



FEDERATION OF MEDICAL WOMEN OF CANADA  
FÉDÉRATION DES FEMMES MÉDECINS DU CANADA

# FMWC HPV Task Force

## The Need for Action to Prevent HPV-Related Cancers in Ontario

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October 2023

A White Paper with Ten Actionable Recommendations

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# FEDERATION OF MEDICAL WOMEN OF CANADA FÉDÉRATION DES FEMMES MÉDECINS DU CANADA

## FMWC HPV Task Force: The Need for Action to Prevent HPV-Related Cancers in Ontario

October 1st, 2023

### Introduction

Cancer is the leading cause of death in Canada.<sup>2</sup> Impressive advances in research and treatment have taken place in the 21st century, leading to a decrease in cancer incidence and mortality, as well as safer and more effective treatments.<sup>2</sup> However, the rates of some cancers, like oropharyngeal cancers, continue to increase, and cancer still takes an immense physical, psychological, social, and economic toll on Canadians.<sup>7-10</sup>

Many Canadians do not know that some cancers are caused by viruses.<sup>11,12</sup> Human papillomaviruses (HPV) are DNA viruses that infect the human skin and mucosa.<sup>13</sup> Widely known as the causative agent of cervical cancer, human papillomavirus is also the most important risk factor for head and neck (oropharyngeal) cancers.<sup>14</sup> HPV also causes 91% of anal cancers, 69% of vulvar cancers, 75% of vaginal cancers, 63% of penile cancers, and 70% of oropharyngeal cancers.<sup>15</sup> HPV-related cancers also cause significant physical challenges and psychological distress.<sup>16</sup> HPV is often sexually transmitted, but can also be transmitted by nonsexual contact, including from mother to child during pregnancy or delivery.<sup>17,18</sup>

HPV infection is very common; three-quarters of all Canadians will be infected at some point during their lifetimes.<sup>19</sup> Most are unaware of the infection because it typically does not cause symptoms.<sup>19</sup> HPV is usually cleared within two years, but in some people, it remains persistent, causing precancerous changes in the body and eventually leading to cancer – often years or decades after the original infection. Surveys have identified a lack of knowledge and awareness of HPV not only among the general public, but also among many health care professionals.<sup>20,21</sup>

### The good news: These HPV-related cancers are preventable by vaccination

HPV-related cancer is highly preventable. Vaccines developed in the 2000s protect against up to nine HPV strains, including the highly-carcinogenic strains 16 and 18.<sup>22</sup> In Canada, bivalent, quadrivalent, and nonavalent vaccines are available; the latter, which protects against 9 strains, is used in

The HPV vaccine is “an unprecedented opportunity to prevent multiple male and female cancers”.<sup>5</sup>

Ontario's provincial school-based vaccination program.<sup>23</sup> These vaccines are highly effective: vaccination prevents almost 100% of cervical cancer if the complete series of shots is given by age 25.<sup>24,25</sup> The efficacy and safety of HPV vaccines has been demonstrated in both males and females, and in real-world studies as well as randomized controlled trials.<sup>26</sup> Canadian studies have shown that immunization against HPV types 16 and 18 prevents about 70% of anogenital cancers and 60% of precancerous cervical lesions.<sup>23</sup> Immunization against the additional strains in the nonavalent vaccine prevents another 14% of anogenital cancers and 30% of precancerous cervical lesions, as well as about 90% of genital warts.<sup>23</sup> Evidence from programs that have delivered over 270 million doses shows that there are **no serious side effects of HPV vaccines**.<sup>24</sup> It is now possible that **a type of cancer could be eliminated globally for the first time**: the WHO has set a goal to eliminate cervical cancer within the next century.<sup>3</sup> Achieving that goal rests on three key pillars, namely vaccination, screening, and treatment. WHO research has indicated that the corresponding targets must be reached to eliminate cervical cancer: 1) 90% of girls fully vaccinated with the HPV vaccine by the age of 15; 2) 70% of women screened using a high-performance test by the age of 35, and again by the age of 45; 3) 90% of



