

# FOLLOWING PASSION

## Leads Epidemiologist to HIV Prevention



Robert Bailey (left)  
Professor of Epidemiology at UIC SPH

Mural on the wall of the UNIM clinic depicting the major HIV prevention strategies at the time of the onset of the trial with male circumcision included as a question



Sometime after studying 900 squirrel monkeys on an island in the Amazon and surveying the growth of pygmies in the forests of central Africa, Robert Bailey decided he wanted to help end some of the human suffering he encountered during his travels.

After leading a recent study of 2,784 HIV negative men in Kisumu, Kenya, which concluded that medical circumcision of men reduces their risk of acquiring HIV during heterosexual intercourse by 53 percent, Bailey, a professor of epidemiology at the UIC School of Public Health, has done just that.

“Circumcision is now the only proven effective HIV prevention for adults,” Bailey said. “We know that circumcision reduces the risk of contracting HIV, which translates into saving lives.”

During the study, half the men were randomly assigned to circumcision and half the men remained uncircumcised for two years. Participants received free HIV testing and counseling, medical care, tests and treatment for sexually transmitted infections, condoms and behavioral risk counseling during periodic assessments throughout the study.

These study results - coupled with the results from similar trials in Uganda and South Africa - were so compelling that on March 28, 2007, the World Health Organization issued a statement supporting circumcision as a proven method for HIV prevention.

“In response to the urgent need to reduce the number of new HIV infections globally, the World Health Organization (WHO) and the UNAIDS Secretariat convened an international expert consultation to determine whether male circumcision should be recommended for the prevention of HIV infection,” the statement reads. “Based on the evidence presented, which was considered to be compelling, experts attending the consultation recommended that male circumcision now be recognized as an additional important intervention to reduce the risk of heterosexually acquired HIV infection in men.”

Kisumu, Kenya is a long way from Wall Street, where Bailey worked in marketing for a smelting and refining company after graduating from Harvard in 1969 with a degree in modern European history. It was the height of the Vietnam War and Bailey often felt more at home with the students who gathered on Wall Street to protest the war than he did with his conservative colleagues.

After a year and a half on the job, Bailey was offered a promotion and a chance to be groomed for a lucrative executive position. But after some soul searching, Bailey not only decided to turn down the promotion, he also quit his job.

“I knew if I took that job I would be there for the rest of my life,” Bailey said. “I saw the way my father lived. He was a successful businessman who worked hard and commuted everyday, but he didn’t have a passion for his work.”

So Bailey packed up a bag and hitch-hiked to New Orleans, where he bought a car for \$50. He drove to Mexico and landed in Cuernavaca, Morelos, where he studied Spanish and lived among an eclectic group of political exiles and intellectuals gathered around Ivan Illich.

Bailey went on to travel throughout Central America in that same \$50 Rambler Classic. He sold his car for \$250 when he arrived in Panama and went on to the Amazon where his sister worked for a tourist company. When he arrived, Bailey discovered that his sister had been flown out the previous day with hepatitis, so he took her job.

“The day after I arrived I took tourists out who paid big bucks for this green ‘gringo’ to show them around,” he said. “I was paid \$20 a week plus room and board, but I fell in love with the Amazon.”

Bailey soon found a way to stay in the Amazon. He applied for and received a research grant from Merck to study population dynamics of squirrel monkeys on a remote Amazonian island. He decided, while on the island, that he was going to be a primatologist, so he planned to return to Harvard for a graduate degree in bioanthropology.

More specifically, Bailey wanted to study the evolution of behavior of New-World primates. So before starting grad school, he went to Kenya for three months to collect and analyze data on baboons.

After Kenya, Bailey ventured to Cameroon to look for talapoin monkeys, the African equivalent to the squirrel monkey. To study the talapoins, he went to a village in southeast Cameroon and asked two Baka pygmies to take him into the rainforest.

Communicating only with hand-gestures, Bailey, his guides and their families walked two days into the rainforest where they set up camp and lived for two weeks. While Bailey worked during the day, his resourceful guides hunted antelope, picked wild mushrooms and yams, and gathered termites for dinner. “As I watched them I wondered why I was researching monkeys when I was really interested in human evolution,” Bailey said. “I decided I should study pygmies, who were living as hunter-gatherers, the way humans did for 99% of human evolution.”

Bailey, along with the woman who would become his wife, Nadine Peacock, who is now an Associate Professor of Community Health Sciences at UIC SPH, applied for and received a grant to study Pygmy populations throughout central Africa. He began to learn French and Swahili and set up a research camp in the Ituri Forest of the Democratic Republic of Congo, where the 6’2” man lived off and on for the next 14 years studying the Efe pygmies, who are considered to be the shortest people in the world.

