

## Immunization Coverage for School-Based Immunization Programs

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**To:** Chair and Members of the Board of Health

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## Recommendations

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It is recommended that the Board of Health:

1. Receive this report for information.

## Key Points

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- A high level of immunization coverage is important to prevent outbreaks of vaccine preventable diseases.
- Provincial immunization coverage rates for school-based immunization programs in the 2019-20 and 2020-21 school years are less than previous school years
- Pandemic-related school closures have contributed to lower immunization rates
- Despite significant challenges posed by the COVID-19 pandemic, Wellington-Dufferin-Guelph Public Health (WDGPH) resumed provision of in-school clinics for all grade 7 & 8 classes in October 2021.
- WDGPH remains engaged in community immunization outreach efforts to increase immunization coverage locally.

## Discussion

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Immunization coverage refers to the proportion of a population that is appropriately immunized at a specific point in time.<sup>1</sup> High immunization coverage is important for preventing outbreaks of vaccine preventable diseases.<sup>1</sup> Most childhood vaccines in Wellington-Dufferin-Guelph (WDG) are administered by community healthcare providers within primary care, however, a select few vaccines are administered predominantly by health units. Health units go into schools annually and vaccinate grade seven cohorts with Hepatitis B (Hep B), Human Papilloma Virus (HPV) and Quadrivalent Meningococcal Conjugate (MCV-4).

These vaccine rates are reported annually by Public Health Ontario (PHO) at the end of each school year. These reports are specific to each public health unit.<sup>1</sup> The *Immunization Coverage Report for School Pupils in Ontario: 2019-20 & 2020-21 School Years* can be accessed on the [PHO](#) website, along with historical reports.

The impact of the COVID-19 pandemic in Ontario is reflected in the 2019-20 and 2020-21 PHO report on immunization coverage for school-based programs.<sup>1</sup> Province-wide school closures occurred from March 12, 2020 - June 26, 2020 and a significant portion of the 2020-21 school year.<sup>1</sup> The grade 7 cohort of 2019-20 initiated their school-based immunizations but did not complete this, additionally the grade 7 cohort of 2020-21 were not able to initiate their series.<sup>1</sup>

Provincial immunization coverage rates in the 2019-20 and 2020-21 school years are less than previous school years.<sup>1</sup> Pandemic-related school closures and capacity limits at public health units contributed to lower immunization coverage estimates.<sup>1</sup> Catch-up activities that occurred in the beginning of the 2021-22 school year are not reflected in the PHO annual report of vaccine coverage data for WDGPH.

The following tables denote the vaccine coverage for WDGPH compared to the Province for 2019- 2021.

**Table 1. Immunization Coverage (%) for School-Based Immunization Programs, Children 12 Years Old (2019-20 School Year)**

	<b>Meningococcal (ACYW-135) UTD</b>	HPV:Series initiation	HPV UTD	Hep B: Series initiation	Hep B: UTD	Denominator
Wellington-Dufferin Guelph Public Health	40.3	44.4	27.9	46.7	37.7	3362
Ontario	67.2	64.8	5.2	55.7	25.0	158,468

**Table 2. Immunization Coverage (%) for School-Based Immunization Programs, Children 12 Years Old (2020-21 School Year)**

	<b>Meningococcal (ACYW-135) UTD</b>	HPV:Series initiation	HPV UTD	Hep B: Series initiation	Hep B: UTD	Denominator
Wellington-Dufferin Guelph Public Health	30.6	29.3	0.8	22.7	12.3	3570
Ontario	17.3	15.1	0.8	19.8	16.8	157,959

**Table 3. Immunization Coverage (%) for School-Based Immunization Programs Among 17-year-olds by Public Health Unit in Ontario: 2019-20 School Year**

	<b>Meningococcal (ACYW-135) UTD</b>	HPV:Series initiation	HPV UTD	Hep B: Series Initiation	Hep B: UTD	Denominator
Wellington-Dufferin Guelph Public Health	95.1	5.2	66.2	8.7	77.7	3234- males & females  1619- females
Ontario	93.9	8.7	63.4	8.5	77.3	155,511- males & females  75,951- females

**Table 4. Immunization Coverage (%) for School-Based Immunization Programs, Among 17-year-olds in Ontario: 2020-21 School Year**

	<b>Meningococcal (ACYW-135) UTD</b>	HPV:Series initiation	HPV UTD	Hep B: Series initiation	Hep B: UTD	Denominator
Wellington-Dufferin Guelph Public Health	95.6	5.4	67.3	7.0	74.6	3278 males & females  1619- females

Ontario	93.8	8.9	63.4	9.2	77.7	154,387- males & females  75,305- females
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## Vaccine Coverage Improvement Initiatives

In the 2021-2022 school year WDGPH Vaccine Preventable Disease (VPD) program resumed provision of grade 7 vaccines for Hepatitis B (Hep B), Human Papilloma Virus (HPV) and Quadrivalent Meningococcal Conjugate (MCV-4) through school-based clinics and specialized “catch-up” clinics to both grade 7 and 8 students in all WDG elementary schools, Table 5 -reflects the number of vaccines administered in this initiative. Vaccine coverage for the cohort now in grade 9 (birth year 2007) that did not complete their grade 7 vaccines in 2019-2020 is reflected in Table 6. Primary care providers also administered a large number of school-based vaccines. Table 7 reflects the number of vaccines distributed to primary care from January 2020 – November 22, 2021.

