Public Health Ontario | Santé publique Ontario

USER GUIDE

Ontario Respiratory Virus Tool

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Introduction

The Ontario Respiratory Virus Tool integrates a number of different data sources to provide a comprehensive view of respiratory virus infection activity in the province. This user guide describes the contents of this interactive report, how it is organized, and the functionalities for visualizing the content.

This interactive report includes case data for COVID-19 and influenza, lab testing and outbreak data for COVID-19, influenza, and other respiratory viruses within Ontario. Data on COVID-19 vaccination coverage are also included. Data for COVID-19 starts from January 2020, while for other viruses, additional historical data is available. The tool will always contain data for ten surveillance periods: nine years of historical data, plus data for the current surveillance period.

The tool is organized into five tabs based on the content type included:

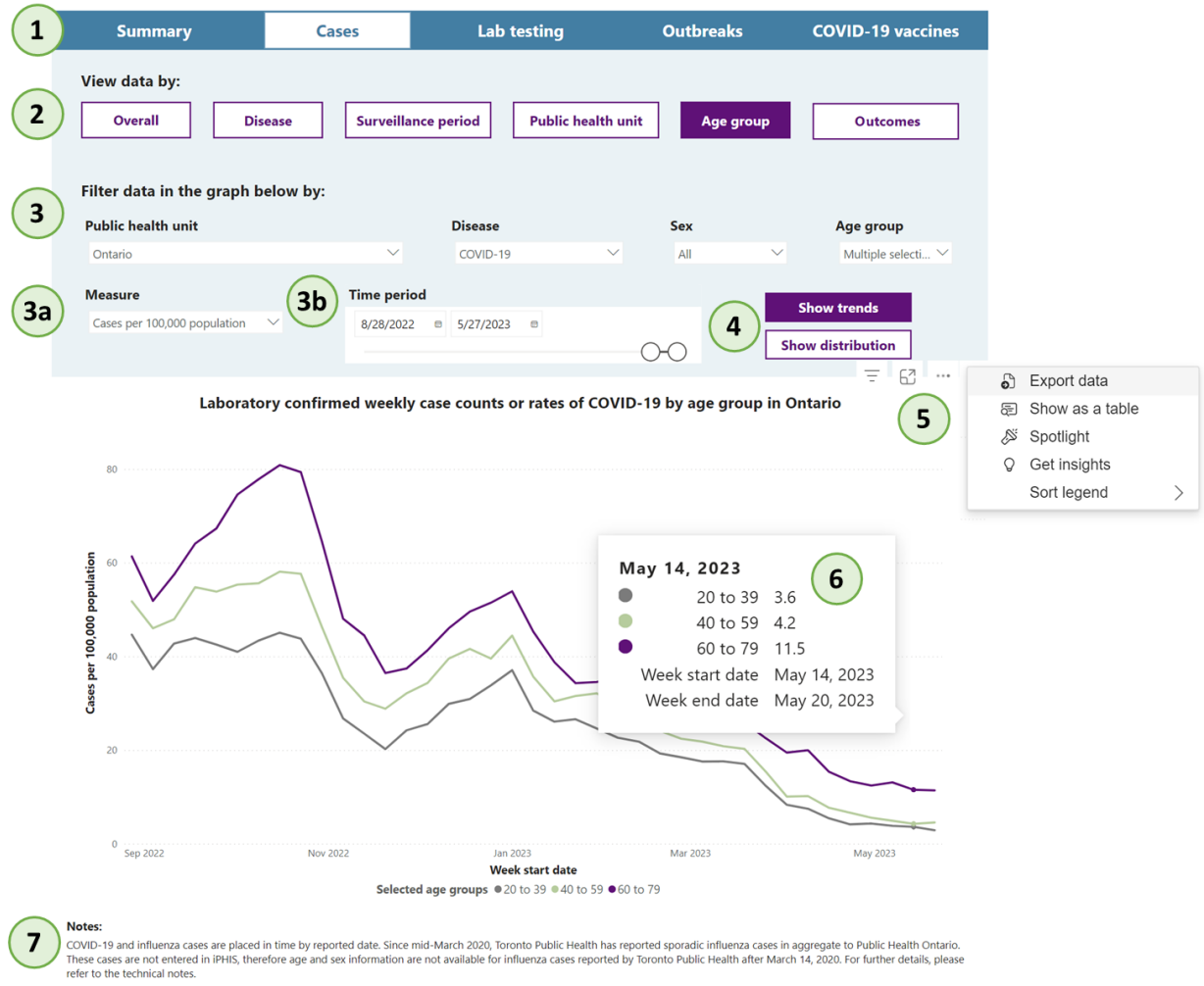
- **Summary tab:** contains high level summary information on recent activity and positivity levels for COVID-19, influenza, and other respiratory viruses including a map displaying indicator data by public health unit
- **Cases tab:** contains information on laboratory confirmed cases of COVID-19 and influenza
- **Lab testing tab:** contains information on laboratory test results for COVID-19, influenza, and other respiratory viruses
- **Outbreaks tab:** contains information on outbreaks of COVID-19, influenza, and other respiratory viruses
- **COVID-19 vaccines tab:** contains information on COVID-19 vaccination coverage

Each tab contains different selection criteria for users to view the data by several stratifiers, enabling them to make comparisons. Some of the options available include selecting by virus, surveillance period, public health unit, age and sex, and setting. Specific details on what is contained in all the tabs and sections is outlined throughout this document.

