

Early antiretroviral therapy for HIV shown cost-effective

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Researchers at Weill Cornell Medical College and GHESKIO (Groupe Haitien d'Etude du Sarcome de Kaposi et des Infections Opportunistes) have shown that early treatment of HIV not only saves lives but is also cost-effective. Results are published in today's edition of *PLoS Medicine*.

Before 2009, the [World Health Organization](#) (WHO) recommended waiting to initiate antiretroviral therapy (ART) for [HIV](#) until a patient's CD4+ T cells fall below 200 cells per cubic millimeter. But in that year, a [randomized clinical trial](#) completed by Weill Cornell researchers at the GHESKIO clinic in Port-au-Prince, Haiti, demonstrated that early ART decreased mortality by 75 percent in HIV-infected adults with a CD4 cell count between 200 and 350 cells/mm³. As a result, the WHO now recommends that ART is started in HIV-infected people when their [CD4 cell count](#) falls below 350 cells/mm³.

The new study, conducted by researchers at Weill Cornell [Medical College](#), GHESKIO, and Brigham and Women's Hospital in Boston sought to evaluate if the revised WHO recommendation is cost-effective and if its benefits outweigh its costs. A [medical intervention](#) is generally considered cost-effective if it costs less than three times a country's per capita gross domestic product (GDP) per year of life saved (YLS).

The researchers used data from the previous [randomized trial](#) to compare the cost-effectiveness of early versus standard ART. They included in their analysis the use and costs of ART, other medications, laboratory tests, outpatient visits, radiography, procedures and hospital

services. Patients who received early ART had higher average costs for ART but lower costs for other aspects of their treatment than patients who received standard ART. When the [costs](#) of research-related tests were excluded, the incremental cost-effectiveness ratio after three years for early ART compared with standard ART was US \$2,050/YLS.

"Because the Haitian GDP per capita is US \$785, these findings suggest that, in Haiti, early ART is a cost-effective intervention over the observation period of the trial," says lead author Dr. Serena P. Koenig, assistant professor at Brigham and Women's Hospital.

"The incremental cost-effectiveness ratios calculated in our study are probably conservative because they did not consider the clinical benefits of early ART that continue beyond three years -- early ART is associated with lower longer-term mortality than standard ART -- or the benefit of early ART on disability and quality of life," says senior author Dr. Bruce R. Schackman, associate professor of public health and chief of the Division of Health Policy at Weill Cornell Medical College.

"This study suggests that the new WHO guidelines for ART initiation can be cost-effective in resource-poor settings," says Dr. Jean W. Pape, founder and director of GHESKIO and professor of medicine at Weill Cornell Medical College. "Despite substantial budget and logistical constraints to implementing earlier treatment," he continues, "policymakers should allocate resources to maximize their ability to implement the new guidelines."

Provided by New York- Presbyterian Hospital

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