

# Human papillomavirus (HPV) vaccine uptake in gay, bisexual, and other men who have sex with men (gbMSM) in Montreal, Toronto, and Vancouver: A Canadian Immunization Research Network (CIRN) Study



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## BACKGROUND

- gbMSM are at increased risk for many HPV-associated cancers, particularly if living with HIV.
- Vaccination protects against the HPV types responsible for most anal and oral cancers, and anogenital warts.
- British Columbia, Ontario, and Quebec implemented targeted HPV vaccination programs in September 2015, September 2016, and January 2016, respectively, where HPV vaccine is offered free of charge to gbMSM aged ≤26.
- We explored potential barriers and facilitators to vaccine uptake based on the new strategy.

## METHODS

- Engage is an ongoing sexual health study among gbMSM aged 16+ years in Montreal, Toronto and Vancouver.
- Participants complete a comprehensive questionnaire, including questions on HPV vaccination, at baseline and during a 12-month follow-up visit.
- Men are being recruited via respondent driven sampling (RDS). Recruitment began in February 2017 for Montreal and Vancouver and in May 2017 for Toronto.
- Using preliminary data from the baseline period and the Fisher's exact test, we compared RDS unadjusted proportions by age group (≤26 and >26) for responses to HPV-related questions on vaccine awareness/receipt, healthcare use, sexual orientation disclosure and willingness to be vaccinated.
- Significance was based on a p-value of <0.05.

## RESULTS

- As of 30/08/2018, 1,937 men enrolled of which >75% were over 26 years of age and identified as gay (Table 1). In all three cities, most participants identified as Canadian or European and reported an income between \$20,000-\$59,000.
- In Montreal, Toronto, and Vancouver, **68.9%**, **84.0%** and **81.6%** were aware of the HPV vaccine, respectively.
- The majority of men were unvaccinated, although a higher proportion of younger men were vaccinated (Figure 1).
- A higher proportion of older (>26) men had a regular primary healthcare provider (Figure 2).
- In Vancouver, significantly more older men disclosed having sex with men to their provider whereas in Montreal and Toronto, proportions for both age groups were high and similar for sexual orientation disclosure (Figure 3).
- Over 80% of men ≤26 were aware the HPV vaccine is recommended for boys/men (Figure 4).
- A higher proportion of older (>26) men were willing to get vaccinated if doing so required disclosing their sexual orientation (Figure 5). Over 50% of men ≤26 and 40% of men >26 were vaccinated at a sexual health clinic (Figure 6).

Table 1: Engage participants' age and sexual orientation up to August 30, 2018 (N=1,937)

	Montreal % of N=1,173	Toronto % of N=307	Vancouver % of N=457
Age			
≤26 years old	21.1	21.1	25.8
>26 years old	78.9	78.8	74.2
Sexual orientation			
Gay	81.0	76.5	85.8
Bisexual	8.3	3.3	4.6
Queer	5.4	16.9	6.3
Straight	0.6	-	-
Other <sup>a</sup>	4.7	3.3	3.3

<sup>a</sup>including asexual, questioning, two-spirit, pansexual and other.