Using the Ontario Respiratory Virus Tool

Overview

Generally the functionality is similar across the different tabs in the tool. The available selection areas of the tool are numbered and summarized below.



1. **Navigation bar**: This top navigation bar is used to move between the different tabs (Summary, Cases, Lab testing, Outbreaks, COVID-19 vaccines). The tab being viewed is indicated in white, while the others remain blue.

2. **Stratifiers (View data by)**: The buttons in the 'View data by' navigation bar are used to change the stratifier used in the graph. Selecting a stratifer organizes the larger data sets and allows users to view the data by subsets with similar characteristics (e.g., disease, public health unit, age group). The stratifiers for this tool vary depending on the tab users have selected. The current selection is indicated in purple, while the others remain white.

3. **Filters:** Filters are used to break down the data within each section by selecting the drop down arrow. The filter will either allow for a single selection or multi-selection depending on the stratifier selected. The Sex and Age group filters are multi-select throughout all of the tabs. Further details on filters in specific tabs are available in the 'Report overview' section below.

    - The 'Measure' filter appears within all of tabs and stratification views except when 'Overall' is selected on the 'View data by' navigation bar. Selecting 'Overall' changes the measure being used to plot the data on the graph.
    - The 'Time period' filter is used to adjust the time period used to plot the data on the x-axis of the graph by either selecting a start and end date in the top boxes or by dragging the slider below the date selection. The weekly data in the graph will always start on the Sunday of that week. If a different day of the week is selected then the graph will default to the following Sunday. If 'Surveillance period' is selected in the 'View data by' navigation bar, the 'Time period' filter will be replaced by one where only the entire surveillance period can be selected.

4. **Changing views**: In some tabs there are two views available for the stratifier. You can view the data in the graph by selecting either the Showing trends view or the Show distribution view for that specific stratifier (e.g., by age group or by setting). These buttons will appear on the right side of the time selector when the Changing views functionality is available.

5. **Download data**: When hovering over a graph, a context menu (denoted by three dots) will appear at the top right. Once selected, users can chose to export the data in the graph or view the data in the graph as a table. To capture an image of the graph, users can use the Snipping tool built into Microsoft Windows (Windows logo key + Shift + S) or macOS (Command + Shift + 5).

6. **Tooltips:** When hovering over any data point on a graph, a tooltip will appear with related information about that data point.

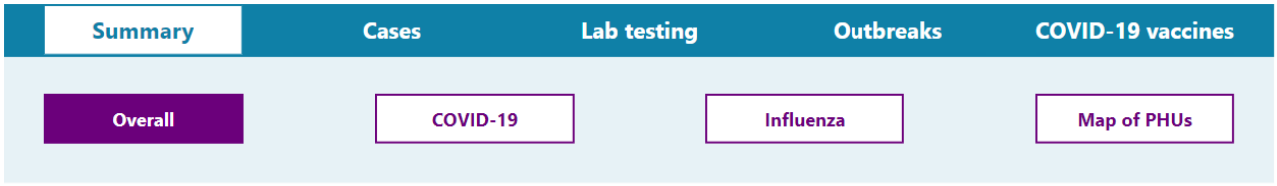
7. **Notes**: Beneath the visualization in each tab are are brief notes describing important considerations for data interpretation. Further details can be found in the technical notes.

Summary Tab

This tab contains high level summary information on recent activity and positivity levels for COVID-19, influenza, and other respiratory viruses in the province. The tab contains four sections:

Overall

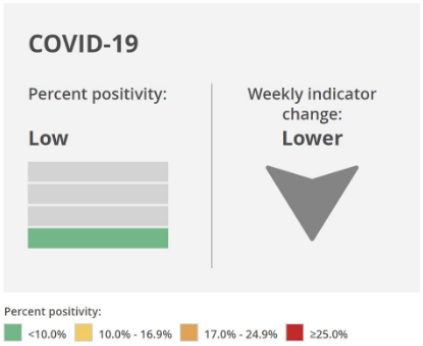
This section provides information on respiratory virus activity in the most recent week for which data are available. It contains two figures with COVID-19 and influenza percent positivity (percent of persons tested who tested positive for the virus) and the change in activity from the previous week. A table is included with positivity levels in the most recent week for all respiratory viruses included in the Tool.

