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Can offering incentives to test increase HIV and STI testing rates?

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Testing and diagnosis for HIV and sexually transmitted infections (STIs) are important to detect new infections and bring people into care and treatment. Diagnoses of infections can not only improve the health of people living with HIV or STIs through care and treatment but it also helps to prevent new infections, thus controlling infection in communities.

Many different strategies have been used to encourage individuals to get tested, such as social marketing campaigns, outreach, routine testing and the use of rapid tests.

Another potential strategy is to offer people an incentive to get tested. Monetary and non-monetary incentives have been successfully used to influence other health-related behaviours including HIV prevention and tuberculosis screening. This article summarizes the results from a systematic review which investigated the use of incentives to encourage testing for STIs, including HIV.

**Why is HIV and STI testing important?**

According to 2014 estimates from the Public Health Agency of Canada (PHAC), over 16,000 of the 75,500 people living with HIV in Canada are unaware of their HIV status. This represents about 21% of all people with HIV but this proportion varies by population: 18% for men who have sex with men (MSM), 20% for people who use injection drugs, and 28% for heterosexual men and women.

The importance of testing for HIV so that people are aware of their HIV infection as early as possible cannot be overstated, particularly given recent advances in our understanding of HIV treatment and prevention.

People who are aware of their HIV-positive status can access care and support services and start treatment when they are ready. Advances in treatment mean that people with HIV can live almost as long and as healthily as people who are uninfected. To get the most out of treatment, research shows it may need to be started soon after someone is infected with the virus.

Currently, however, many people in Canada are not learning about their HIV status until late in their disease, when they start to develop symptoms or opportunistic infections. At this point, antiretroviral treatment can help improve health but not as effectively as when treatment is started earlier.

Knowledge of HIV status is also important for the prevention of HIV transmission. Research suggests that the majority of HIV transmissions originate from people who are unaware of their HIV status. However, generally, once people become aware of their HIV infection, they take steps to reduce their risk of transmitting HIV to
Also, once diagnosed, treatment can be initiated, which significantly reduces a person’s risk of HIV transmission.\textsuperscript{15,16} 

Rates of many STIs are on the rise in Canada.\textsuperscript{17,18,19,20,21} Testing for STIs is important because these infections are often asymptomatic, which can result in unknown transmission to sexual partners or progression to the more serious complications of infection. Having an untreated STI can also increase a person’s risk of acquiring or transmitting HIV.

Treatment of STIs can help people avoid long-term complications and transmission to sexual partners, but only once they know their status.

**What kind of research does the review include?**

A systematic review\textsuperscript{6} looked at the use of incentives as a potential strategy to encourage testing for STIs, including HIV.

The systematic review identified seven studies on the use of incentives to encourage STI testing. A study was included in the review if:

- It used incentives as a significant part of an intervention. Incentives could be monetary or non-monetary.
- The purpose of the intervention was to increase uptake of STI testing. Test uptake was defined as having an STI test or retrieving results from an STI test.
- The outcome of the intervention was measured as testing uptake. This included screening test rates, test of cure rates, repeat test rates, test result retrieval rates and percentage of first-time testers.

Characteristics of the seven studies included:

- Four of the studies took place in the United States. The remaining three studies took place in Australia, South Africa and Malawi.
- The testing interventions were done in clinical and non-clinical settings. Clinical settings included STI clinics and drug treatment facilities. Non-clinical settings included homeless shelters and soup kitchens, community fairs, a mobile van, and other places in the community.
- The smallest study had approximately 370 participants. The largest study had approximately 8,700 participants. The combined total of participants in the studies was 17,194.
- Testing for HIV, gonorrhea, chlamydia or syphilis.
- The interventions were done with different populations: youth, unemployed men, people at increased risk of HIV infection attending emergency departments, people attending STI clinics, and the general population.
- Two studies were randomized controlled trials and five were quasi-experimental studies, with some form of comparison group.

**What were the incentives and how were they used?**

Six studies offered a monetary incentive and one offered a non-monetary incentive to complete different test uptake activities. Monetary incentives in the American studies ranged from 5 to 50 American dollars. The Australian study used 10 Australian dollars, while the study in Malawi used different amounts that averaged to 1.01 American dollars, or approximately one day’s wage. The non-monetary incentive was a food voucher valued at about 10.30 American dollars. The authors note that the incentive values may not be directly comparable as they were offered in different countries and in different years.

