INFECTIOUS DISEASES

# HIV/AIDS care for all—on a budget

## Meeting promotes ways to cut clinic visits and tests without compromising treatment

*By* **Jon Cohen**, *in Harare*

Every 2 months, a Land Cruiser stuffed with health care workers leaves Chidamoyo Hospital here early in the morning and drives 90 minutes east across washboard roads to the farming village of Nyamutora. Boxes of antiretroviral (ARV) drugs and medical records crowd the back of the vehicle. Sitting on pews at a Salvation Army church, nearly 150 HIV-infected people are waiting for the nurses and counselors. By the time the Land Cruiser leaves about 6 hours later, all will have received enough drugs to last until the team's next visit, had their weight documented, and spoken with a nurse. Some will have had blood drawn for later analyses to test how they're responding to treatment.

This routine departs from the usual model of HIV treatment, in which patients receive ARVs at frequent clinic visits. Yet the 143 Nyamutora villagers who have been given their ARVs every 2 months through this 3-year outreach effort have done remarkably well, Benjamin Chimukangara, a molecular virologist at the Biomedical Research and Training Institute in Harare, reported here last week at the International Conference on AIDS and STIs in Africa. Only two have died from AIDS—both began treatment when they were very ill—and all but four others, or 96%, have reduced their "viral load" to the level that the World Health Organization (WHO) uses to define treatment success—less than 1000 virus particles per milliliter of blood. "They've shown an unbelievable adherence and response," said study leader David Katzenstein of Stanford University in Palo Alto, California.

The result is good news for efforts to lower the cost of HIV treatment, so that poor countries like Zimbabwe can come closer to achieving a new goal: universal treatment for HIV. Until today, most governments have reserved ARVs for people who have shown at least some immune system damage from HIV. But new evidence shows that immediate treatment staves off AIDS, and in September WHO called on countries to offer the drugs to all HIV-infected people. There are an estimated 21 million untreated people, 12 million of whom live in Africa. Without a bolus of new cash, which no one expects, governments will have to come up with ways to cut costs without compromising the quality of care. The Nyamutora project is precisely the sort of simple, innovative "alternative delivery model" that can help. "The paradigm should be services going to people, and today, most people are going to services," Michel Sidibé, head of the Joint United Nations Programme on HIV/AIDS, told *Science*.

Sidibé, who spoke at the meeting, noted that the world now spends $22 billion on HIV/AIDS a year, and yet the cost of drugs is only $80 to $100 per person a year in poor countries. Most of the global expenses are for clinic visits and lab tests. "It's difficult for me to think we'll be able to change completely the scale of our treatment programs by continuing the traditional high-cost approach," he said. A new buzzword, "differentiated care," calls for providing intensive services only to those who are ill or failing on medication: Those doing well can cut clinic visits back to twice a year and receive up to a 6-month supply of ARVs.

The Nyamutora project, conceived by the local Salvation Army church and Chidamoyo Hospital, shows how efficient that approach can be. Before the project began, people would either have to find round-trip transportation—which often meant paying $6, a hefty sum for most—or walk for an entire day to receive a month or two's supply of medication. What the villagers call "Chidamoyo day" also saves the hospital staff time and money: The village visit is an efficient way to see many patients in one fell swoop, and their main extra cost is $35 for gas.

One reason patients can forgo frequent clinics visits is that routine monitoring of CD4s, the white blood cells that HIV targets and destroys, is increasingly being seen as a pointless money sink. At the meeting WHO recommended "stopping routine CD4 count testing" for people who are stable on ARVs and instead monitoring viral loads as rarely as once a year. Using "dried blood spot" technology, which requires a simple finger prick rather than collecting venous blood to monitor viral load, could save even more money. Zimbabwe alone could save millions of dollars each year by using the dried blood spot strategy instead of routine CD4 measurements, according to a model presented by Paul Revill of the University of York in the United Kingdom.

HIV-infected people in a remote Zimbabwean village receive antiretroviral drugs at the local church once every 2 months.

PHOTO: TJ MAPOSHERE

Less skilled workers can often do the same quality work as better-paid professionals, several speakers said. Pharmacists, for example, need not distribute ARVs. Doctors Without Borders trained community health workers in rural Malawi to perform viral load tests accurately. "We have to explore every single piece of how to get as many people on treatment right now with the resources we have," Deborah Birx, head of the U.S. President's Emergency Plan for AIDS Relief, told *Science*.

Birx urged countries to put the new recommendations into effect "within weeks, not years." She also sees other opportunities for savings. "You could visualize in these remote areas drones carrying drugs and drones carrying dried blood spots," she suggests. "There are a lot of different innovations we haven't even attempted." ■

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