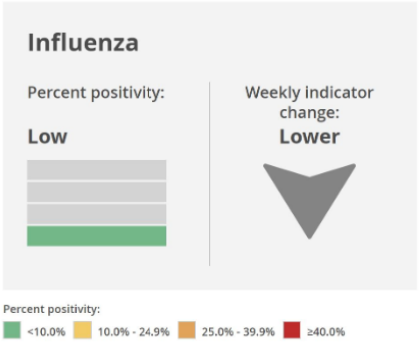


Respiratory Virus Activity

June 25, 2023 to July 1, 2023

These images provide a high-level assessment of respiratory virus activity in Ontario. Provincial percent positivity can be used to provide an estimate of the intensity of circulating viruses in the province. Percent positivity for the most recent week is used to assign influenza and COVID-19 to either a low, moderate, high or very high category. Weekly indicator change was determined by considering a combination of indicators (see Technical Notes). For more details on cases, lab testing, outbreaks, and COVID-19 vaccinations use the blue navigation bar at the top of the report to go to those pages.



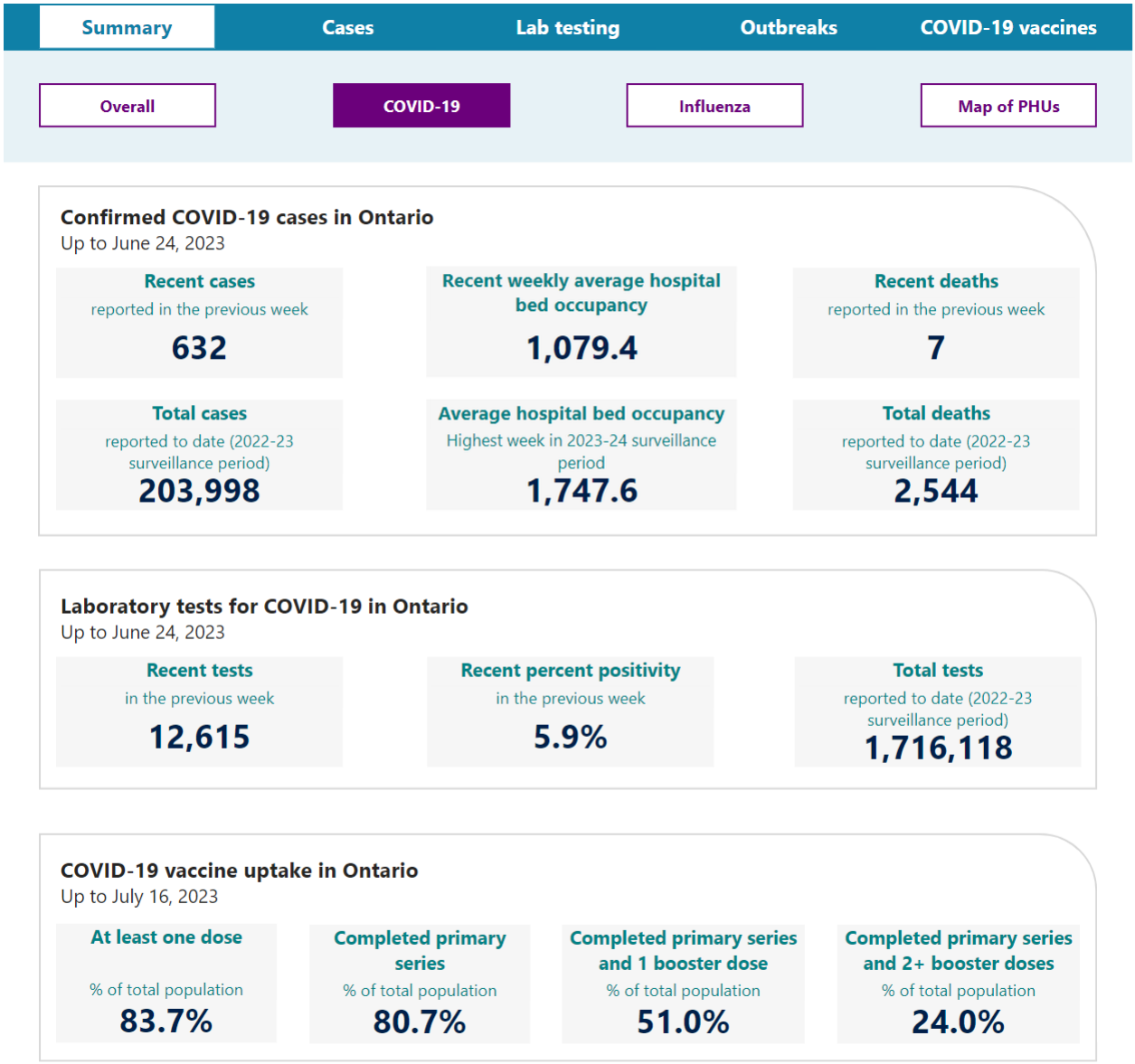


Respiratory virus activity

Virus	Percent positivity (%)
Adenovirus	2.7%
COVID-19	6.9%
Entero/Rhinovirus	8.9%
Human metapneumovirus	2.8%
Influenza A	0.3%
Influenza B	0.1%
Parainfluenza (all types)	3.3%
Respiratory syncytial virus	0.5%
Seasonal human coronavirus	4.2%

