HOT TOPICS

Cost-Effective Ways to Fight HIV

What is the best way to ensure that government funds allocated to HIV prevention are used effectively? With more than 40,000 new HIV infections in the U.S. each year and only limited government funds available, the answer to this question is crucial. RAND Corporation researchers used mathematical cost-effectiveness modeling to evaluate 24 possible methods for preventing HIV. Of the 24 intervention methods studied, researchers found that 10 achieved maximum impact per dollar spent. Together, the 10 interventions could prevent as many as 20,000 new infections per year, thereby meeting the Centers for Disease Control and Prevention’s goal of cutting the total number of new infections in half.

The most cost-effective intervention methods are targeted to high-risk groups. For example, community outreach programs targeted directly to gay men could prevent nearly 9,000 new infections per year, at a cost per infection prevented of $12,000.

Needle exchange programs, especially in cities with a high prevalence of intravenous drug users, are also cost-effective. Interventions targeted to relatively low-risk groups (such as mass media campaigns targeted to the general public) can be cost-effective if they are designed to reach a large number of people at a relatively low per-person cost. Of the 10 intervention methods, one-on-one HIV counseling and testing is the most expensive ($110,000 per infection prevented). For comparison, the estimated lifetime cost of treating one HIV patient is $195,000.

Combining Interventions Is Most Cost-Effective

Allocating available funds among all 10 intervention methods achieved the best result. Together, the 10 interventions combine intensive efforts focused on high-prevalence populations with inexpensive large-scale efforts targeted at lower-prevalence populations. The total cost of the 10 interventions would be approximately $400 million, which is within the $415 million budgeted in 2004 to state and local health departments for HIV prevention.

The new HIV initiative sponsored by the CDC specifies only four interventions: making HIV testing a routine part of medical care, improving HIV diagnostic techniques, working with HIV patients and their sexual partners, and decreasing mother-to-child transmissions. When researchers reran the model, limiting it to the four interventions recommended by the CDC, they found that due to the lower success ratio of the four interventions, preventing 20,000 new infections per year would require four times more money.

State and local health officials face the challenge of choosing a plan that maximizes limited resources and responds to local needs. RAND developed a user-friendly tool available online to allow local communities to compare the relative cost-effectiveness of many different HIV prevention methods. Cost-effectiveness may not be the only useful criterion; officials may also want to consider factors such as feasibility and acceptability to local populations. Thus, the tool allows users to assign weights to a variety of critical factors.

READ MORE: Cost-Effective Allocation of Government Funds for Preventing HIV | News release | Maximizing the Benefit—spreadsheet tool

HIV Study Wins Award

A pioneering RAND study of patients receiving HIV care has received the American Association of Public Opinion Research 2005 Policy Impact Award. The study was sponsored by the Agency for Healthcare Research and Quality, a part of the U.S. Department of Health and Human Services.

RAND’s HIV Cost and Services Utilization Study (HCSUS) was the first major research effort to collect information on a nationally representative sample of HIV patients. The study highlights significant trends and disparities in medical care received by patients nationwide. Key findings include:

- After the introduction of antiretroviral therapy, overall spending for HIV medical care dropped by almost 40%.
- African Americans were 65% less likely than whites to receive new antiretroviral drug therapies, even when the severity of their disease was similar.
- Only 32% of patients were covered by private insurance; 20% were uninsured.

The study provides policymakers with detailed, reliable information on the health care services HIV patients are receiving and on the costs of those services, which can be used to inform policy decisions on the allocation of health care resources.

READ MORE: News release | HCSUS home page

FORTHCOMING PROJECT

- Saturated in Beer: How Beer Advertising Affects Children and Adolescents

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