

## Public Dashboard Updates

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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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- WDGPH dashboards reflect Public Health's best understanding of the risks and protection to COVID-19 in the community
- Updates to key data sources, including a release from the 2021 Population Census, has resulted in an overall increase in the estimate of COVID-19 vaccination coverage in Wellington, Dufferin, and Guelph

- Looking forward, WDGPH is moving from metrics of *ever vaccinated* towards those of *recently vaccinated*, which more accurately and succinctly reflect the ongoing degree of population protection against COVID-19

## Discussion

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### Introduction

During the COVID-19 Pandemic, Wellington-Dufferin-Guelph Public Health (WDGPH) has relied heavily on dashboards to share the latest, and most pertinent data to the public on the evolving situation. WDGPH has employed methods and data sources which yield the most accurate and complete picture of current COVID-19 risk to the population. This has necessitated regular updates on data elements and dashboard design. On June 1, 2022, updates to the COVID-19 Cases and COVID-19 Vaccinations dashboards reflect both new data availability, and a shifting perspective on the pandemic. These updates encompass:

- More accurate population estimates (use of 2021 Population Census)
- Improved geographic assignment of cases and vaccine recipients
- Introduction and beginning of shift to *Recency of Vaccination* metrics
- Alignment of both dashboards to a once weekly update schedule (Wednesdays)

### Population Estimates

Population estimates are directly used when calculating case or vaccination rates on a population basis. In Canada, a Census of Population is conducted every 5 years.<sup>1</sup> With the April 27, 2022, release of data from the 2021 Census of Population, there is sufficient detail to switch the denominators used in rate calculations across WDGPH public reports to Census-derived estimates.<sup>2</sup> In inter-censal years, population projections are utilized. Population projections carry a number of assumptions, and those assumptions compound and have larger impact the further-out projections are made. Immediately before the release of new Census of Population figures is generally when the largest deviation between population projections from actual population can be seen (i.e., in a census year or in the months following, prior to dissemination of results from that census).

In the switch from 2020 Population Projections to 2021 Population Census figures, a reduction of 1.8% in the estimated Wellington-Dufferin-Guelph (WDG) population is seen. This change places the current estimate of the WDG population at 307,165.

Wellington, Dufferin, and Guelph each see reductions from their previous estimates, ranging from 1.3% to 3.1% (Table 1)

In the rate calculations, all else held equal, a reduced population results in an increased population rate. When measuring the vaccination progress, this means there is a higher estimated rate of vaccination. In terms of the rate of cases of COVID-19, more of the population is now estimated to have had infections confirmed by Public Health as well.

Table 1: Population figures from the 2021 Census of Population, in comparison to the 2020 Population Projections previously used by WDGPH in its public reporting.

Area	Population Census '21	Population Estimate '20	Difference	
Dufferin	66250	68378	-2128	<b>-3.1%</b>
Amaranth	4330	4523	-193	<b>-4.3%</b>
East Garafraxa	2835	2859	-24	<b>-0.8%</b>
Grand Valley	3860	3352	508	<b>15.2%</b>
Melancthon	3110	3341	-231	<b>-6.9%</b>
Mono	9440	10346	-906	<b>-8.8%</b>
Mulmur	3550	3849	-299	<b>-7.8%</b>
Orangeville	30155	30649	-494	<b>-1.6%</b>
Shelburne	8970	9459	-489	<b>-5.2%</b>
Guelph	143725	145584	-1859	<b>-1.3%</b>
Guelph	143725	145584	-1859	<b>-1.3%</b>
Wellington	97190	98764	-1574	<b>-1.6%</b>
Centre Wellington	31085	31028	57	<b>0.2%</b>
Erin	11975	12060	-85	<b>-0.7%</b>
Guelph/Eramosa	13920	14631	-711	<b>-4.9%</b>
Mapleton	10810	11564	-754	<b>-6.5%</b>
Minto	9065	9412	-347	<b>-3.7%</b>
Puslinch	7945	7632	313	<b>4.1%</b>
Wellington North	12390	12437	-47	<b>-0.4%</b>
<b>WDG Total</b>	<b>307165</b>	<b>312726</b>	<b>-5561</b>	<b>-1.8%</b>

