

# Does knowledge of U=U impact sexual behaviour? An analysis of the Alberta in-person 2018 Sex Now Survey

## Background

Numerous scientific studies have demonstrated that individuals with HIV who maintain an undetectable viral load are unable to sexually transmit the virus. The implications of Undetectable=Untransmittable (U=U) are significant, especially for treatment as prevention (TasP) strategies, as well as reducing the stigma surrounding HIV. Despite this, there are still many individuals who are not aware that U=U.<sup>1</sup>

Although the U=U campaign was launched in 2016,<sup>2</sup> the campaign was met with initial reservation,<sup>3</sup> and it was generally not until 2018 that local organizations such as HIV Edmonton started strongly promoting U=U. On December 1, 2018, Canada became the first government to formally endorse U=U, and the Minister of Health discussed the importance of this campaign in combatting HIV-related stigma.<sup>4</sup>

## Study Aim

This study aims to deepen the understanding of the relationship between awareness of U=U and sexual behaviours, with the intention of providing some level of insight into potential impacts of federal, provincial, and local U=U awareness campaigns. As this study utilizes data collected only shortly after U=U campaigns started to become more widespread, the hope is that this data can serve as a referent for future studies.

## Methods

The data for this study were obtained from the 2018 Sex Now survey, which was administered in-person at 16 pride parade festivals across Canada from June to September. This study focuses on participants who reported living in either Alberta (n=582).

Participants were initially grouped based on HIV status (positive: n=18, negative: n=492, or never been tested: n=51). Answers to 9 questions regarding sex with men in the past 6 months were compared with respondent awareness of U=U. Both the overall pool of Albertan respondents and the HIV negative group were analyzed. 100% of HIV positive respondents knew that U=U, so no analysis was run on this specific group, as there were no individuals who were unaware of U=U to compare with. Due to the relatively small number of individuals with an unknown HIV status, no significant relationships could be found, so these analyses are not discussed here. Odds ratios were used to determine the statistical significance of the relationship between each sexual behaviour and knowledge of U=U.

## Results

Of all Albertan respondents, 69.8% (n=406) were aware that a person with HIV with an undetectable viral load is unable to transmit the virus during sex. 27.7% (n=161) did not know this, and 2.6% (n=15) did not answer the question. A chi-squared test showed that there was a statistically significant ( $p=1.4e-07$ ) relationship between HIV status and U=U awareness.

