



Cost-Effective Allocation of Government Funds for Preventing HIV

There are approximately 40,000 new HIV infections in the United States each year. The estimated average lifetime cost of treating one HIV infection is \$195,000. Relative to the size and costliness of the epidemic, government funds for prevention are scarce. To help decisionmakers allocate funds effectively, the RAND Corporation developed a mathematical model of the cost of a wide variety of HIV prevention interventions. The model uses a constant total budget of \$400 million annually, which is within the \$415 million budgeted in 2004 to state and local health departments for HIV prevention. The most cost-effective interventions (those that prevented the largest number of infections per dollar spent) are shown in the table.

Cost-Effective Interventions to Prevent HIV Infections

Intervention	People Reached	Annual Cost of Intervention	Infections Prevented	Cost Per Infection Prevented
Educational videos in STD clinics	2,000,000	\$2,700,000	580	\$4,700
Notifying sexual partners	54,000	\$13,500,000	2,230	\$6,100
Community outreach (Mpowerment model ^a)	600,000	\$109,096,000	8,921	\$12,000
STD screening at HIV clinics	467,000	\$18,680,000	1,606	\$12,000
Implementing needle exchange in high-prevalence areas	1,000,000	\$30,380,000	2,291	\$13,000
Mass media campaigns	70,000,000	19,999,000	1,131	\$18,000
Opinion leaders programs	600,000	\$22,851,000	994	\$23,000
Implementing needle exchange in medium-prevalence areas	600,000	\$18,228,000	388	\$47,000
Increasing condom availability/accessibility	24,905,725	\$90,566,000	1,920	\$47,000
HIV counseling and testing (one-on-one)	1,000,000	\$74,000,000	700	\$110,000
Total		\$400,000,000	20,761	

^a This model allows gay people in each community to tailor and run the intervention. For more information, go to <http://www.mpowerment.org/>.

- The most cost-effective interventions are targeted at high-risk groups, such as men who have sex with men and users of intravenous drugs.
- The single most effective intervention (potentially preventing nearly 9,000 infections per year) is community outreach using the Mpowerment model.
- HIV patients who have other sexually transmitted diseases have a much greater risk of transmitting HIV to their sexual partners. Screening and treating HIV patients for other STDs can significantly reduce the incidence of HIV.
- Interventions aimed at low-prevalence populations (such as mass media campaigns) can be cost-effective if they reach a large number of people.
- Allocating funds across all ten interventions achieved the best results: prevention of an estimated 20,000 infections annually.

- RAND RESEARCH AREAS**
- THE ARTS
 - CHILD POLICY
 - CIVIL JUSTICE
 - EDUCATION
 - ENERGY AND ENVIRONMENT
 - HEALTH AND HEALTH CARE
 - INTERNATIONAL AFFAIRS
 - NATIONAL SECURITY
 - POPULATION AND AGING
 - PUBLIC SAFETY
 - SCIENCE AND TECHNOLOGY
 - SUBSTANCE ABUSE
 - TERRORISM AND HOMELAND SECURITY
 - TRANSPORTATION AND INFRASTRUCTURE
 - WORKFORCE AND WORKPLACE

This fact sheet is based on:

Cohen DA, Wu S-Y, and Farley TA, "Cost-Effective Allocation of Government Funds to Prevent HIV Infection," *Health Affairs*, Vol. 24, No. 4, July/August 2005, pp. 915–926.

RAND Offices Santa Monica • Washington • Pittsburgh • New York • Doha • Berlin • Cambridge • Leiden

RB-9132 (2005)

This product is part of the RAND Corporation research brief series. RAND fact sheets summarize published, peer-reviewed documents or a body of published work. The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND®** is a registered trademark.

© RAND 2005

www.rand.org



HEALTH

THE ARTS
CHILD POLICY
CIVIL JUSTICE
EDUCATION
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INTERNATIONAL AFFAIRS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
SUBSTANCE ABUSE
TERRORISM AND
HOMELAND SECURITY
TRANSPORTATION AND
INFRASTRUCTURE
WORKFORCE AND WORKPLACE

This PDF document was made available from www.rand.org as a public service of the RAND Corporation.

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

The RAND Corporation is a nonprofit research organization providing objective analysis and effective solutions that address the challenges facing the public and private sectors around the world.

Support RAND

[Browse Books & Publications](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Health](#)

View [document details](#)

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use.