## Geographic Assignment

WDGPH uses a combination of geocoding for addresses with sufficient detail, and probabilistic geographic assignment using Postal Code, for lower detail addresses. The latter is based on a Canada Post data product called the *Postal Code Conversion File Plus (PCCF+)*. This product receives annual updates, which WDGPH has access to

through its membership in the Community Data Program.<sup>3</sup> Version 7E was recently made available, and it has been switched to with the June 1, 2022, COVID-19 Dashboard updates.<sup>4</sup> This change may result in differences of geographic assignment, whether that means vaccine doses received by residents are reattributed from one municipality to another within WDG, or from in-region to out-of-region (or *vice versa*). For more details on WDGPH's approach to spatial analyses, and the impact of spatial analyses at WDGPH during the COVID-19 Pandemic, see Board of Health Report ***Health Analytics Innovation During the COVID-19 Pandemic.***<sup>5</sup>

## Updated Vaccination Coverage Estimates

With updates to geographic assignment and to population denominators, WDG sees increases to each eligible population-based vaccination (Table 2).

Table 2: With updates to geographic assignment and to WDG population denominators, there is an increase to the population estimated to have received one, two, or three or more doses against COVID-19. Data are recent as of May 24, 2022.

Vaccination Indicator (Eligible Population)	Updated Value	Difference
One or more doses	91.20%	+0.6%
Two or more doses	88.60%	+0.7%
Three or more doses	59.20%	+0.9%

Structuring by age, there are mostly positive changes to the estimated percentage of the population that has received at least one dose. Most notable is a 6.6% increase to the percentage of 20- to 24-year-olds that are estimated to have received at least one dose, and an 8.5% increase to the estimate for 25- to 29-year-olds (Table 3).

Table 3: New estimates of vaccination with at least one dose are shown for the WDG population, by age.

Age	Updated Value	Difference
5-9	53.2%	-3.8%
10-14	74.7%	-2.9%
15-19	88.4%	+1.1%
20-24	91.6%	+6.6%
25-29	96.2%	+8.5%
30-34	94.3%	+1.7%
35-39	93.4%	-0.9%
40-44	94.3%	+2.0%
45-49	92.6%	+3.5%
50-54	94.8%	+1.1%
55-59	92.3%	+1.8%
60-64	99.0%	+0.2%
65-69	99.0%	0.0%
70-74	97.1%	-1.9%
75-79	99.0%	0.0%
80+	99.0%	0.0%

## Recency of Vaccination

Vaccination against COVID-19 with most vaccines available in Canada, consists of a two dose primary series. By the end of the Summer 2021 vaccination campaign, most eligible residents in WDG had completed such a primary series. Towards the end of 2021, it was increasingly understood that immunity against COVID-19 wanes with time. In the context of current circulating variants and current vaccines available, booster doses were recommended to protect individuals from severe outcomes, and to protect the capacity of the health system. In 2022, second booster doses were recommended for specific populations at greatest risk, and for those of certain ages.

While there is complexity around the dose interval and number of doses recommended for specific individuals, and uncertainty around vaccine effectiveness against future variants, broadly, WDGPH recognizes that protection gained from immunization must shift from being measured as ever having been vaccinated, to having been vaccinated recently.

In the June 1, 2022, COVID-19 Dashboard updates, an initial design for vaccination indicators based on recency is shared. With this, the population is segmented into three categories:

- **0-24 weeks** those that have completed a primary series, or received a booster dose (first or second booster) within last 24 weeks (168 days, ~6 months),
- **25-48 weeks** those that have completed a primary series, or received a booster dose, between 25 and 48 weeks ago (169 – 336 days),
- Those that have not received a dose within 48 weeks are grouped with those with incomplete or uninitiated primary series in the final category.

In this dashboard update, this has been made available for the WDG population by age (Figure 1).