### Table 5. Immunization Provided to Grade 7 & 8 Students in Schools: September 1, 2021 – January 24, 2022.

Wellington-Dufferin-Guelph Public Health	Vaccine	Count of Immunizations	
		Grade 7	Grade 8
	HB	1836 (47.5%)	1829 (50.7%)
	HPV-9	1896 (49.1%)	1891 (52.4%)
	Men-C-ACYW-135	2250 (58.3%)	1611 (44.6%)
Overall-Total		5982	5331

**Table 6. Immunizations Overdue in Grade 9 (birth year 2007) Students as Current January 26, 2022**

Wellington-Dufferin-Guelph Public Health	Vaccine	Overdue students with birth year 2007
	HB	1206 (37.4%)
	HPV-9	1248 (38.7%)(
	Men-C-ACYW-135	1182 (36.6%)

**Table 7. Immunizations for Grade 7 Immunizations Distributed to Primary Care: Jan. 2020 - November 22, 2021**

Wellington-Dufferin-Guelph Public Health	Vaccine	Count of Immunizations
	HB	3412
	HPV-9	2931
	Men-C-ACYW-135	2417
Overall-Total		8760

WDGPH offers annual catch-up clinics in high schools for any vaccines that are mandated for school attendance under the Immunization School Pupils Act. High school clinics will resume in February 2022 in collaboration with in-school COVID-19 vaccine clinics to provide further catch-up opportunities for students who missed the vaccines in the grade 7 school-based immunization program (Hep B, HPV & MCV-4). In spring 2022, WDGPH will return to elementary schools to complete the Grade 7 vaccine series and provide opportunities for catch up again. Immunizations can also be accessed through WDGPH clinics by appointment.

## Conclusion

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The COVID-19 Pandemic has impacted the vaccine status of WDG students particularly those in grade 8-12. WDGPH will work with school boards, community partners and parents to increase these rates through school and community clinics and with the support of primary care. It will take some time to see the impact on this strategy as more than 2 cohort years are impacted by the restrictions of the pandemic. Community wide vaccine fatigue is another potential barrier to a quick catch up on Hepatitis B (Hep B), Human Papilloma Virus (HPV) and Quadrivalent Meningococcal Conjugate (MCV-4) vaccines. A multifaceted approach over time is required to get local vaccination rates of school age children up to pre-pandemic levels.

## Ontario Public Health Standard

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### Immunization

**Goal:** To reduce or eliminate the burden of vaccine preventable diseases through immunization.

**Requirements:** The Board of Health shall promote and provide provincially funded immunization programs and services to eligible persons in the health unit, including underserved and priority populations.

### School Health

**Goal:** To achieve optimal health of school-aged children and youth through partnership and collaboration with school boards and schools.

**Requirements:** The Board of Health shall promote and provide provincially funded immunization programs to eligible students in the health unit through school-based clinics.

## 2020 WDGPH Strategic Direction(s)

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*Double click checkbox to change from unchecked to checked.*

☒ **Service Delivery:** We will provide our programs and services in a flexible, modern and accessible manner, and will ensure they reflect the immediate needs of our Clients and our role in the broader sector.

☐ **System Transformation:** We will equip the Agency for change in all aspects of our work so that we are ready for transformational system change when the time comes.

☐ **Knowledge Transfer:** We will ensure that our decision-making and policy development efforts are informed by meaningful health data at all times.

## Health Equity

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Research shows that families with fewer social and economic resources are more likely to have children that are not fully immunized.<sup>2</sup> In normal times, WDGPH offers clinics that provides multiple opportunities to be immunized. The impact of the COVID-19 pandemic contributed to barriers to immunization through capacity limitations for WDGPH clinics and school closures. Every year Public Health Nurses work diligently with school staff to identify students who are at risk for adverse events if unable to attend school. These families are contacted and offered support in accessing immunization or submitting records. It is anticipated that over the next few years WDG Public Health Nurses will have an increased workload contacting and supporting at-risk students who missed vaccines as a result of the pandemic.

WDGPH continues to work toward increasing immunization coverage overall for all WDG students.

## References

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1. Public Health Ontario. Immunization Coverage.  
<https://www.publichealthontario.ca/en/health-topics/immunization/vaccine-coverage>
2. Determinants of Non-Vaccination and Incomplete Vaccination in Canadian Toddlers, Human Vaccines & Immunotherapeutics.  
<https://www.tandfonline.com/doi/full/10.1080/21645515.2016.1277847>

## Appendices

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