



Effectiveness and cost-effectiveness of strategies to expand antiretroviral therapy in St. Petersburg, Russia.

<https://arctichealth.org/en/permalink/ahliterature166730>

Author: Elisa F Long
Margaret L Brandeau
Cristina M Galvin
Tatyana Vinichenko
Swati P Tole
Adam Schwartz
Gillian D Sanders
Douglas K Owens

Author Affiliation: Department of Management Science and Engineering, Stanford University, Stanford, CA 94305, USA.
elisa46@stanford.edu

Source: AIDS. 2006 Nov 14;20(17):2207-15

Date: Nov-14-2006

Language: English

Publication Type: Article

Keywords: Adolescent
Adult
Antiretroviral Therapy, Highly Active - economics
Cost-Benefit Analysis
HIV Infections - drug therapy - economics - transmission
Humans
Middle Aged
Prevalence
Quality-Adjusted Life Years
Russia - epidemiology
Substance Abuse, Intravenous - drug therapy - economics

Abstract:

To assess the effectiveness and cost-effectiveness of treating HIV-infected injection drug users (IDUs) and non-IDUs in Russia with highly active antiretroviral therapy HAART.

A dynamic HIV epidemic model was developed for a population of IDUs and non-IDUs. The location for the study was St. Petersburg, Russia. The adult population aged 15 to 49 years was subdivided on the basis of injection drug use and HIV status. HIV treatment targeted to IDUs and non-IDUs, and untargeted treatment interventions were considered. Health care costs and quality-adjusted life years (QALYs) experienced in the population were measured, and HIV prevalence, HIV infections averted, and incremental cost-effectiveness ratios of different HAART strategies were calculated.

With no incremental HAART programs, HIV prevalence reached 64% among IDUs and 1.7% among non-IDUs after 20 years. If treatment were targeted to IDUs, over 40 000 infections would be prevented (75% among non-IDUs), adding 650 000 QALYs at a cost of USD 1501 per QALY gained. If treatment were targeted to non-IDUs, fewer than 10 000 infections would be prevented, adding 400 000 QALYs at a cost of USD 2572 per QALY gained. Untargeted strategies prevented the most infections, adding 950 000 QALYs at a cost of USD 1827 per QALY gained. Our results were sensitive to HIV transmission parameters.

Expanded use of antiretroviral therapy in St. Petersburg, Russia would generate enormous population-wide health benefits and be economically efficient. Exclusively treating non-IDUs provided the least health benefit, and was the least economically efficient. Our findings highlight the urgency of initiating HAART for both IDUs and non-IDUs in Russia.

PubMed ID:

17086061 [View in PubMed](#) 