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women with a precancerous condition treated, and 90% of women with invasive cancer managed.<sup>3</sup> Each country should meet the 90–70–90 targets by 2030 to be on track to eliminate cervical cancer within the next century.<sup>3</sup> Canada has committed to reaching this goal, and an action plan for eliminating cervical cancer has been developed by the Canadian Partnership Against Cancer.<sup>27</sup> Within this plan, improving HPV immunization rates is the first priority.<sup>27</sup>

Unfortunately, even before the pandemic, Canadian efforts fell short of the 90% vaccination level needed to accomplish this goal. In Ontario, school-based vaccine uptake was 57.9% among 12-year-olds and 61.6% among 17-year-olds in the 2018-19 school year – lower than most other provinces and many other countries, and lower than other vaccines offered at the same time.<sup>28</sup> On the other hand, several other countries, including Norway, Switzerland, and Australia, have implemented successful school-based (or partly school-based) vaccination programs.<sup>29-31</sup>

The disruptions caused by COVID-19 resulted in a dramatic fall in HPV immunization rates.<sup>32</sup> In the 2020-21 school year, only 2.6% of 12-year-olds completed the recommended HPV vaccine series through Ontario's school-based immunization program (Figure 1a).<sup>32</sup>

Significant recovery took place in the 2021-22 school year due to the catch-up efforts of local Public Health Units, improving the immunization rate of the 2020-21 cohort to 23.4% (Figure 1b). Similarly, the immunization rate of the 2019-20 cohort improved from 5.8% as of August 31, 2020 to 36.3% as of August 31, 2022 (Figure 1a,b). Nevertheless, the latest data show that in the 2021-22 cohort of 12-year-olds, only 15.6% completed the vaccine series on schedule.<sup>32</sup> Supporting this trend, Toronto Public Health has presented data showing that only 23% of grade 11 students and 22% of grade 12 students had received their vaccines in the 2022-23 school year, compared with about 90% before the pandemic – a drastic drop in protection from disease.<sup>6</sup>

Taken together, these data show that even with catch-up efforts, immunization rates have not recovered to pre-pandemic levels – which were already insufficient to protect children from cancer.<sup>32</sup> **If we do not act to immunize more children, too many Ontarians will be vulnerable to cancer as they grow older.** Estimates for Canada as a whole show that if HPV vaccination, screening and testing targets are not reached, including increasing HPV vaccine uptake, **6,810 women will develop preventable cancers, and 1,750 women will die of preventable disease by 2050.**<sup>27</sup>

**“Despite these tremendous efforts for catch-up, our vaccination rates post-pandemic are lower compared to before the pandemic.”** – Dr. Vinita Dubey, Associate Medical Officer of Health, Toronto Public Health<sup>6</sup>

Achieving an HPV vaccination rate of at least 90% by 2030, together with effective screening and treatment, could **eliminate cervical cancer in Canada within the next century.**<sup>3</sup>

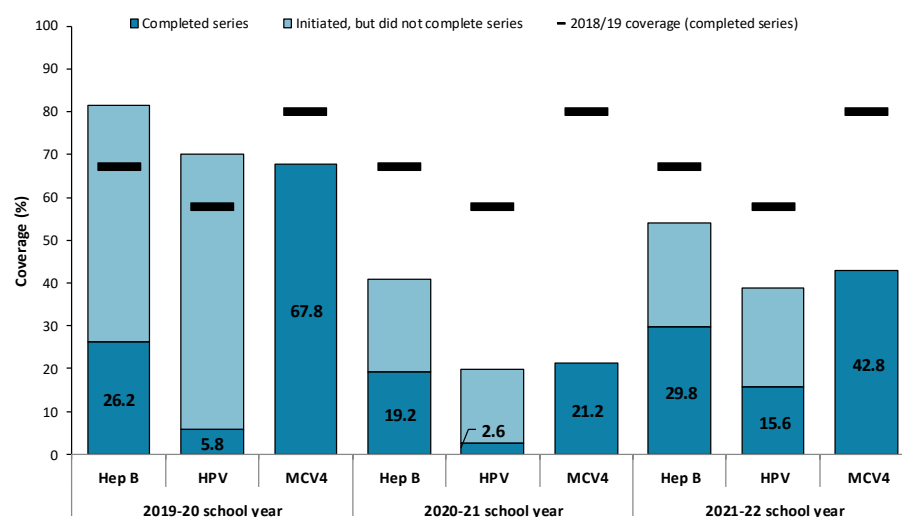
On the other hand, achieving an HPV vaccination rate of over 90% by 2030, together with effective screening and treatment, could **eliminate cervical cancer in Canada within the next century.**<sup>3</sup> According to Dr. Vivien Brown of the FMWC, **“It’s time to urge the government, public health, school boards and all health care providers, including primary care providers, pharmacists, dentists, and allied health professionals, to work together to fill this massive gap.”**<sup>33,34</sup>