Figure Legend: ■ Aged ≤26 ■ Aged >26  
\*p-value <0.05

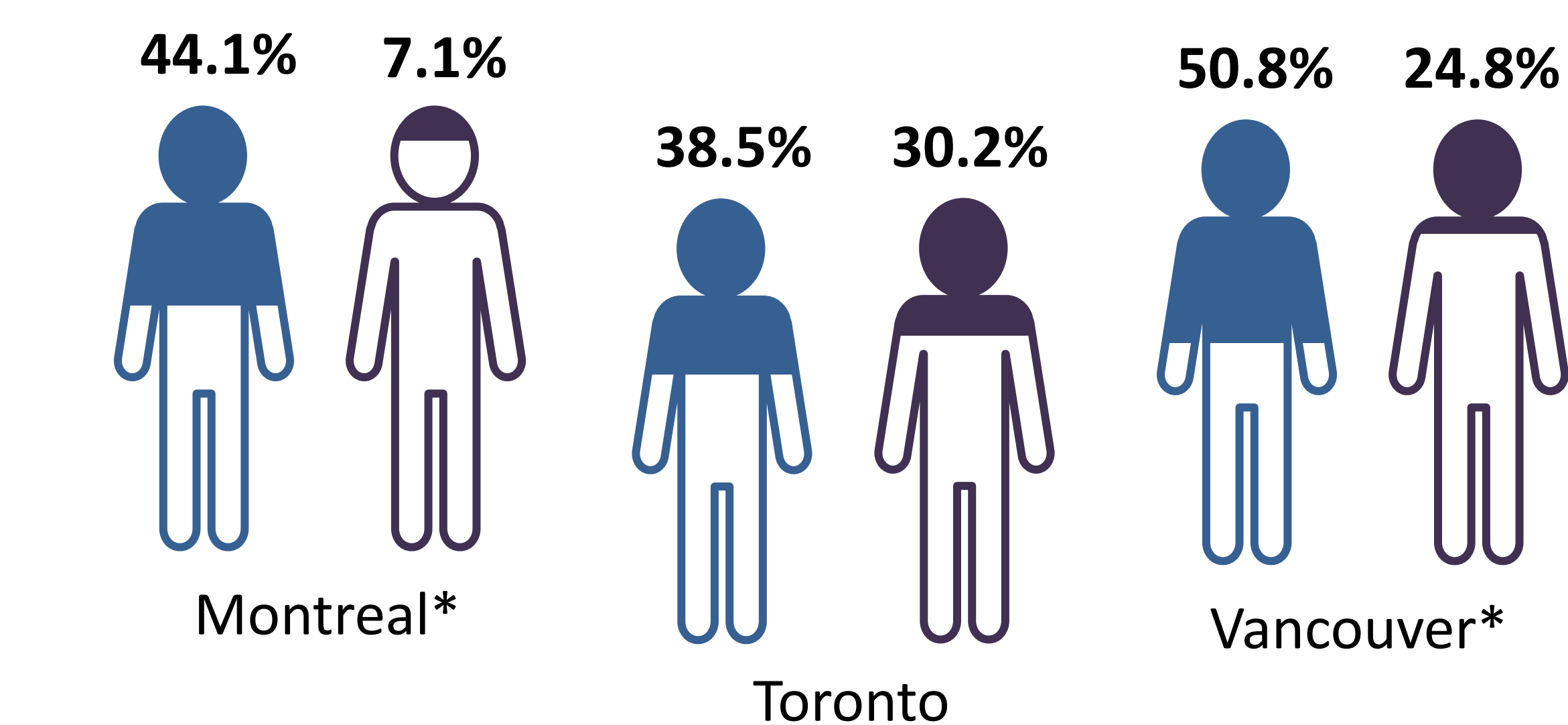


Figure 1. Had 1+ dose of HPV vaccine