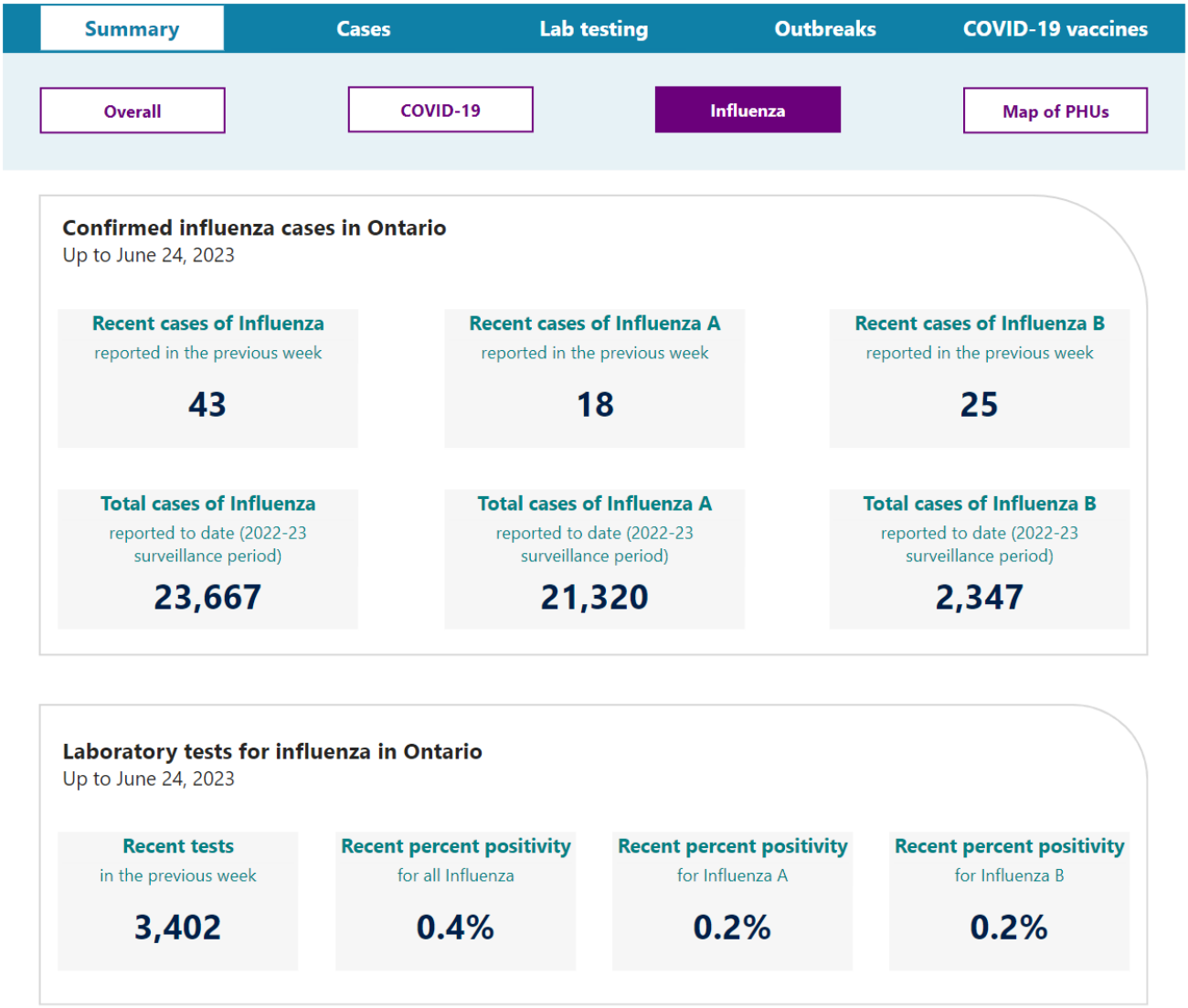
COVID-19

Provides previous week and surveillance period-to-date (most recent data available) information for COVID-19 cases, hospital bed occupancy, deaths, and laboratory tests, as well as the most recent data available for COVID-19 vaccination coverage.