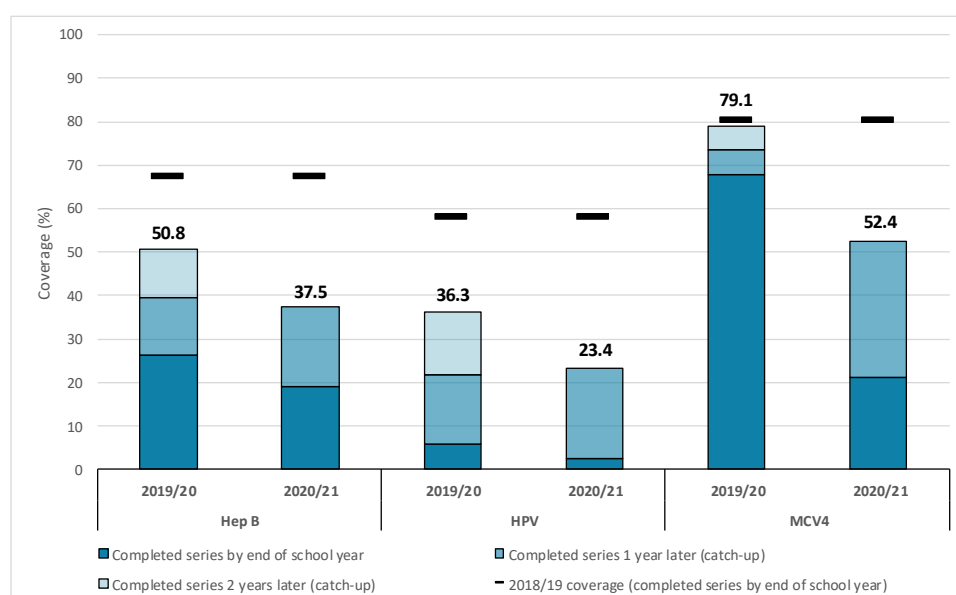
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**Figure 1a. Vaccine series initiation and completion among 12-year-olds for the quadrivalent meningococcal conjugate (MCV4), human papillomavirus (HPV), and hepatitis B (Hep B) vaccines: 2019-20 to 2021-22 school years. Public Health Ontario data. Reproduced from reference 32.**



**Figure 1b. Vaccine series completion among 12-year-olds for the quadrivalent meningococcal conjugate (MCV4), human papillomavirus (HPV), and hepatitis B (Hep B) vaccines: 2019-20 and 2020-21 school years. The cohort was followed until August 31, 2022, and includes catch-up efforts. Public Health Ontario data. Reproduced from reference 32.**





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### Task force to address the crisis in HPV immunization

In early 2022, the Federation of Medical Women of Canada (FMWC) convened a task force consisting of health care providers and other key stakeholders to address the crisis in the Ontario school-based HPV immunization program. With the aim of ensuring that school-based immunization would recover to (and eventually surpass) pre-pandemic levels, the task force developed eleven short-term recommendations and six long-term recommendations addressing the areas of access to immunization, education and communication about immunization, and cross-ministerial collaboration (presented in a 2022 white paper).<sup>35</sup> Task force members met with members of the provincial parliament, other government representatives, and the Ontario Chamber of Commerce. A public relations campaign with media appearances (including CBC's The National) and a social media toolkit awareness and education campaign were also implemented.

