REACH is a collaborative program of Northwestern University and the University of Ibadan with the support of the Bill & Melinda Gates Foundation. REACH aims to improve HIV/AIDS prevention strategies in Nigeria through social science and community-based research.
With the zeal and enthusiasm displayed by the trainees, it is envisaged they will contribute to current initiatives aimed at prevention of the spread of HIV at the youth level.

To get a copy of this article, please email REACH@northwestern.edu.

When words hurt - university students get lessons in sensitivity from plusnews.org

Maseno, KENYA, 7 April 2009—Young people have always been adept at creating witty ways to describe everyday life, but the language they use can be hurtful to people living with HIV; western Kenya's Maseno University is now helping its students to stop using insensitive, stigmatizing language.

"When you hear people make jokes about HIV, without caring about anybody in the group who might be living with it, it makes you feel out of place and withdraw yourself to isolation. Somebody is killing you without knowing it," said William Kisia*, 22, an HIV-positive student.

"These young people might be using these words - not necessarily to create stigma amongst their colleagues, but to ease communication amongst themselves - but then stigma is created in the process, without the originators of these kinds of words knowing it," said Dr Maurine Olel, coordinator of the AIDS Control Unit at Maseno University.

"We are working with student clubs, student leaders and other partners to ensure that students are ... sensitive to their colleagues who might be living with HIV," he added. "When you create stigma, other efforts geared towards fighting HIV become hard to implement."

Some of the slang terms in the Kiswahili language, commonly used by university students to refer to HIV, include: "mdudu", a word for a small creepy-crawly; "huyu jamaa anatuacha", which says, "this guy is leaving us"; "ogopa", meaning fear, a word used by young men to describe HIV-positive women; "huyo jamaa amekanyaga live wire", or "that guy stepped on a live wire", a euphemism for someone who had unprotected sex and contracted HIV.

"The person you are telling about another person living with HIV, using that kind of language, might also be positive, and you could be hurting them without knowing it. We need to desist from using such demeaning language to describe others," said Evelyn Wanderi, who participated in a recent workshop on stigmatizing language.

"Imagine being positive, and you hear somebody make a joke that somebody with HIV is a walking corpse; it kills you emotionally and physically - it kills your spirit," she said. "Those who know their status and are willing to speak out will never do so, and those who do not know their status will keep away from finding out their status - this is the surest way to lose the battle against HIV."

Rosemary Wambui, a psychologist and counsellor at the university's AIDS Control Unit, noted that "Students are generally aware of HIV, but it is important to fight stigma ... and what it is that causes it, including the language, because it leads to silence and denial, which are big hindrances to the fight against HIV."

The Ministry of Health and the Commission for Higher Education have partnered with I Choose Life Africa, an NGO working in HIV management and control among university students, in a programme that has trained around 4,000 HIV peer educators. Several universities, including Maseno, now also have compulsory HIV courses that all students must take as a prerequisite to graduation.

To access this article online, go to http://www.plusnews.org/Report.aspx?ReportId=83835

Mobile technology battles HIV from BBC news

"When I arrived here, I saw people with HIV being carried all day to get to the clinic," Paul Williams recalls.

"There were no testing services, no education, no treatment and certainly no monitoring of treatment. People just died."

That was the situation in Bwindi, Uganda, three years ago. Dr Williams, formerly a GP in North-East England, has since transformed a tiny and very basic health centre on the edge of the Impenetrable Forest into an efficient community hospital.

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And for the past five months, thanks to a small but important piece of equipment, Dr Williams' medical team has been able to monitor the health of patients with HIV from a clinic that fits into the back of their four-wheel-drive "community ambulance".

Bwindi Community Hospital now provides health care for about 40,000 people. It has a dedicated maternity programme and a children's ward that deals with many cases of malnutrition, as well as other common diseases including malaria and HIV. In total, the hospital takes care of 1,000 HIV positive patients.

Dr. Williams describes the environment in which he works: "We're a mile away from the rainforest where there are mountain gorillas, right on the border between Uganda and the Democratic Republic of Congo. "There aren't any tarmac roads here, there isn't any public transport, and lots of the patients live a day's walk from the hospital. Many of them live a subsistence existence and they can't afford to get here."