Most studies offered the incentive as a fixed, direct payment; however, there were also some variations. In one American study participants were given a draw voucher for a chance to win up to $50. In the Malawian study, participants drew a token from a bag to determine the monetary amount they received, including the potential to draw a voucher for a zero amount.

**How did the incentives affect STI testing?**

The systematic review authors evaluated the effect of the incentives on STI testing by comparing the test uptake rate of the incentive-receiving intervention group to the test uptake rate of the comparison group that didn’t receive
incentives. While STI testing uptake was greater in the intervention group for all seven studies, five studies found that incentives significantly increased testing rates. In one of these studies, incentives increased testing in their community setting but not in their clinical setting. Test uptake was measured in several different ways, depending on the study:

- Percentage of people who did an initial STI test
- Percentage of people who retrieved their test results
- Percentage of people who did a test-of-cure (a test done after completing treatment to check it was successful)
- Percentage of people who got re-tested for an STI
- Percentage of people who were first-time testers

In five studies there was a large difference between the test uptake rate of the incentive-receiving group compared to the group that didn’t receive an incentive. The authors described a large difference as more than 15% between the testing uptake rate in the incentive group compared to the control group. For example, in the study with the largest effect, 77% of participants received their test results in the incentive group and 34% of participants received their test results in the non-incentive group.

The authors noted that the studies in the systematic review may indicate that incentives have a greater impact in some situations compared to others, including the following:

- Incentives may increase testing in non-clinical settings more than in clinical settings.
- Incentives may increase testing when used for initial testing more than when used to ask people to re-test after treatment of an infection.

While these trends are consistent with the results of the individual studies contained in this systematic review, no analysis was conducted to formally test these findings.

What are the implications of the review for HIV and STI testing in Canada?

This systematic review found that incentives may increase the uptake of initial STI testing, especially in non-clinical settings. The results offer us another potential tool with which to address HIV and STI testing rates in Canada. For service providers interested in exploring what role an incentivized testing program could play in their organization some things to consider include:

- Assessing whether such an approach could help increase uptake of testing in the populations they serve.
- Considering potential ethical issues around incentivizing certain populations to increase HIV and STI testing.
- Organizations that don’t offer testing can still play a role in the planning and promotion of an incentivized testing strategy through partnerships with other organizations.

However, it’s important to remember that:

- Although four of the seven studies in the review took place in the United States, more Canadian research is needed to help us further understand how effective HIV and STI testing incentives would be in Canada.
- With the exception of one study, the interventions did not look at whether incentives of different sizes would have different effects on testing rates. The studies also did not explore whether there was a difference between using monetary or non-monetary incentives. More research is needed to help us understand what the optimal type of incentive would be to achieve the greatest increase in HIV and STI testing.
- The interventions involved different populations, but they did not evaluate the impact of incentives on different populations. Additional research could help us determine whether incentives work the same across all populations, or whether there are some groups of people who would benefit more from this test promotion strategy than others.
- The authors noted several limitations to the systematic review. Not all studies included in the review were able to ensure that the comparison and intervention conditions were comparable. This means that differences found in the test uptake rates may have been due to another factor that differed between the two conditions. The authors also noted that increases in the availability of HIV treatment over time may have decreased some of the barriers to testing. Finally, there was no economic data on the financial background of the study participants. One limitation of the study not noted by the authors is the issue of publication bias. This may be an issue as there is a tendency among researchers to publish positive results more often than negative results. This can result in drawing the wrong conclusions because not all the studies completed are available for the
What is a systematic review?

Systematic reviews are important tools for informing evidence-based programming. A systematic review is a critical summary of the available evidence on a specific topic. It uses a rigorous process to identify all the studies related to a specific research question. Relevant studies can then be assessed for quality and their results summarized to identify and present key findings and limitations. If studies within a systematic review contain numerical data, this data can be combined in strategic ways to calculate pooled estimates. Combining data to produce pooled estimates can provide a better overall picture of the topic being studied.

Resources

Anonymous HIV Testing Program – Options Clinic, London InterCommunity Health Centre London, Ontario

Peer HIV Testing – PHS Community Services Society, Vancouver, British Columbia

References


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