Influenza

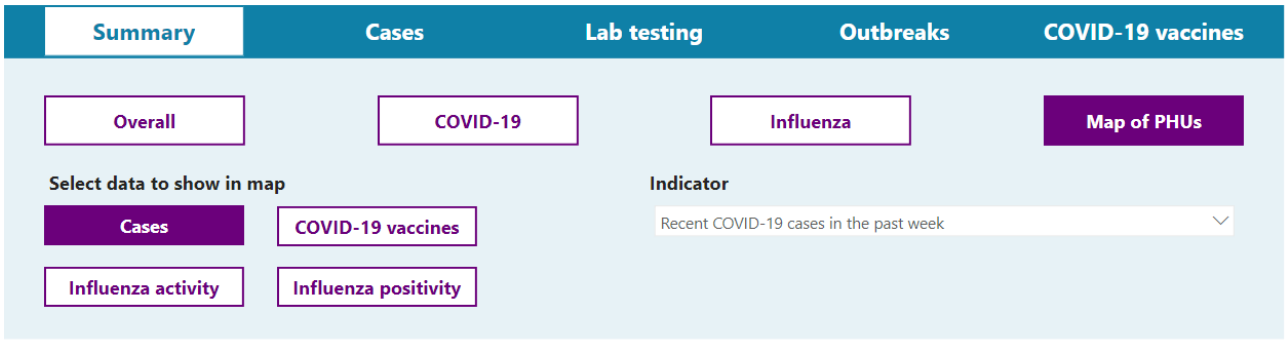
Provides previous week and surveillance period-to-date (most recent data available) information for influenza cases and laboratory tests, including a breakdown by influenza A and B.

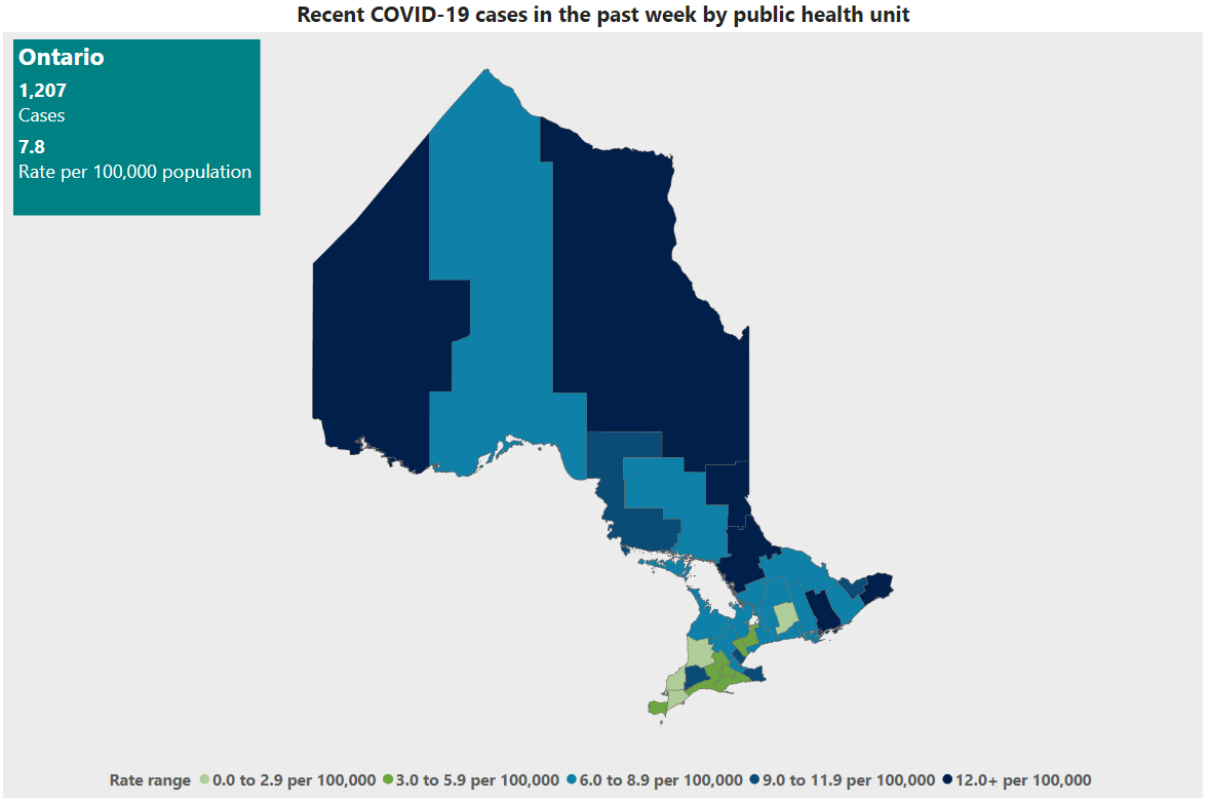


Map of Public Health Units

Contains a shaded map of the information selected by public health unit. The information shown in the map can be changed by selecting:

- **Cases**: previous week and surveillance period-to-date (most recent data available) COVID-19 cases, , and deaths, previous week and surveillance period-to-date (most recent data available) influenza cases, and COVID-19, influenza, and RSV bed occupancy data.
- **COVID-19 vaccines**: cumulative coverage estimates by vaccination status
- **Influenza activity**: influenza activity levels, including historical data
- **Influenza positivity**: influenza percent positivity levels, including historical data





Cases Tab

This tab contains information on laboratory confirmed cases of COVID-19 and influenza in the province, and provides users with the ability to view data by key stratifiers with options to further filter the data.