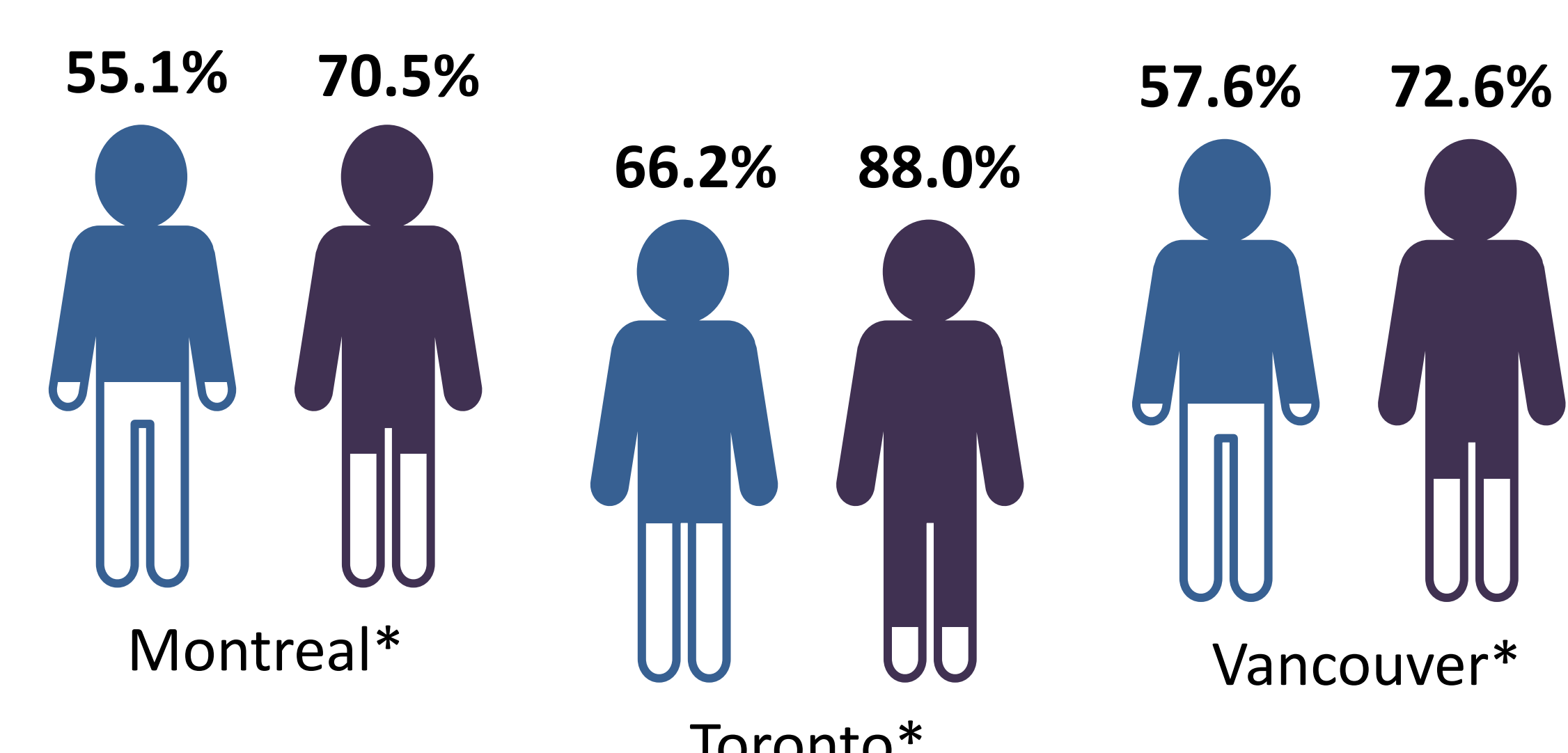


Figure 2. Has regular primary healthcare provider

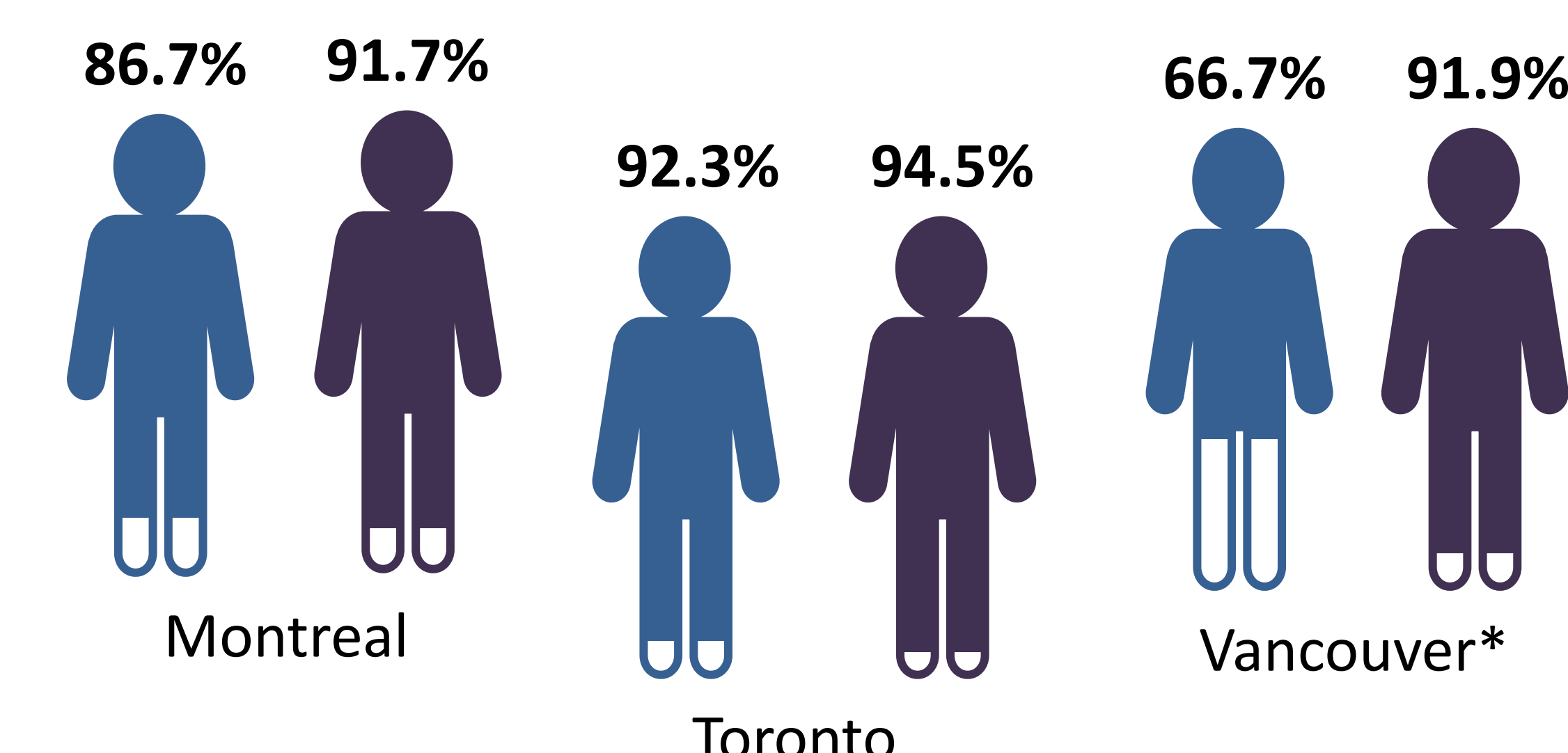


Figure 3. Disclosed having sex with men to regular provider<sup>^</sup>  
<sup>^</sup>Among men with a provider.