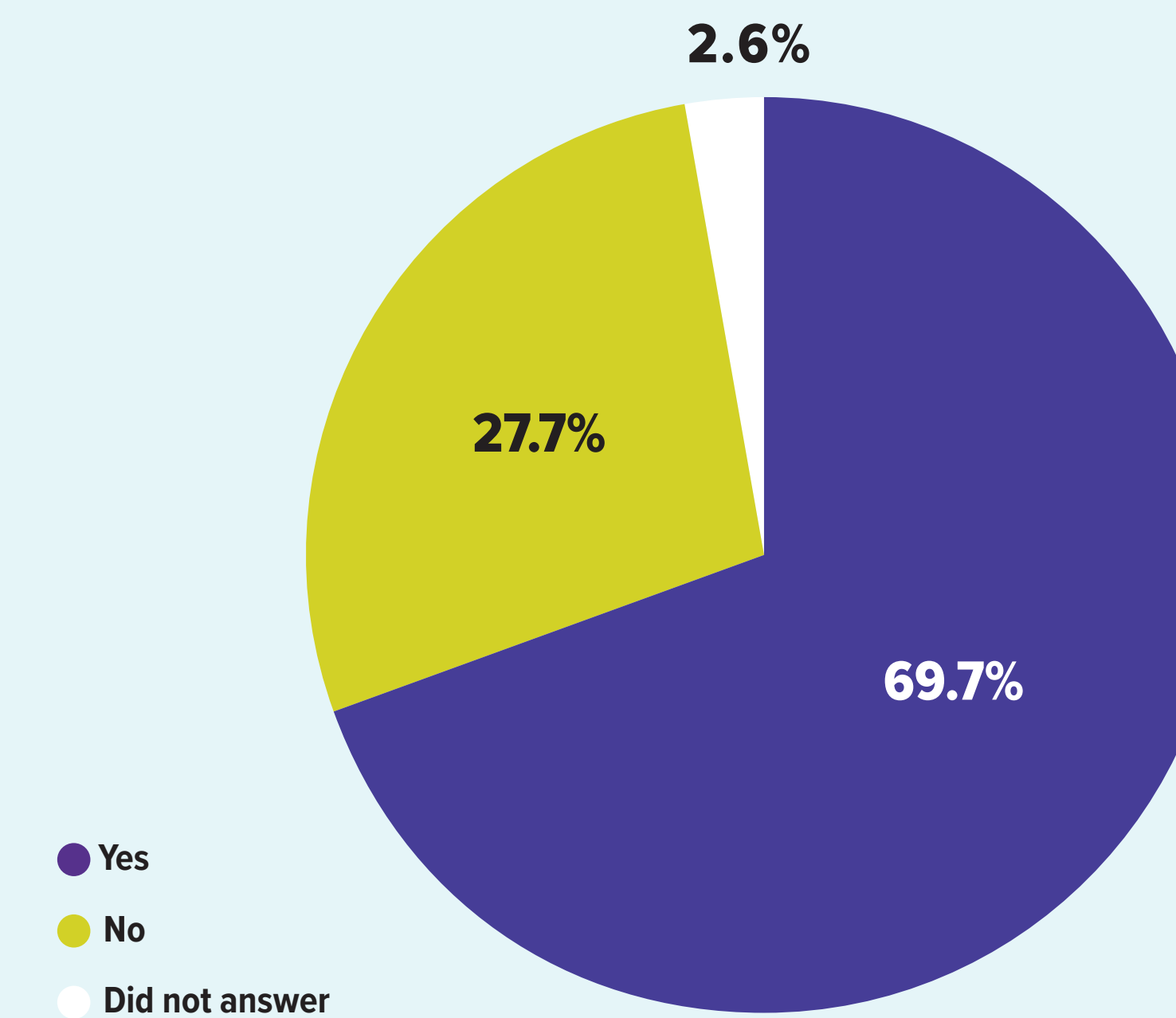


FIGURE 1: RESPONDENT AWARENESS OF U=U

It was found that survey respondents with an awareness of U=U were more likely to engage in certain sexual behaviours than those who did not know U=U. The results are displayed in table 1.

TABLE 1: LIKELIHOOD OF THOSE WHO KNOW U=U ENGAGING IN CERTAIN SEXUAL ACTS RELATIVE TO THOSE THAT DO NOT KNOW U=U

	All Alberta Respondents	HIV-Negative Respondents
Ask a partner about their status	1.90 x	1.80 x
Have a one night stand	2.05 x	1.95 x
Have sex with someone of opposite HIV status	6.88 x	No sig. relationship
Have sex with someone with HIV with an undetectable viral load	5.91 x	4.37 x

(Example: Of all Alberta respondents, those who have knowledge of U=U are 1.90 times as likely to ask a partner about their status than those who did not know U=U.)

The following sexual behaviours were not found to have a statistically significant relationship with U=U awareness:

- having a regular sex partner,
- always using condoms for anal sex,
- having sex that didn't include anal sex,
- only having sex with one partner, and
- always being the top for anal sex if HIV-negative.

## Conclusions

These results demonstrate that Undetectable=Untransmittable (U=U) awareness relates to likelihood in engaging in certain sexual behaviours, such as having sex with someone of an opposite HIV status. While this study is only able to demonstrate the relationship exists, and cannot say with certainty that the rate of these behaviours is due solely to U=U awareness, it is likely that the campaign is having an impact. The fact that Albertan respondents who knew U=U were 5.91 times as likely to have sex with someone with HIV with an undetectable viral load suggest the campaign could potentially be reducing stigma associated with HIV. It is also interesting to note those with U=U knowledge are more likely to have sex with someone of an opposite HIV status (i.e. less likely to serosort). Those with U=U knowledge being more likely to ask a sexual partner about their HIV status could suggest that they have a higher awareness of general sexual health best practices.

The lack of relationship between U=U knowledge and other sexual behaviours have a couple potential explanations. Although some of these behaviours may be expected to be influenced by U=U knowledge, given that they relate to HIV risk, there may be other factors that determine whether or not individuals are engaging in these behaviours. It is also possible that, due to the relative newness of the campaign at the time of data collection, a relationship between these behaviours and U=U knowledge may emerge over time when the campaign has had a larger impact.

Given that the data were collected relatively shortly after the U=U campaign began to take hold on a wider stage, it would be prudent to collect data in future iterations of the Sex Now survey to provide a better picture of the long-term effects of this campaign. Data collected in future surveys could be compared with the 2018 data to gain a better sense of trends and changes that occur as U=U becomes more widely known and understood.

## References

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