This tab contains six sections:

Overall

This section contains a bar and line graph displaying cases and rates by week. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza (all types), influenza A, influenza A H1, influenza A H3, influenza B), Sex, Age group, and time period.

Disease

This section contains a multi-line graph displaying weekly trends for the selected measure (cases or rates), allowing users to compare trends by disease. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza (all types), influenza A, influenza A H1, influenza A H3, influenza B), sex, age group, and time period. Selecting more than one disease in that filter will add the corresponding information to the graph.

Surveillance period

This section contains a multi-line graph displaying weekly trends for the selected measure (cases or rates) over different annual surveillance periods, allowing users to compare seasonal differences in the data. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza (all types), influenza A, influenza A H1, influenza A H3, influenza B), sex, age group, and surveillance period. Filtering by more than one surveillance period will add those lines to the graph.

Public health unit

This section contains a multi-line graph displaying weekly trends for the selected measure (cases or rates), allowing users to compare trends by public health unit. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza (all types), influenza A, influenza A H1, influenza A H3, influenza B), sex, age group, and time period. Filtering by more than one public health unit will add those public health units to the graph (by default, only the provincial line is selected).

Age group

This section contains a multi-line graph displaying weekly trends for the selected measure (cases or rates), allowing users to compare trends by age group. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza (all types), influenza A, influenza A H1, influenza A H3, influenza B), sex, age group, and time period. Filtering by more than one age group will add those age groups to the graph. This tab also has a button which will switch the view to displaying a bar graph showing the distribution by age group for the selected time period.

Outcomes

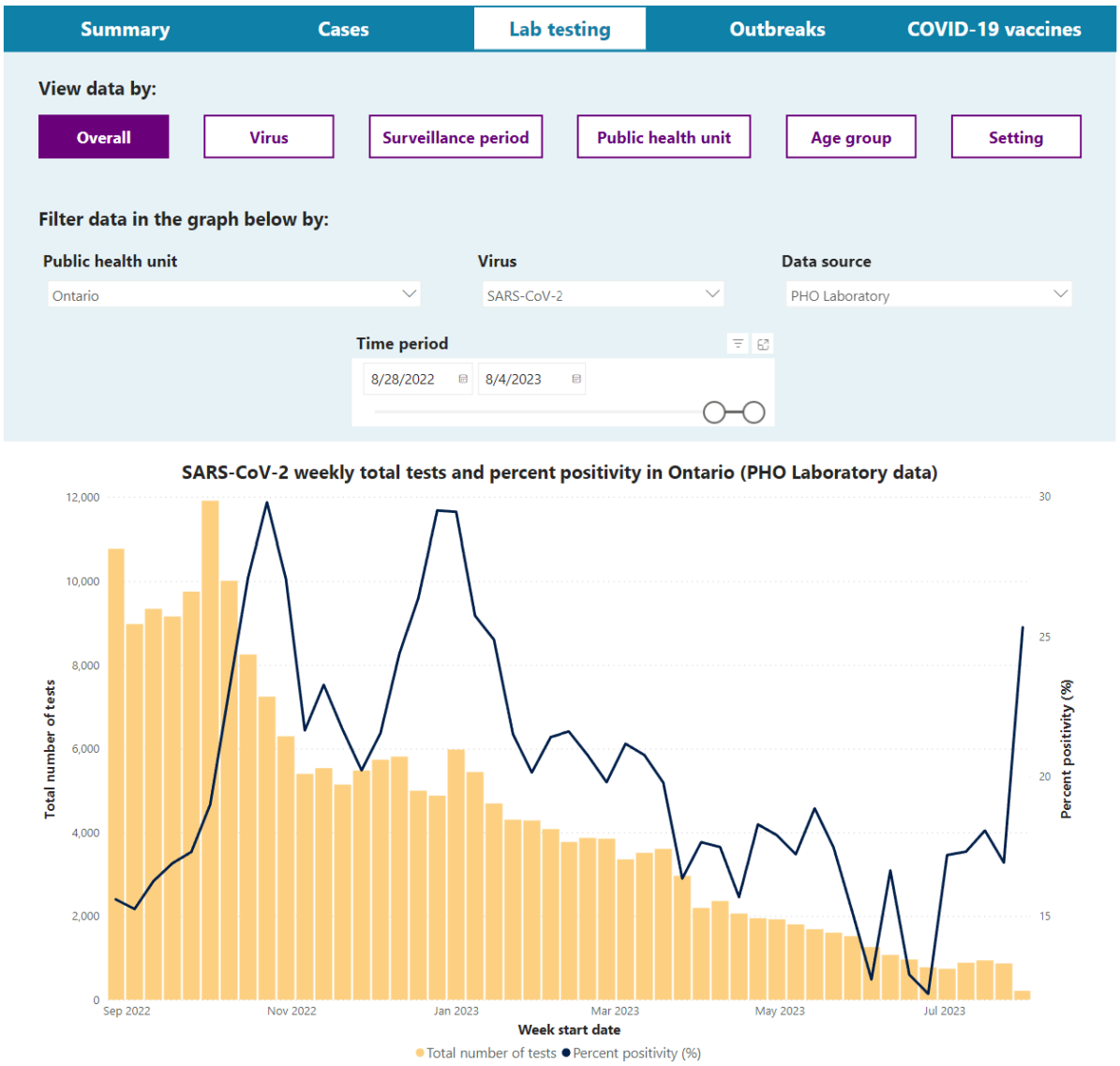
This section contains a multi-line graph displaying weekly trends for the selected measure (number or rates), allowing users to compare trends for COVID-19, influenza, and RSV outcomes. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), outcome (hospital bed occupancy, hospital admissions (COVID-19 only), deaths (COVID-19 only)), and time period. Filtering by more than one outcome will add those outcomes to the graph. This tab also has a button which will switch the view to display outcome data by age group for the selected time period.