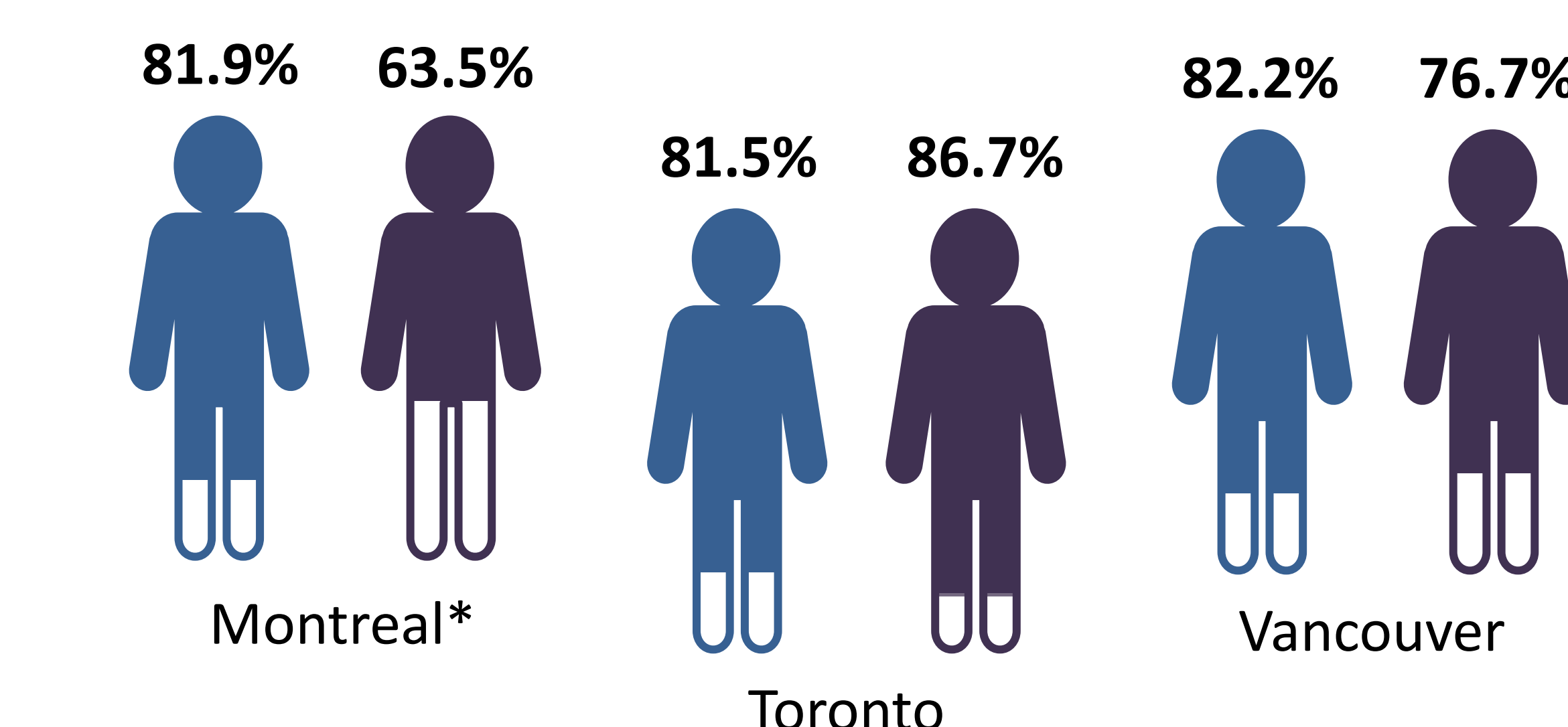


Figure 4. Know HPV vaccine is recommended for men<sup>^</sup>  
<sup>^</sup>Among men who have heard of the vaccine

