AIDS and tuberculosis (TB) symptoms, and finds concise instructions on what to test for. These guidelines go together with onsite training the nurse and fellow health workers have received, in a program called PALS Plus (Practical Approach to Lung Health in South Africa), developed by the University of Cape Town Lung Institute's Knowledge Translation Unit.

Integrating primary care training in TB and AIDS makes enormous sense in Free State. In some areas, as many as 80 to 90 percent of those with TB are also HIV infected.

#### **Snapshot 4:**

As a young man struggles to answer questions about antiretroviral therapy and its use, it becomes clear he knows little about HIV/AIDS, though nearly one in three of his neighbours may be infected with the virus.

In 2004, the research organization CIET Africa surveyed 4 444 people in Free State province and interviewed health workers in 67 facilities, to clarify what people knew and believed about AIDS and ART. The surveys revealed a need for frank and simple information to be available through community media to address widespread ignorance on what can cause or treat HIV/AIDS.

#### **The Impact: An open and responsive ART strategy**

Putting research at the heart of its decision-making process from the beginning has given the Free State rollout a level of transparency and responsiveness almost unprecedented in public health circles. According to Ron Chapman, executive manager for Health Support Services at the province's Department of Health, researchers provide "unbiased, honest answers to questions that need answering. With research going hand in hand with implementation, we know very quickly when something is not working and we can change tack almost immediately."

Having a state-of-the-art information management system also gives the department a clear picture of the effectiveness of its rollout model, and allows it to report publicly on overall progress. Free State was the first South African province to have a patient profiling system. This lets frontline health workers access, use, and build on patient records as they progress through treatment. Over time, this tracking may provide valuable input into global efforts to track the evolution of HIV/AIDS and drug resistance to ART.

PALS Plus training is helping strengthen the role of nurses in the ART program. As of early 2006, randomized trials had shown dramatic improvements in diagnosis among those



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Lara Fairall,  
Head UCT Lung Institute

trained in the system. TB detection among patients seen by PALSAs-trained nurses went up 68 percent, while the numbers of TB patients undergoing voluntary testing for HIV increased by 110 percent. In October 2005, South Africa's National Department of Health approached the PALSAs Plus team to explore whether the approach could be scaled up for national implementation.

Health workers are gratified to be making a difference for HIV-positive patients, where before they had little to offer. But they also report stress and burnout from the increased workload, and many dip into their own pockets to help patients buy food and pay for transportation.

### Future Challenges: Extend the reach of the program

Surveys of patients in the treatment program show that, by and large, they are happy with the care and support they are receiving. Yet many also report struggling to stay with the program because treatment centres are too far, and transport limited, or because they have no food to go with their medication. Such findings underscore the need to bring treatment sites closer to affected communities, and address the poverty that many HIV/AIDS patients face.

Health officials acknowledge that the program as yet has limited reach. At the end of 2005, 18 380 people were registered in the province's CCMT program, with only 2 929 on ART.

A key barrier is the small number of sites accredited to treat AIDS. Free State began with a model where doctor-led treatment sites were fed by nurse-driven assessment sites from the surrounding area. Because of the shortage of doctors and specialists, the province is now considering shifting more responsibility for treatment to nurses.

"Nurse-initiated ART has enormous potential as an accelerator," says Lara Fairall, Head of the UCT Lung Institute Knowledge Translation Unit. "The first step is to demonstrate nurses can provide the services."

Meanwhile, University of the Free State surveys show that the rollout is not yet reaching "the poorest of the poor." Given earlier CIET findings that only a third of those interviewed believed that ART could help someone with AIDS, health authorities face an uphill battle to convince people to seek testing and treatment.

For now, the struggle is to ensure services are there when they come.



IDRC: Charlé Lombard

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International Development Research Centre  
PO Box 8500  
Street address: 250 Albert Street  
Ottawa, Ontario, Canada, K1G 3H9  
Tel: 613-236-6163  
Fax: 613-238-7230  
Email: [info@idrc.ca](mailto:info@idrc.ca)

[www.idrc.ca](http://www.idrc.ca)