In response, the Ontario Ministry of Health implemented several changes. An extension was provided for HPV catch-up efforts for an additional year to students who were impacted by the pandemic. The publicly funded Grade 7 HPV vaccine is available to students up to grade 12, and the time frame to receive missed doses was extended to August 31, 2023 for students who graduated in the 2019-20, 2020-21, and 2021-22 school years (children born in 2002-4).<sup>36</sup> As demands related to the COVID-19 pandemic declined, local Public Health Units also carried out catch-up efforts in elementary schools and some high schools. Despite these actions, immunization uptake has only slightly recovered. HPV vaccine uptake is still below that of other school vaccines and below pre-pandemic levels.<sup>32</sup> Awareness of the HPV vaccine remains low among the public as well as health care providers, and deficiencies in communication, collaboration, technology, and access still hinder progress toward universal HPV vaccination.<sup>37</sup> **The goal of eliminating HPV-related cancer at the provincial, national, and global levels therefore requires new and creative solutions.**

The task force, consisting of physicians, pharmacists, researchers, public health nurses, and dentists from across Canada, met again in August 2023 to review the current situation in Ontario, share the latest research and best practices for HPV prevention nationwide, and propose new recommendations to address the crisis in HPV immunization in Ontario.

Here we present a new set of ten recommendations: one foundational recommendation along with four short-term recommendations and five long-term recommendations for health care providers (HCPs), local Public Health Units, and the Ontario Ministry of Health. These recommendations focus on six main areas:

- Access to the HPV vaccine
- Communication about the HPV vaccine
- Collaboration among HCPs, Public Health Units, and government
- Change management
- Leveraging technology to improve vaccine uptake
- Investment in public health and research

### Foundational Recommendation

**The task force recommends that the Ontario government create a provincial vaccine registry that would be accessible to all health care providers, parents, and individuals.** A provincial vaccine registry is a pivotal step that will facilitate many of the task force's other recommendations. Ontario's Digital Health Immunization



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Repository is currently only accessible to staff in local Public Health Units; no other health care provider or parent may view or enter patient immunization data. Tracking of immunizations requires parents to inform their local Public Health Unit either electronically through ICON, or by telephone or fax, when their child receives a vaccine. Alternatively, primary care providers may inform their local Public Health Unit by fax, a long-outdated technology. With a provincial vaccine registry that is accessible to all health care providers and individuals (not just local Public Health Unit staff), vaccine services would be improved by allowing HCPs access to a platform to review real-time vaccine records so that accurate assessments can be made about which vaccines are needed at a given time for each individual.

A registry would enable progress toward other public health goals, such as improving individuals' agency in their health care, increasing health care providers' ability to share information, and enabling the evaluation of Ontario's immunization programs. As HCPs raise the alarm about plummeting immunization rates, they also emphasize the key role of an electronic registry.

"The number one thing that comes up [in discussions] is that **we need a uniform, streamlined provincial registry like we had for COVID**".<sup>6</sup> -Dr. Milena Forte

The need for a registry has been emphasized by the Ontario Medical Association (OMA), which has stated that the current system can easily lead to missed or duplicate vaccines and has the potential to create "**significant risks to patient safety**".<sup>38</sup> Similarly, the Ontario College of Family Physicians (OCFP) has raised concerns about the potential for fragmentation of care when vaccination occurs in multiple settings.<sup>39</sup> This would also be addressed by creating a harmonized electronic repository that is accessible to all HCPs.

The proposed registry would enable parents and mature minors to provide consent electronically. It would also allow HCPs to easily access patient records. However, the registry should not place additional demands on overburdened, understaffed primary care providers and public health staff; it should be easy and convenient for them to use. The registry should be capable of forecasting vaccine due dates and automatically generating letters to individuals and families to remind them when vaccines are due.