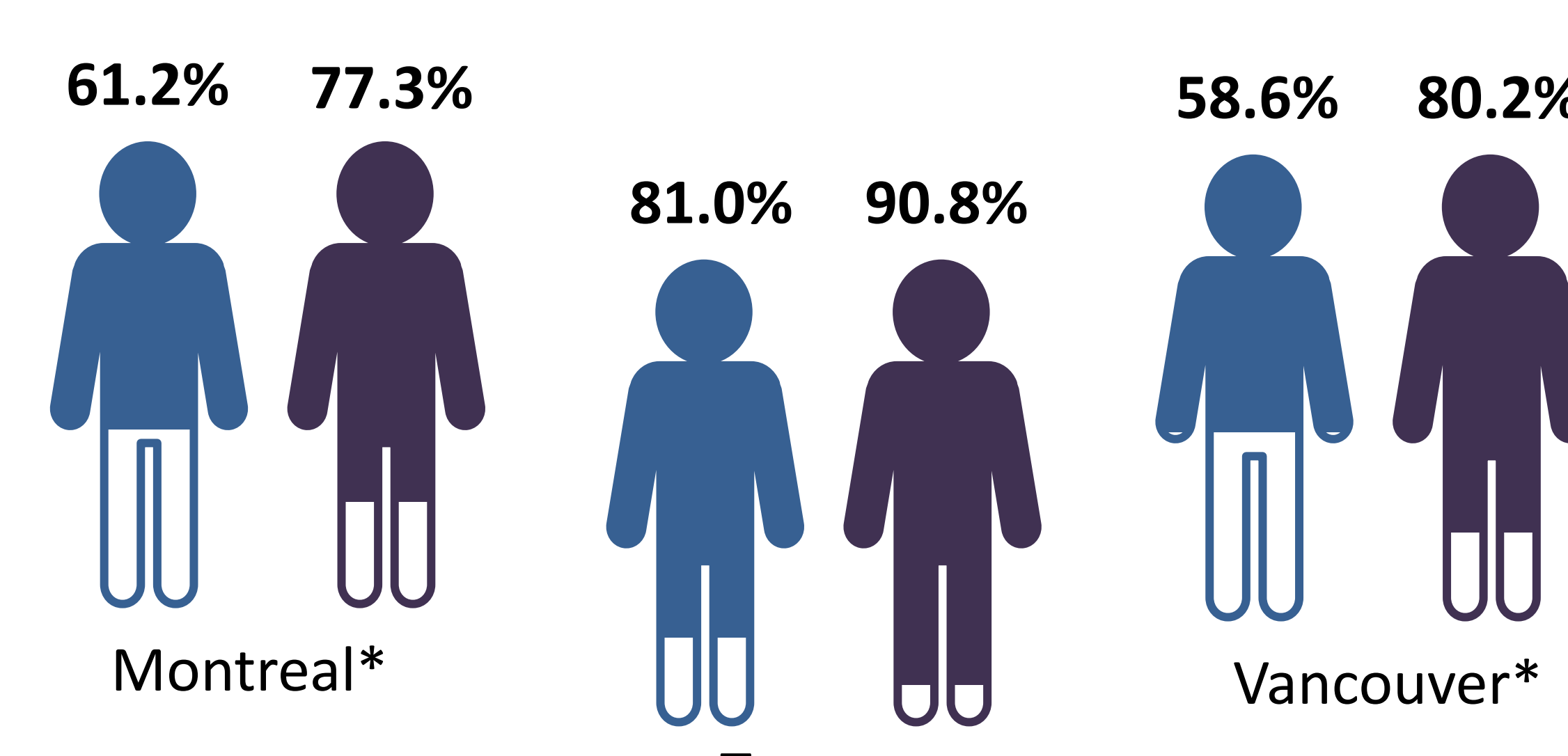


Figure 5. Likely/very likely to get vaccinated if free of charge and had to disclose having sex with other men<sup>^</sup>  
<sup>^</sup>Among men who have heard of the vaccine and unvaccinated/don't know if vaccinated.