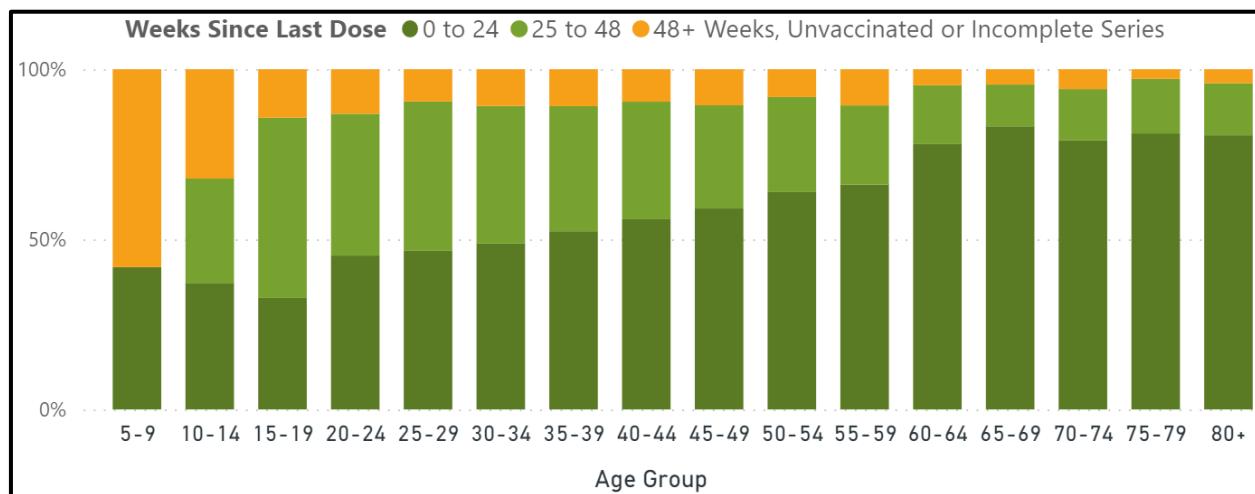


Figure 1: Recency of Vaccination is now available by age on the Vaccination Dashboard. A toggle is provided to switch between this new visual, and the previous age grouped visual which shows coverage by specific dose numbers. Data are recent as of May 24, 2022.

## Update Schedule

WDGPH has switched to a once-per-week update schedule for its COVID-19 Dashboards. This change is supported by trends in dashboard viewership and allows WDGPH to focus more resources in other program areas.

# Conclusion

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To continue to deliver the most relevant information on the status of the COVID-19 pandemic, WDGPH continuously evaluates the data presented through the popular COVID-19 Public Dashboards. In the June 1, 2022, COVID-19 Dashboard updates, adjustments range from a data source change resulting in offers improved accuracy to key indicators, to new features. Notably, with this update COVID-19 risk is beginning to be framed in the context of endemicity with the recency of vaccination data presentation. This signals a shift into the next stage of the pandemic, as well as a renewed commitment to the public to maintain COVID-19 data translation efforts.

## Ontario Public Health Standard

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### Immunization

“The board of health shall conduct epidemiological analysis of surveillance data for vaccine preventable diseases, vaccine coverage... including monitoring of trends over time, emerging trends, and priority populations...”

### Infectious and Communicable Diseases Prevention and Control

“The board of health shall conduct population health assessment and surveillance regarding infectious and communicable diseases and their determinants. These efforts shall include... [c]onducting surveillance and epidemiological analysis, including the monitoring of trends over time, emerging trends, and priority populations...”

“The board of health shall, based on local epidemiology, supplement provincial efforts in managing risk communications to appropriate stakeholders on identified risks associated with infectious diseases and emerging diseases of public health significance.”

## 2020 WDGPH Strategic Direction(s)

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**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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WDGPH COVID-19 Public Dashboards deliver on an expectation of transparency and reliability in presenting relevant information on current risks relating to COVID-19. Continued efforts to enhance these dashboards, and frame data by appropriate context, partly aims to grow trust in Public Health. Having this trust is especially important for the ability of Public Health to reach individuals and communities in WDG that experience marginalization, such that accurate risk information can be shared, or direct services provided.

## References

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1. Statistics Canada. Surveys and statistical programs - Census of Population. [Online]. [cited 2022 05. Available from: <https://www23.statcan.gc.ca/imdb/p2SV.pl?Function=getSurvey&SDDS=3901>.
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4. Community Data Program. Postal Code Conversion File Plus (PCCF+) Version 7E. [Online]. [cited 2022 05. Available from: <https://communitydata.ca/content/postal-code-conversion-file-plus-pccf-version-7e-november-2021>.
5. Angevaare J. Health Analytics Innovation During the COVID-19 Pandemic. Board of Health Report. Guelph, Ontario, Canada: Wellington-Dufferin-Guelph Public Health, Health Analytics; 2022. Report No.: BH.01.MAY1122.R12.