While doing his research, Bailey learned that Efe women have a very high rate of infertility, with 35-40 % of the population never having a live birth. This, he determined, was due in part to a high rate of sexually transmitted disease. The Efe also suffered from malnutrition, lack of access to healthcare, and a high mortality rate. The life expectancy at birth for an Efe was 28.

Although writing research papers on the people he studied was interesting, Bailey decided that what he really wanted to do was to help end some of the suffering he witnessed firsthand. So in 1994, Bailey received a fellowship at the Center for Disease Control (CDC) and simultaneously attended Emory University, where he earned a Master of Public Health in Behavioral Epidemiology.

Bailey was assigned to the Division of HIV/AIDS at the CDC and was sent to work on a project in Abijan, Ivory Coast preparing a trial of the drug AZT to prevent transmission of HIV from pregnant women to their infants. He was also sent to Bangkok to assist with a similar HIV/AIDS project there. Bailey read an article that stated that in the areas of Africa where HIV/AIDS was most prevalent the men were not circumcised. In fact, men who were not circumcised were 2-8 times more likely to contract HIV than men who were, the article stated.

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Univ. of Nairobi, Illinois & Manitoba (UNIM) clinic, the site of the randomized controlled trial of male circumcision to reduce HIV acquisition in men



Lumumba Health Center, the major health center for the municipality of Kisumu, Kenya

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(continued)

Nelli Westercamp at the UNIM clinic preparing to bite into her first grilled maize



Bailey decided his next challenge would be to prove that circumcision could indeed help prevent HIV. But it was 1996 and no one was talking about circumcision as a way to prevent HIV.

“I went all over the world giving talks in the 1990’s telling people to look at the evidence and that we need to start delivering circumcision,” he said. “A lot of people

laughed, but they finally see that this has great potential.”

Bailey’s study in Kisumu was halted nearly one year early, on Dec. 12, 2006, because the interim results were so overwhelming. In response, all men enrolled in the study who remained uncircumcised were offered circumcision.

“It wouldn’t be ethical not to offer circumcision to these men (in light of the results),” Bailey said.

While the results are encouraging, circumcision can not be the only intervention, Bailey believes. Men who seek circumcision must also be treated for sexual transmitted diseases, receive behavioral counseling and given condoms, he said.

“Providing the circumcision procedure gives healthcare workers an opportunity to also provide other important treatment to young men who may not otherwise come to a health facility,” he said.

Nelli Westercamp, a PhD candidate in the Division of Epidemiology and Biostatistics at UIC SPH, will be doing her dissertation research with Bailey in Kisumu, focusing on risk compensation after circumcision.

“A lot of people question whether young men who are circumcised will feel protected and engage in high risk sexual behavior, thus reducing the benefit of circumcision,” she said. “Circumcision should be viewed as part of the protection package, along with behavioral change.”

Bailey said that being in the Division of Epidemiology and Biostatistics at UIC SPH has given him the credibility necessary to attract support for his work.

“Especially being trained originally as an anthropologist, being part of a school of public health that has a reputation for research excellence has helped me to attract funding and to develop collaborative relationships with excellent scientists from institutions all over the world,” he said. “Also, I have excellent colleagues within the SPH with whom I collaborate and who strengthen the research that I am involved in.”

The research work by faculty and students at the UIC SPH is often directly relevant to the work he is doing in Kenya, Bailey said.

“The UIC SPH is especially strong in working with communities to develop research that addresses pressing health problems in communities and then translating sound research into practice to reduce suffering and improve health,” he said. “The models that I see at work here in Chicago are very relevant to many developing country settings, and learning from my colleagues how they address community health issues here improves the activities that we are pursuing overseas.”

Westercamp, who has already spent two summers working with Bailey in Kisumu, said that the experience she was afforded by Bailey will undoubtedly help her achieve her goal of continuing to work in international studies in the area of infectious disease.

“The caliber of Dr. Bailey’s leadership is something I have not experienced previously,” Westercamp said. “It has been a great honor to work with him and to have exposure to such amazing scientific research projects.”

While Bailey’s journey to help uncover one of the most promising advances in the fight against AIDS in years may have been a bit unconventional, he did exactly what he has advised Westercamp and his other students to do.

“Find your passion and pursue it,” he said. “I would discourage anyone going straight to graduate school after college. Go out and get some experience.” ■