So his team packs an "HIV outreach clinic" into its vehicle, and takes it out to remote communities. Along with the rest of the equipment loaded into the back and strapped on to the roof of the ambulance, there is one modest-looking grey box.

This piece of equipment is a PointCare NOW machine. It was donated to the hospital last year, and has since transformed the care Dr. Williams can offer HIV patients. The machine is a portable blood-testing device - pop in a blood sample and, within 10 minutes, it gives a print-out detailing the condition of a patient's immune system. It counts CD4 positive T cells. These are the white blood cells that the HIV virus latches on to - attacking and destroying them.

"When we say someone has a weak immune system because of HIV, we mean their number of CD4 cells is low," explains Dr Williams. "During the course of infection, the number of these cells gets less and less - so you have to count them to see how advanced the HIV is."

The quest
The machine was developed by PointCare, a company based in the US that specialises in diagnostic equipment for the developing world.

It's an organisation with an impressive pedigree. Petra Krauledat, and her long-time business partner Peter Hansen, founded the company in 2003, having both already had long and successful careers in HIV research.

"Peter invented the first automated CD4 test in the late 1970s, and I led the group in 1982, in Germany, that launched the first HIV screening test in Europe," explains Dr Krauledat. In the 1990s they were approached by former colleagues who asked them to turn their attention to developing a much-needed, cheap CD4 test for the developing world.

"So we went to Southern Africa to talk to the [medics] actually working there," she says. What they found surprised them both. "People showed us tonnes of donated instruments just sat in storage. The reagents [or chemicals needed to run the tests] had simply perished in the heat," she relates. "So 'cheap' wasn't people's biggest concern. What they needed was a test that could be used in a little shack of a clinic, transported to remote areas, and that could withstand the high temperatures."

"We've fulfilled that quest."

Surviving the heat
Dr Hansen invented a test that uses chemical reagent that can be freeze-dried and stored in temperatures of over 40C.

CD4 screening tests use antibodies - molecular tags that recognise and latch onto a chemical marker on the surface of the cell. By attaching to the cells, they act as flags distinguishing CD4 cells from other white blood cells. But these antibodies need to be "labelled", so they can be detected by a machine.

Traditionally, antibodies are labelled using fluorescent markers, but these fluorescent chemicals perish if they are not kept refrigerated. So they're useless for a medical team operating from a temporary clinic in the heat of an African summer.

Dr Hansen developed a new label. "We use colloidal gold," explains Dr Krauledat. "It's true nanotechnology - extremely tiny gold particles attached to the anti-CD4 antibody."

The gold-bound antibodies are very heat-stable - they can be stored at over 42C for an entire year.

Immediate result
Inside the PointCare machine, the freeze-dried, gold-labelled antibody is liquefied and combined with the blood sample, and with a chemical accelerator that speeds up the attachment of the antibody to the cells.
"Mobile technology battles HIV" continued, from page 3

"How the accelerator works is a trade secret, but it allows us to complete the test within eight minutes," says Dr Krauledat.

"Before we had this machine, we'd see somebody in the clinic, then we'd have to see them on another day to collect a blood sample," recalls Dr Williams. "We had a system of motor-cycle riders that went round all of our outreach sites on a particular day to collect samples. They would have to ride for four hours along a muddy road through the Impenetrable Forest, to a laboratory on the other side, where we could get them tested.

"It took us three days to get the result, and we couldn't get it back to the patient until we saw them again two weeks later. "Now, with this simple piece of technology, we can deal with problems immediately."

The machine is also far cheaper to run than traditional instruments. It is powered via a battery pack. "Because we use colloidal gold, we have an instrument that doesn't consume a lot of power," explains Dr Krauledat.

"Fluorescently labelled antibodies have to be detected with a laser, and those systems are quite fragile and consume more power. We use a [light-emitting diode] detector. It's technology with a lifetime of 180,000 days, doesn't break and it uses almost no power."

'Productive lives'
As well as a CD4 count, the device also counts five other subtypes of white blood cell. This gives a complete picture of the patient's immune system.

The results provide a physician with a good indication of whether an HIV positive patient might have tuberculosis, give a warning sign of other opportunistic infections, and find out if the patient has anaemia - a debilitating condition that is fairly common in the latter stages of HIV.

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