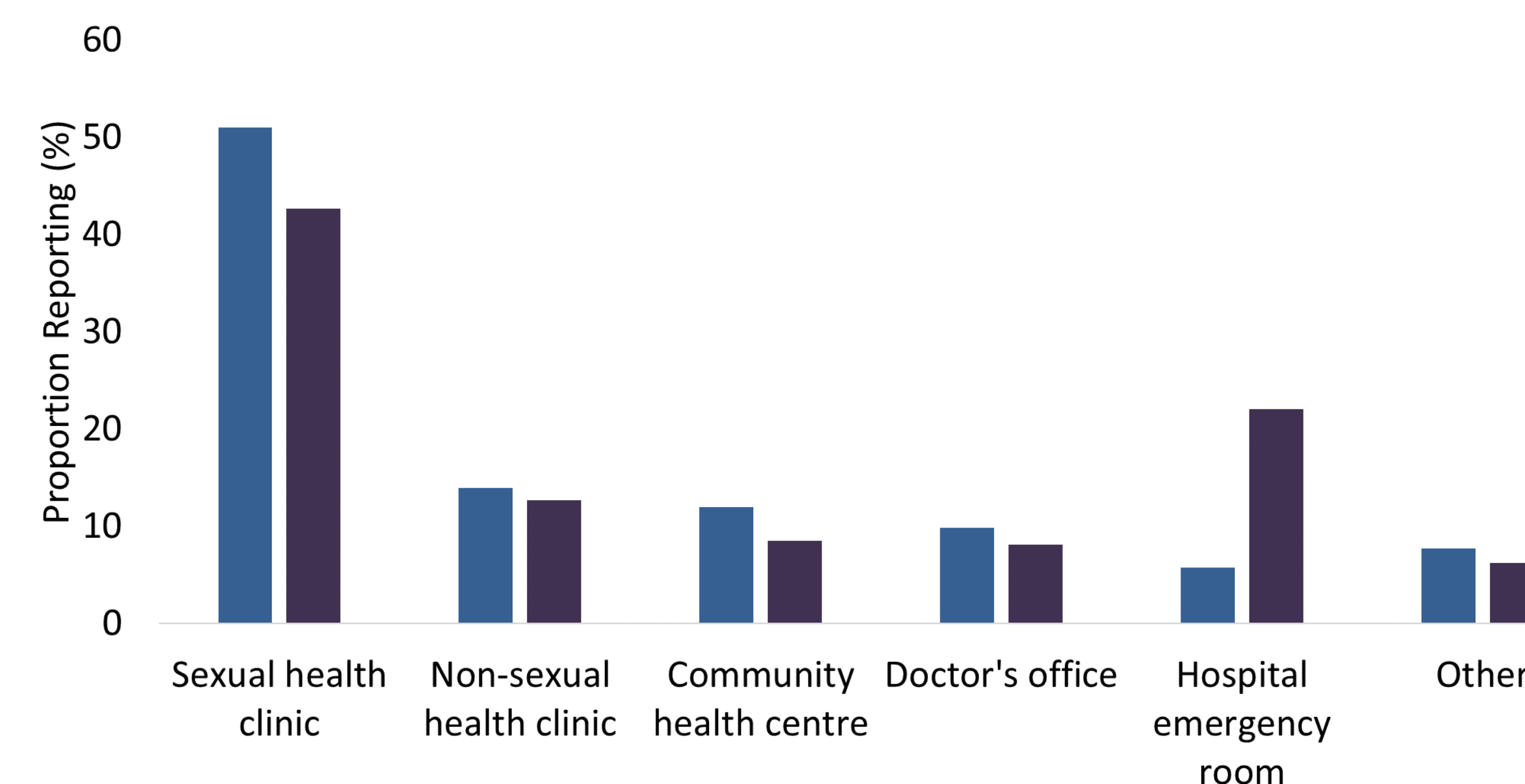


Figure 6. Location received HPV vaccine

## CONCLUSIONS

- Our preliminary, RDS unadjusted results suggest that most gbMSM remain unvaccinated, especially if >26 years of age.
- Among younger (≤26) men eligible for free vaccination, access to a provider, and in Vancouver, having to disclose sexual orientation may be barriers to vaccine uptake.
- Although disclosure of sexual orientation to a regular provider was high in Montreal and Toronto, disclosure to other health professionals may still be a barrier since less men were willing to be vaccinated if having to disclose to *any* health professional.
- Most men were vaccinated for HPV at a sexual health clinic.
- There is still opportunity to increase uptake through vaccine promotion and increasing opportunities for vaccination.

CONFLICT OF INTEREST DISCLOSURE: I have no conflicts of interest.