There are several examples of comprehensive immunization registries with patient and provider access that can be found in other provinces in Canada. In Ontario, for example, the COVax<sub>ON</sub> vaccine registry accommodated a wide range of users across the province, with data accessible to HCPs, individuals, and other users such as Public Health Ontario during the pandemic. COVax<sub>ON</sub> allowed HCPs to efficiently record and share information, enabling a successful mass vaccination campaign.<sup>40</sup> The task force recommends that the Ontario government develop an immunization database with the functionality to streamline record-keeping and information sharing for all publicly funded vaccines. The task force also recommends that an accessible vaccine registry for all HCPs and individuals should be created first, with any app interfaces being built on the provincial system (rather than encouraging a patchwork of solutions across the province).

### **Short-Term Recommendations: To be implemented within the next 3-6 months**

**1. The task force recommends expanding eligibility for the publicly funded vaccine.** We recommend universal eligibility for the publicly funded HPV vaccine. **Once a young person becomes eligible for the publicly funded vaccine, they should always remain eligible.** It should be noted that Health Canada has approved the HPV vaccine for individuals 9-45 years of age,<sup>41</sup> whereas the National Advisory Committee on Immunization (NACI) has stated that the vaccine may be given to individuals aged 9 and up with no upper age



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limit.<sup>42</sup> Eligibility beyond high school age for the publicly-funded vaccine would align Ontario's criteria with those of other Canadian jurisdictions and with the scientific evidence.<sup>43</sup>

Many young people miss school immunization clinics due to illness or because of unanswered questions or concerns about the vaccine. Increasing the window of eligibility for the publicly funded vaccine would provide extra time for these students to attend catch-up programs or to receive the vaccine through another access point, such as their primary care provider. While this is already possible if an individual who is not eligible for the publicly funded vaccine pays out of pocket or uses private insurance, many insurance companies do not cover the vaccine and the high cost is a barrier to many people. At present, Ontario's regulations regarding eligibility for the publicly funded vaccine represent an artificial and unnecessary barrier to immunization.

**Once eligible for the publicly funded HPV vaccine, an individual should always be eligible.**

**2. The task force recommends expanding the spectrum of health care providers authorized to administer vaccines, along with education and collaboration between local Public Health Units, medical associations, schools, and government.** A strong recommendation from a health care provider is one of the most important factors influencing an individual's decision to receive a vaccine.<sup>1,44</sup> In fact, a recent meta-analysis found that parents who received a recommendation from their HCP were ten times more likely to initiate HPV vaccination for their children than those who did not receive such a recommendation.<sup>45</sup> However, many health care professionals lack awareness of HPV as a cause of cancer and of the role of vaccination in cancer prevention. A recent systematic review of worldwide studies found **"worrying gaps in health care professionals' knowledge levels"**.<sup>37</sup> Many HCPs did not know details about how HPV vaccines work and their potential benefits, and some were unwilling to recommend the HPV vaccine to young women and girls.<sup>37</sup> Likewise, an American study found that many physicians do not strongly endorse the HPV vaccine, delay recommending the vaccine, or do not communicate the urgency of vaccination.<sup>46</sup> Another study identified a lack of clarity among physicians regarding age-based eligibility.<sup>47</sup>

We encourage a **"no wrong door"** approach, in which HCPs would be eligible, after training, to offer the vaccine in a variety of clinical settings across multiple professions. For example, dentists and dental hygienists have historically participated in prevention efforts for diabetes, cardiovascular disease, HIV, and other conditions.<sup>48</sup> They are well positioned to participate in HPV prevention through screening, patient education, and immunization, and researchers have proposed that oral health care providers **"can take the lead in confronting the HPV-opharyngeal cancer epidemic"**.<sup>49</sup>

**When it comes to vaccine access, there is 'no wrong door'. – FMWC HPV Task Force**

Pharmacists have the knowledge and training to immunize, and during the pandemic, they played an essential role in providing health care and information when patients could not access other types of health care.<sup>50</sup> However, regulatory barriers prevent them from offering the publicly-funded HPV vaccine in Ontario. A provincial vaccine registry, as described in the Foundational Recommendation above, will aid pharmacy involvement in publicly funded HPV immunizations. Without a provincial vaccine registry, there is a risk for medication errors and a lack of program accountability. Pharmacies have proven to do an excellent job with





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immunization for influenza and COVID-19 and should be enabled to help fill the gap with HPV immunizations in Ontario.

