

Study shows what works in treating HIV-infected African children

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Providing HIV combination antiretroviral drug therapy is key to saving the lives of African children infected with the disease.

Letting nurses and other trained health care workers deliver that therapy and monitor patients, especially when doctors are in short supply, is just as important to saving lives, according to a new study by the University of Alabama at Birmingham (UAB).

Data for the study was gathered by following the health of 4,975 children for three years at the Centre for Infectious Disease Research in Zambia (CIDRZ), a nonprofit clinical, research and training center run by UAB faculty in conjunction with the Zambian government. The results are published in the *Journal of the American Medical Association*.

On average, children enrolled in the study experienced a more than doubling of their CD4 cell counts after one year of antiretrovirals, from an average of 12.9 percent CD4 count to 27 percent CD4 count, the researchers said.

The CD4 count is a blood test for a certain type of white blood cell that allows health care providers to monitor the effect of human immunodeficiency virus (HIV) on the immune system. Low CD4 counts are a sign of a weakening immune system, which puts patients at increased risk for developing AIDS and other opportunistic infections.

“We know from work in the U.S. and Europe that children do well on

antiretroviral drugs. But we were surprised in this study at just how high their CD4 counts went, and how quickly they went up,” said Jeffrey Stringer, M.D., director of CIDRZ and a professor in UAB’s Department of Obstetrics and Gynecology.

In addition to the improvements seen in the CD4 counts, the UAB study found HIV-infected children who received antiretrovirals went up noticeably in what is called the “weight-for-age” score. This measurement is calculated from standardized pediatric growth charts and is used to monitor the health of HIV-infected infants and children.

Many of the children enrolled in the study were already two points below their expected weight-for-age score, and those who were infected but did not get antiretrovirals worsened. But those who got the drugs went up in weight, and many of the youngest HIV patients in the study went up by an entire point in their weight-for-age score.

Also in the study, the pediatric care was provided by nurses and clinical officers, which are the equivalent to physician assistants in the United States. The decision by Zambian officials to allow HIV-infected children enrolled in the *JAMA* study to be treated by non-physicians allowed more lives to be saved, said Craig Wilson, M.D., director of UAB’s Sparkman Center for Global Health and a co-author on the study.

“The prioritization by CIDRZ and the Zambian government of getting care to these children as well as the development of targeted protocols and training made all of this possible. It ensures the broadest access to treatment and benefit,” Wilson said. He along with Celia Hutto, M.D. a professor of infectious diseases in the UAB Department of Pediatrics, traveled to Zambia repeatedly to help develop protocols and train health workers in pediatric HIV care.

The Zambian Ministry of Health, through CIDRZ and other international

health agencies, provide antiretrovirals at primary care clinics in Lusaka, where HIV infection rates are high. Stringer said the drug-therapy project in children is being done in conjunction with a large-scale project to reduce mother-to-child HIV transmission through patient testing and education.

Source: University of Alabama at Birmingham

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