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## Earlier Initiation of Antiretroviral Therapy Should Be Highest Priority for Expansion of HIV Care, Study Finds

***Earlier initiation of antiretroviral therapy should be the highest priority for global expansion of HIV patient care. This finding, from a paper published in PLoS Medicine, should help resource-limited nations to phase in the implementation of the new 2010 WHO recommendations for HIV treatment.***

"Immediate scale-up of the entire WHO guideline package may be prohibitively expensive in some settings," said Lead Author Rochelle P. Walensky, MD, MPH of the Massachusetts General Hospital, Boston. "In many resource-limited settings, the relevant policy question is: What to do first?"

The new WHO guidelines include three major changes: initiation of ART when CD4 levels drop below 350/ $\mu$ l, rather than waiting until they reach 200/ $\mu$ l; replacing the antiretroviral drug stavudine with the less-toxic but more expensive tenofovir for first-line treatment, and switching patients to second-line ART regimens when the first-line regimen fails.

Findings from Walensky and colleagues demonstrate that earlier ART initiation increased 5-year survival from 80 to 87% and showed substantially improved early clinical outcomes compared to either using tenofovir for first-line treatment or providing second-line regimens. In settings where ART initiation at 350/ $\mu$ l is already available, switching stavudine to tenofovir offers clinical benefit and is less costly than adding second-line regimens. Finally, the authors demonstrate that the availability of second-line regimens offers major survival benefits (greater than 4 years per person) but at substantial increases in cost.

The authors conclude: "The entire package of recommenda-

(incremental cost-effectiveness ratio of US\$2,370 per year of life saved). However, in settings where immediate implementation of all of the new WHO treatment guidelines is not currently feasible, antiretroviral treatment initiation at CD4 < 350/ $\mu$ l provides the greatest short- and long-term survival advantage and is highly cost-effective."

Rochelle Walensky is an Associate Professor of Medicine at Harvard Medical School. Additional co-authors of the PLoS Medicine report are Andrea L. Ciaranello MD, MPH, Sarah B. Lorenzana, Adam W. Stoler and Kenneth A. Freedberg, MD, MSc, MGH Department of Medicine; Robin Wood, FCP, MMed, DTM&H, Desmond Tutu HIV Centre, University of Cape Town; A. David Paltiel, PhD, Yale School of Medicine; and Xavier Anglaret, MD, PhD, INSERM Unité 897, Centre de Recherche "Épidémiologie et Biostatistique." The study was supported by grants from the NIAID, NIDA, and the Doris Duke Charitable Foundation.

Rochelle P. Walensky, Robin Wood, Andrea L. Ciaranello, A. David Paltiel, Sarah B. Lorenzana, Xavier Anglaret, Adam W. Stoler, Kenneth A. Freedberg, for the CEPAC-International Investigators. Scaling Up the 2010 World Health Organization HIV Treatment Guidelines in Resource-Limited Settings: A Model-Based Analysis. PLoS Medicine, 2010; 7 (12): e1000382 DOI: 10.1371/journal.pmed.1000382