Providers in all specialties should be encouraged to make HPV screening and immunization part of regular patient care. At present, many providers lack knowledge about HPV or find it difficult to discuss HPV with patients.<sup>48</sup> Providers should be fully enabled to support HPV vaccinations, including access to the publicly-funded vaccine, an electronic vaccine registry, logistical support, and educational resources. Toolkits should be made available to guide discussions with patients. In a recent study, one dentist commented “I would like a short, three-minute video. Also, I [would] like [an] information fact sheet, [a] one-page fact sheet at fifth grade reading level. Quick and simple and easy. And then, maybe, some posters saying, “Ask me more” or something like that....”.<sup>48</sup>

It is important that medical associations present consistent information regarding HPV, as discordant messaging can erode public trust. The FMWC challenges all medical associations to commit to their own position statements on HPV vaccination, and to promote and support universal, easy access to HPV vaccines. In addition, they should encourage their members to participate in immunization, to promote awareness of HPV-related cancer, to educate their staff regarding appropriate screening and patient education, and to make HPV prevention a part of daily patient care. All providers should have the tools to immunize safely, such as access to publicly funded vaccine, materials for patient education, and technology to facilitate the recording, tracking, and sharing of immunization records.

**3. The task force recommends collaboration with medical and dental student associations, as well as trainees of other specialties.** Many college- and university-age young adults did not receive HPV immunizations in high school. Medical and dental students, as well as trainees in other specialties, are part of the generation that can be protected from HPV-related cancers. These students could be excellent advocates for HPV immunization during their training and as they enter medical practice. They should be encouraged to improve their own knowledge regarding HPV, to increase their comfort level with discussing the topic, and to promote HPV awareness in their interactions with their friends, families, and classmates.

**4. The task force recommends that the Ontario Ministry of Health increase communication with the public, parents, young adults, and families to raise awareness of cancer prevention through HPV vaccination and of options for receiving immunizations.** Many people are not aware that HPV causes cancer in both females and males, and that there is an effective and safe vaccine available. Better communication and education using **simple, yet clear messages** will be essential to make this information accessible to all parents and students in Ontario. The crucial role of the HPV vaccine in preventing a variety of cancers in both males and females should be emphasized, since many people may only recognize HPV as a sexually transmitted infection affecting females.

According to the Canadian Partnership Against Cancer, COVID-19 created challenges to the quality of cancer screening, prevention, and treatment.<sup>51</sup> These challenges have disproportionately impacted equity-denied populations. Therefore, health equity must be a fundamental consideration of plans to improve cancer prevention.<sup>51</sup> Education for the public should be customized for different populations, including equity-denied populations such as First Nations, Inuit and Métis, rural communities, people experiencing social and material deprivation, immunocompromised people, LGBTQ2S+, people living with HIV, and newcomers to Canada. Education should address vaccine hesitancy, as well as the importance of HPV vaccination for males. We





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recommend a provincial approach rather than relying on 34 Public Health Units to spread the word individually.