Lab Testing Tab

This tab contains information on laboratory test results for respiratory viruses in the province, with the ability to view data by key stratifiers, as well as filter the data.

Data in this tab come from several different sources which may not be available for all viruses or stratifiers. The data sources are as follows:

- **PHO laboratory:** contains data for all available respiratory viruses at the provincial and public health unit level for all available stratifiers. This data comes from all testing which is done across the 14 PHO laboratories in the province and includes routine testing of select population groups.
- **PHO laboratory Sentinel Practitioner Surveillance Network (SPSN):** contains data for all available viruses at the provincial level without any stratification; the SPSN is a network of primary care practitioners aiming to monitor the effectiveness of the influenza vaccine and support respiratory surveillance. The data included reflect those specimens submitted to PHO by participating clinicians.
- **Public Health Agency of Canada:** contains data for all available respiratory viruses with the exception of SARS-CoV-2 (COVID-19) at the provincial level without any stratification; information on total number of tests is only available for influenza. This data comes from select laboratories across the province and is meant to be comparable across the country.
- **Provincial COVID-19 Diagnostic Network:** contains data for SARS-CoV-2 (COVID-19) at the provincial level without any stratification. This network consists of more than 40 independent, hospital, public health, and community laboratories providing a comprehensive view of COVID-19 testing in the province.



This tab contains six sections:

Overall

This section contains a bar and line graph displaying total number of tests and percent positivity by week. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO laboratory, PHO laboratory Sentinel Practitioner Surveillance Network, Public Health Agency of Canada, Provincial COVID-19 Diagnostic Network), and time period.

Virus

This section contains a multi-line graph displaying weekly trends for the selected measure (number of total tests, number of positive tests, or percent positivity), allowing users to compare trends for the selected viruses. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO

laboratory, PHO laboratory Sentinel Practitioner Surveillance Network, Public Health Agency of Canada), and time period. Filtering by more than one virus will add lines to the graph for the selected viruses.

Surveillance period

This section contains a multi-line graph displaying weekly trends for the selected measure (number of total tests, number of positive tests, or percent positivity) over different surveillance periods, allowing users to compare seasonal differences in the data. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO laboratory, PHO laboratory Sentinel Practitioner Surveillance Network, Public Health Agency of Canada, Provincial COVID-19 Diagnostic Network), and time period. Filtering by more than one surveillance period will add lines to the graph for the selected surveillance periods.

Public health unit

This section contains a multi-line graph displaying weekly trends for the selected measure (number of total tests, number of positive tests, or percent positivity), allowing users to compare trends by public health unit. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO laboratory only), and time period. Filtering by more than one public health unit will add lines to the graph for the selected public health units (by default just the provincial line is selected).

