



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.

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