Parents may not have been informed about the extended eligibility dates for students born in 2002, 2003 and 2004, and may not know that their child is eligible for the HPV vaccine. Therefore, the parameters and time frames for the publicly funded HPV vaccine should be highlighted. According to a study of 778 Ontario parents by the nonprofit coalition 19 to Zero (which aims to encourage positive health behaviours) and the University of Toronto, most parents do not know where and when vaccines are offered at their local Public Health Unit.<sup>1</sup> Indeed, almost one-third of individuals surveyed had not heard of the HPV vaccine.<sup>1</sup> The task force recommends adopting processes such as cancer screening recall to automatically contact and remind parents of students in grade 7, as well as those in high school (grade 9) who are eligible for catch-up programs, to inform them of their eligibility and to provide information about the HPV vaccine. The task force recommends implementing recall/reminder mechanisms for HPV vaccination, like those used in other cancer prevention programs such as cervical, breast, and colon cancer screening. Recall/reminder systems are effective in increasing vaccine uptake.<sup>52</sup>

Parents should be informed of vaccine access points outside the school system, such as their primary care provider and pharmacies, and should be given opportunities to meet with public health personnel to ask questions. In addition, the task force recommends that HCPs visit colleges and universities to educate young adults about the HPV vaccine, promote discussion of HPV, and inform them of their options for immunization.

In a survey of 778 Ontario parents, **almost one-third of parents had not heard of the HPV vaccine.**<sup>1</sup>

### Long-Term Recommendations: To be implemented within the next 1-5 years

**1. The task force recommends that the province of Ontario adopt cancer prevention as a core value and guiding principle of public health.** The importance of cancer prevention for the future physical, social, psychological, and economic health of Ontarians cannot be overstated. Cancer prevention, including HPV vaccination, is a top priority in the Canadian Strategy for Cancer Control stewarded by the Canadian Partnership Against Cancer.<sup>53</sup> The World Health Organization has described prevention as “**the most cost-effective long-term strategy for the control of cancer**”.<sup>54</sup> Writing in *The Lancet*, Imperial College London researchers described prevention as “**a particularly effective way to fight cancer**” and “**an integral part of global cancer control**”.<sup>55</sup> The cancer action plans developed by the provinces of BC and PEI both emphasize prevention as a key focus area.<sup>56,57</sup>

The task force recommends that Ontario Health and the Government of Ontario commit to eliminating cervical cancer in the province, as other provinces have done. More broadly, the province of Ontario should adopt cancer prevention as a key principle and core value. The task force recommends that the Ontario Ministry of Health formally adopt this principle so that cancer prevention will always remain a top priority – without competing with other public health goals and needs that may change from year to year. Likewise, the task force recommends that the government of Ontario recognize cancer prevention as a top-priority area.



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**2. The task force recommends implementing change management to address the logistical barriers that inhibit widespread vaccination.** Several different barriers to increasing vaccine uptake must be addressed. One barrier is the complexity of the eligibility rules for the publicly funded HPV vaccine in Ontario. The current eligibility rules are not based on evidence and represent artificial barriers that should be eliminated; as described above, individuals who become eligible for immunization should always be eligible. In addition, expanded eligibility guidelines are often not well communicated by policy makers, and left for HCPs or Public Health Units to act upon.

As more healthcare providers begin to participate in immunization, some will need improvements to their infrastructure and protocols. The Canadian Dental Association has implemented new billing codes to enable dentists to be appropriately reimbursed for their time spent on immunizations and patient counseling. Similar codes should be developed for other HCPs. Liaison with insurance companies may be necessary to obtain private coverage for vaccines given by pharmacists.

**3. The task force recommends investing in research on health equity in HPV immunization in Ontario.** Strategies such as school-based immunization clinics are effective but require continued investment and quality improvement. Recent research has shown that vaccine uptake is highly variable among different regions within each province. According to Dr. Cory Neudorf, leader of the Urban Public Health Network, the reasons for low uptake are highly region-specific.<sup>58</sup> Researchers carrying out small-area spatial analysis have identified factors that contribute to low uptake in certain regions, such as social deprivation. In addition, there are still populations that experience greater inequities in access to cancer prevention, including immunization. This research must be continued to determine which strategies and programs are most successful, and to guide the development of targeted vaccination strategies for different populations. Efforts to increase coverage rates across Ontario and Canada must include implementation strategies to promote health equity.

