

COST EFFECTIVENESS OF HIV COMMUNITY-BASED PREVENTION PROGRAMS

New Ontario research was released about the value of community-based HIV services. The study, **Economic Evaluation of Community-Based HIV Prevention Programs in Ontario**, was published in the journal, *AIDS and Behavior*, and was authored by Stephanie Choi, David Holtgrave, Jean Bacon, Rick Kennedy, Joanne Lush, Frank McGee, George Tomlinson and Sean B. Rourke.

KEY FINDINGS OF THIS STUDY

From 1987 to 2011, community-based HIV prevention programs prevented 16,672 infections and saved the health care system \$6.5 billion.

Tax payers saved \$5 for every dollar invested in community-based prevention programs in Ontario.



Here are some questions and answers to help you respond to any inquiries about this study:

WHAT IS A COMMUNITY-BASED PREVENTION PROGRAM?

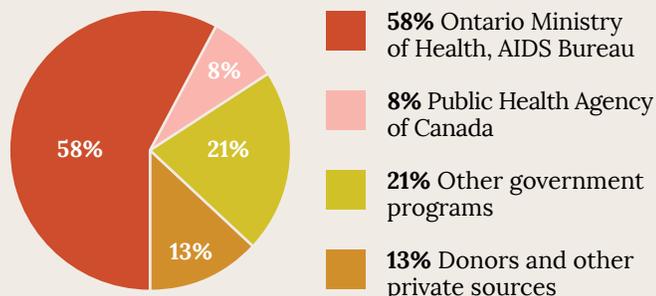
Community-based prevention programs provide education and health promotion services to those Ontarians most at risk of HIV infection as well as support services to people living with HIV. They offer education and counselling to help people understand how to reduce their risk, mass media campaigns as well as prevention tools like condoms and clean needles.

Community-based prevention programs also offer counselling, social support, practical assistance (e.g. access to food programs, emergency financial assistance, assistance accessing provincial drug payment programs, assistance finding housing) for those living with HIV. These practical supports help people find stability and protect their health. There are 29 dedicated community-based HIV programs in Ontario and another 43 community-based programs that receive funding for HIV education, prevention and support.

WHAT ARE THE COSTS OF THESE PROGRAMS?

We performed detailed analyses in the years 2005–2011 regarding the investments and the impacts. In the most recent year of the study (2011) over **\$47 million was invested** in these programs – resulting in a **savings of \$289 million**.

WHERE DID THE FUNDING COME FROM?



The Ontario Ministry of Health and Long-Term Care is the primary investor in these programs and also the primary beneficiary, saving over \$1.75 billion dollars in direct health care costs from 2005–2011, and an estimated \$6.5 billion over the entire 25 year period we studied.

WHAT ABOUT PUBLIC HEALTH? WHAT DO COMMUNITY-BASED PROGRAMS DO THAT PUBLIC HEALTH DOESN'T?

Public Health focuses on sexual health programs, testing for sexually transmitted diseases and partner notification/contact tracing services for the general public. These activities help reduce new HIV infections and we credit a portion of the costs saving to this work. Community-based prevention programs work specifically with communities and people at risk, helping them build skills and resources to avoid infection.

HOW CAN WE KNOW HOW MANY INFECTIONS HAVE BEEN AVOIDED?

This study is based on mathematical models created from Ontario's own records estimating what could have happened without prevention programs. To calculate how many Ontarians might have been infected, we averaged the rates of transmission from the first 10 years of the HIV epidemic and assumed that this average rate happened every year for the past 25 years.

In reality, Ontario established community prevention programs early. The transmission rate was cut in half by 1990, and has continued to drop. Our numbers are estimates. We can never truly know the suffering avoided and the dollars saved, however even our most conservative estimates suggest tremendous savings.



ISN'T TREATMENT THE BIGGEST INFLUENCE ON FALLING HIV RATES?

There is no question that combination antiretroviral therapy changed the lives of people living with HIV, and also reduced the number of new infections by reducing the amount of virus in a person's system that could be transmitted to someone else. These drugs became available in Ontario in 1997. After 1997, we estimated that 75% of the reduction in HIV infections was due to these drugs. Even with that assumption, community-based prevention programs are cost effective – saving Ontarians billions.

HAVE THERE BEEN SIMILAR FINDINGS IN OTHER COUNTRIES?

Absolutely. We modeled our study on research done by the US Centers for Disease Control evaluating their investments in prevention programs. One such study showed that prevention programs saved the US health care system \$130 billion from 1991–2006 and prevented over 360,000 infections. Australian research looking at community-based programs has also shown a tremendous impact.

WHO BENEFITS FROM THE SAVINGS?

Ultimately Ontario tax payers and the over 16,000 people who avoided HIV infection. The Ontario Ministry of Health and Long-Term Care saved an estimated \$6.5 billion in direct health care costs over the 25 year period studied. Our study did not include indirect benefits such as the taxes paid by people who stayed healthy and continued to work, so the savings are likely even higher.

HOW DO WE KNOW WHICH PROGRAMS WORK BEST?

Our study looked at community HIV prevention as a whole and showed a tremendous benefit overall. However the next step is to look more closely at specific community-based and public health programs, and weigh the benefits of various investments. Ontario has had a long-term policy

of funding evidence-based programs tested by research, and of targeting our resources to the communities most at risk. These policies have led to the savings revealed by our study.

IF HIV TREATMENTS WORK, WHY DO WE STILL NEED COMMUNITY PREVENTION PROGRAMS?

Combination antiretroviral therapy is primarily used to treat people who are already HIV-positive. We were very conservative in estimating that 75% of the reduction was due to antiretroviral treatment. Recent studies from New York City and the UK suggest only about 25% of the reduction may be due to these treatments.

However, even with our assumption that drug treatment plays a major role in reducing new infections, our study still shows that community-based prevention programs save Ontarians billions of dollars and avert thousands of new HIV infections. Community-based prevention increases the impact of treatment by helping people take their HIV medications more regularly, by connecting people to testing and care services, and by providing resources to help people live healthier lives.

AREN'T HIV MEDICATIONS NOW BEING USED TO PREVENT HIV?

Ontario is now studying the use of antiretroviral drugs to prevent HIV infection – although these drugs have not yet been officially approved by Health Canada for this use. Community-based prevention agencies are already helping to educate people at risk about these biomedical prevention tools, and will likely play a major role in helping people use this form of HIV prevention effectively in the future.

 Economic Evaluation of Community-Based HIV Prevention Programs in Ontario: Evidence of Effectiveness in Reducing HIV Infections and Health Care Costs. link.springer.com/article/10.1007%2Fs10461-015-1109-8#page-1

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