

Inconsistencies in HPV vaccination coverage across Canada: A commentary

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Abstract

Human papillomavirus (HPV) affects around 75-80% of men and women in Canada and is associated with high morbidity and mortality rates when the infection persists. Despite the preventable nature of HPV-related diseases, they still burden our society due to errors in past public health efforts and their current shortfalls. Specifically, strict limitations and inconsistencies in HPV vaccine coverage have left many young Canadians unprotected. This commentary will highlight the gaps in HPV preventative care across Canada and discuss an impactful student initiative that has paved the road for future advocates to effectively promote HPV prevention within their own communities.

What is HPV?

Human papillomavirus (HPV) has long been thought of as a “woman’s disease.” This has been debunked by the rising incidence of HPV-related cancers among both men and women.¹ In women, HPV can manifest as cervical, vulvar, and vaginal cancers, while in men, HPV can develop into penile cancer.² Both sexes can develop anal and oropharyngeal cancers (OPC), the latter of which is increasing at an alarming rate, particularly among men.²

At the inception of public health efforts, like the grade-school vaccination programs in 2007, HPV vaccines were only recommended and covered for females.³ However, the rise in OPC among men has solicited further investigations into the impact of their omission from these programs and therefore, the impact of men not receiving the vaccine.⁴

Recent studies demonstrate 90% protection against HPV infections for both male and female vaccinated populations.^{5,6} This highlights the effectiveness of HPV vaccines and demonstrates how gaps in their provision, particularly for men, may have contributed to public health detriments. The rise in HPV-related diseases among unvaccinated populations, in conjunction with evidence supporting vaccine efficacy, evokes feelings of urgency among all stakeholders, namely public health officials and young adults, to take action towards improving HPV preventative care.

HPV vaccine accessibility

Currently, there are three HPV vaccines approved in Canada (Gardasil®, Gardasil 9®, and Cervarix®) that differ in formulation and strain coverage.¹ These will be discussed generally as “HPV vaccines” for simplification, as all three have proven highly efficacious in preventing HPV-related diseases.⁷

HPV vaccinations are currently recommended for all young men and women.¹² In Canada, most provinces and territories provide coverage for students in grades six or seven through school vaccination programs.^{8,9} Although these efforts are commendable, limiting coverage by age has left many excluded.¹⁰

Since parental consent is required, students occasionally miss the vaccinations for reasons such as: lack of parental knowledge, the misconception that HPV vaccines may promote earlier sexual activity, and the fear of long-term effects.^{10,11} If these students decide to be

vaccinated later on, they may no longer be covered, depending on where they live, their age, and their sexual orientation.^{8,9}

For instance, Table 1 compares HPV vaccine coverage provided in Ontario and British Columbia (B.C.). In B.C., a catch-up program is available for females up to age 26, which does not exist in Ontario.⁸ Furthermore, compared to heterosexual male populations, both provinces focus on providing coverage primarily for men who have sex with men (MSM) and young women.^{8,9} This is due to their higher risk of developing anal and cervical cancers, respectively, thereby leading to MSM- and women-centered public health promotions.¹² As a result, heterosexual men report that they are less willing to receive the vaccine because they are less aware of its efficacy and less worried about HPV-related diseases.¹² However, HPV transmission only requires skin-to-skin contact.¹² Therefore, everyone, regardless of age, sex, and sexual orientation can benefit from receiving the vaccines and should be provided with adequate coverage.

Student initiatives

Current research demonstrates that advocacy without coverage does not effectively increase HPV vaccination rates among young adults.^{11,13} A systematic review reported that vaccination rates were approximately 4.92 times greater in publicly funded programs than in pay out-of-pocket situations.⁴ At \$180 CAD per dose for the three doses of HPV vaccine recommended in individuals above the age of 15, cost remains a barrier to HPV protection.^{4,14} This is of particular concern for current post-secondary students who are already financially overwhelmed. Where coverage is not universal, students have advocated for their own through their respective

Table 1 | HPV vaccine coverage differences between British Columbia and Ontario

Province	Coverage
	Everyone in grade 6
	Females ≤ 26: - born in 1994 or later and did not complete vaccine series
	Males 9-26: -having sex with men -not sexually active but are questioning their sexual orientation
	Everyone in grade 7
	Male <26: -having sex with men -identify as gay or bisexual
British Columbia ⁸	
Ontario ⁹	

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institutions. In Ontario, the University of Ottawa, does not provide coverage for HPV vaccines, whereas only a few kilometers away, Carleton University provides 80% coverage.^{15, 16} In B.C., students at Simon Fraser University and the University of British Columbia receive 100% coverage for non-prescribed vaccinations for up to \$150 CAD per year, covering almost one of three HPV vaccine doses.^{17,18} The inter- and intra-province discrepancies are disheartening for students who stand without sufficient coverage, but health advocacy success stories from institutions like McMaster University provide hope for change.

An interview with the administrative services coordinator (Victoria Scott, February 28, 2018) at McMaster University suggested that it all started with one student advocate. Upon proposal of amendments to the existing student health insurance coverage, a school-wide referendum was called. The majority of students voted for the plan with maximum health benefits, which included 80% coverage for HPV vaccines at only a marginal cost increase. This was ratified in 2014, providing a plethora of additional health benefits for all McMaster students. Similarly, the student body constitution can be an avenue to explore for students looking to improve their health benefits. While it may be an arduous task, the rising incidence of HPV-related diseases is an urgent reminder that the onus is on young adults to advocate for their own health needs. Given the strong evidence for the effectiveness of HPV vaccines, promoting responsibility at the individual level and advocating for greater coverage at a systemic level is highly merited.

Future recommendations

Medical training often emphasizes the recognition of a condition, understanding its etiology, and treating accordingly. Often, this philosophy of medicine undermines the importance of preventative measures to stop diseases before they occur. Considering the highly preventable nature of HPV, the current rise of HPV-related diseases emphasizes the need to improve preventative care. Despite the large variance in coverage that is present on a macro and micro level, collaborative advocacy efforts can help increase awareness and develop coverage plans that are congruent with the true universal care that has always made us so proud to be Canadian.

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