**“A combination of higher vaccination rates and greater screening for HPV will get us to the target and help save lives.” – Dr. Cory Neudorf<sup>4</sup>**

**4. The task force recommends increasing funding for public health agencies in Ontario, including local Public Health Units.** Across Canada, public health agencies have been underfunded for many years. Public health staff are asked to carry out catch-up programs but may not have sufficient staff or funding to effectively implement these programs. More resources are needed to enable an increase in the number of clinics offered in Ontario schools, including more visits in Grade 7, as well as catch-up visits for all grades in high school. Additional funding would also support efforts to restore and boost vaccine confidence. For example, local Public Health Units could offer educational sessions in which students and parents could ask questions about the HPV vaccine.

The Ministry of Health, the Ministry of Education, and Ontario’s Boards of Education should support the delivery of catch-up vaccines in high schools. For example, the Ministry of Health could mandate that all local Public Health Units **must** return to high schools in all of their respective jurisdictions to offer catch-up vaccines (currently this is a choice of each individual Public Health Unit). These additional visits should be well publicized by targeted letters and robocalls to families.



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**5. The task force recommends that the Ministry of Health assume a leading role in building relationships across the health care system on the issue of HPV prevention.** HPV vaccine uptake lags behind that of other childhood vaccines, and there is a significant level of vaccine hesitancy among the public, which has increased during the pandemic.<sup>59</sup> Many individuals feel a lack of trust in the medical system as a whole, but maintain good relationships with providers that they know well, or with other community members and groups. It will be essential for Public Health Units and primary care organizations/providers to build relationships with diverse health care professionals as well as other leaders within their respective jurisdictions, to ensure a high level of access to immunization opportunities and HPV education.

### **Conclusion**

Ontario children will be highly vulnerable to HPV-related cancers unless we act now. The ten recommendations described above should be implemented promptly. The recommendations described here could save thousands of lives and greatly reduce the burden on our health care system in the future.

**“If we do not act now to increase HPV immunization levels in schools in Ontario, we will see increasing numbers of adults vulnerable to vaccine preventable cancers.” – Dr. Vivien Brown**

### **Appendix 1: FMWC HPV Task Force Participants at**



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**August 24<sup>th</sup>, 2023 Meeting**

**Chair: Dr. Vivien Brown, Family Physician, Toronto**

### **List of Participants:**

Ms. Jen Belcher, Vice President, Strategic Initiatives & Member Relations, Ontario Pharmacists Association, Toronto

Dr. Milena Forte, Family Physician, Toronto

Ms. Michelle Halligan, Director Prevention, Canadian Partnership Against Cancer, Toronto

Ms. Karen Mulvey, RN, MN, Manager, Vaccine Preventable Diseases Wellington-Dufferin-Guelph Public Health

Dr. Christine Palmay, Family Physician, Toronto

Mr. John Papastergiou, Pharmacist Owner, Toronto

Dr. Chloe Rozon, Obstetrician/Gynecologist, Ottawa

Ms. Jaspreet Saini, Manager Prevention, Canadian Partnership Against Cancer, Toronto

Dr. Marla Shapiro C.M., Family Physician, Toronto

### **Guest Speakers:**

Dr. Cheryl Cable, Associate Professor, University of Alberta, Faculty of Medicine and Dentistry, Lead Alberta Head and Neck Dental Leadership Team, Founding President Canadian Association of Women Dentists

Dr. Christine Navarro, Public Health Physician, Immunization & Vaccine Preventable Diseases, Health Protection, Public Health Ontario

Dr. Cory Neudorf, Urban Public Health Network, BSc, MD, MHSC, FRCPC (Public Health and Preventive Medicine), Professor Community Health and Epidemiology, University of Saskatchewan

### **Observers:**

Michael Di Tommaso, Merck

Margaret Johnson, PhD, Medical Writer, Mackenzie MedWrite

Brendan Murphy, Merck

Sheri F. Poulain, FMWC HPV Portfolio Lead, Business Strategy Coach and Consultant at FleurishMD



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