

# Effectiveness of expanding harm reduction and antiretroviral therapy in a mixed HIV epidemic

March 1 2011

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Effectiveness and cost effectiveness of expanding harm reduction and antiretroviral therapy in a mixed HIV epidemic: a modeling analysis for Ukraine

A new study from Stanford researchers published in *PLoS Medicine* makes the case that a combination of methadone [substitution therapy](#) and anti-retroviral treatment would have the greatest effect on reducing new infections and improving quality of life in a region where HIV is spreading rapidly among intravenous drug users.

In the past decade, an epidemic of HIV has swept through Ukraine, fueled mostly by intravenous drug use. Of Ukraine's approximately 390,000 intravenous drug users as many as half are HIV-infected. Researchers at Stanford and Veterans Affairs Palo Alto Health Care System have demonstrated, using a [cost-effectiveness](#) modeling study, that the most effective way to combat the spreading disease is a combined program of drug substitution – providing [methadone](#) for opiate users, for instance – and anti-retroviral therapy for those already infected with HIV.

"HIV is spreading in Eastern Europe more quickly than in any other part of the world," said Margaret Brandeau, the Coleman F. Fung Professor of Engineering at Stanford University and senior author of the study.

"Our study shows that substitution therapy for injection drug users is an

inexpensive and effective means of curbing HIV transmission in the region."

With no further intervention, the study predicts that HIV prevalence will reach 67.2 percent in intravenous drug users in 20 years. The authors further show that providing drug-substitution to just 25 percent of intravenous drug users today could lower that figure considerably.

"Not only does drug substitution therapy work, but it is remarkably cost-effective when you consider total costs of treating and caring for a growing HIV-infected community," said lead author Sabina Alistar.

"Providing effective drug substitution therapy and [HIV](#) antiretroviral therapy together to the injection-drug-using community protects the entire population – it actually prevents more infections in non-drug users than in the drug-using community," said Douglas K. Owens, co-author and a senior investigator at the VA Palo Alto [Health Care System](#) and professor of medicine at Stanford University.

**More information:** Alistar SS, Owens DK, Brandeau ML (2011) Effectiveness and Cost Effectiveness of Expanding Harm Reduction and Antiretroviral Therapy in a Mixed HIV Epidemic: A Modeling Analysis for Ukraine. PLoS Med 8(3): e1000423.

[doi:10.1371/journal.pmed.1000423](https://doi.org/10.1371/journal.pmed.1000423)

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Citation: Effectiveness of expanding harm reduction and antiretroviral therapy in a mixed HIV epidemic (2011, March 1) retrieved 20 April 2024 from <https://medicalxpress.com/news/2011-03-effectiveness-reduction-antiretroviral-therapy-hiv.html>

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