Age group

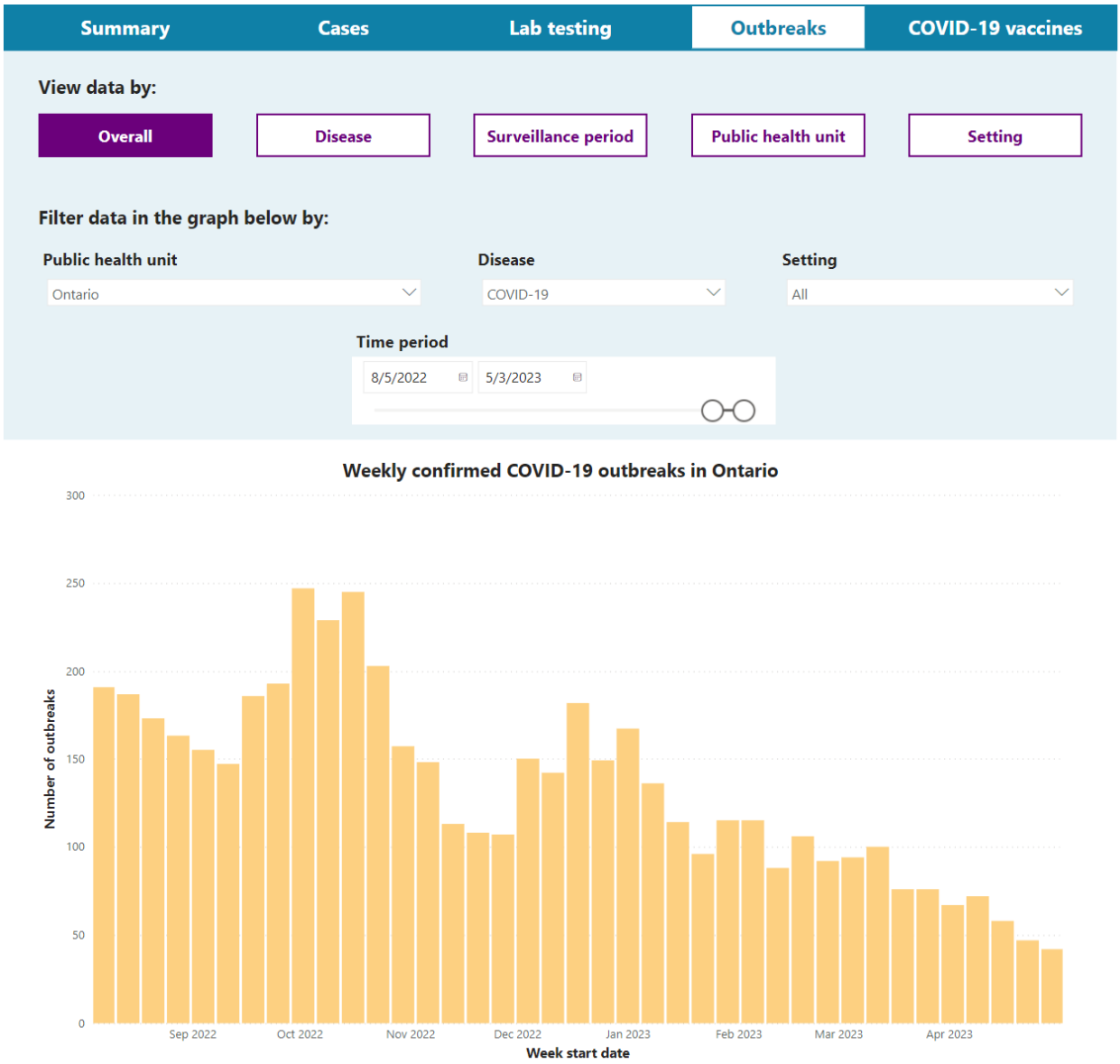
This section contains a multi-line graph displaying weekly trends for the selected measure (number of total tests, number of positive tests, or percent positivity), allowing users to compare trends by age group. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO laboratory only), age group, and time period. Filtering by more than one age group will add lines to the graph for the selected age groups. This tab also has a button which will switch the view to display a bar graph showing the distribution by age group for the selected time period.

Setting

This section contains a multi-line graph displaying weekly trends for the selected measure (number of total tests, number of positive tests, or percent positivity), allowing users to compare trends by setting. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), virus (SARS-CoV-2, influenza by subtype, adenovirus, entero/rhinovirus, human metapneumovirus, parainfluenza, respiratory syncytial virus, seasonal coronavirus), data source (PHO laboratory only), setting (intensive care unit, hospital, emergency department, congregate living), and time period. Filtering by more than one setting will add lines to the graph for the selected settings. This tab also has a button which will switch the view to display a bar graph showing the distribution by setting for the selected time period.

Outbreaks Tab

This tab contains information on outbreaks of respiratory viruses in the province, with the ability to view data by key stratifiers, as well as filter the data.



This tab contains five sections:

Overall

This section contains a bar graph displaying the number of outbreaks by week. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza A, influenza B, entero/rhinovirus, parainfluenza, respiratory syncytial virus, other, more than one, none detected), setting (congregate care [long-term care homes, hospitals, retirement homes], congregate living [group home/supportive housing, correctional facility, shelter], other, unknown), and time period.

Disease

This section contains a multi-line graph displaying the number of outbreaks by week), allowing users to compare trends for the selected diseases. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza A, influenza B, entero/rhinovirus, parainfluenza, respiratory syncytial virus, other, more than one, none detected), setting (congregate care [long-term care homes, hospitals, retirement homes], congregate living [group home/supportive housing, correctional facility, shelter], other, unknown), and time period. Filtering by more than one disease will add lines to the graph for the selected diseases.

Surveillance period

This section contains a multi-line graph displaying the number of outbreaks by week over different surveillance periods, allowing users to compare seasonal differences in the data. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza A, influenza B, entero/rhinovirus, parainfluenza, respiratory syncytial virus, other, more than one, none detected), setting (congregate care [long-term care homes, hospitals, retirement homes], congregate living [group home/supportive housing, correctional facility, shelter], other, unknown), and time period. Filtering by more than one surveillance period will add lines to the graph for the selected surveillance period.

Public health unit

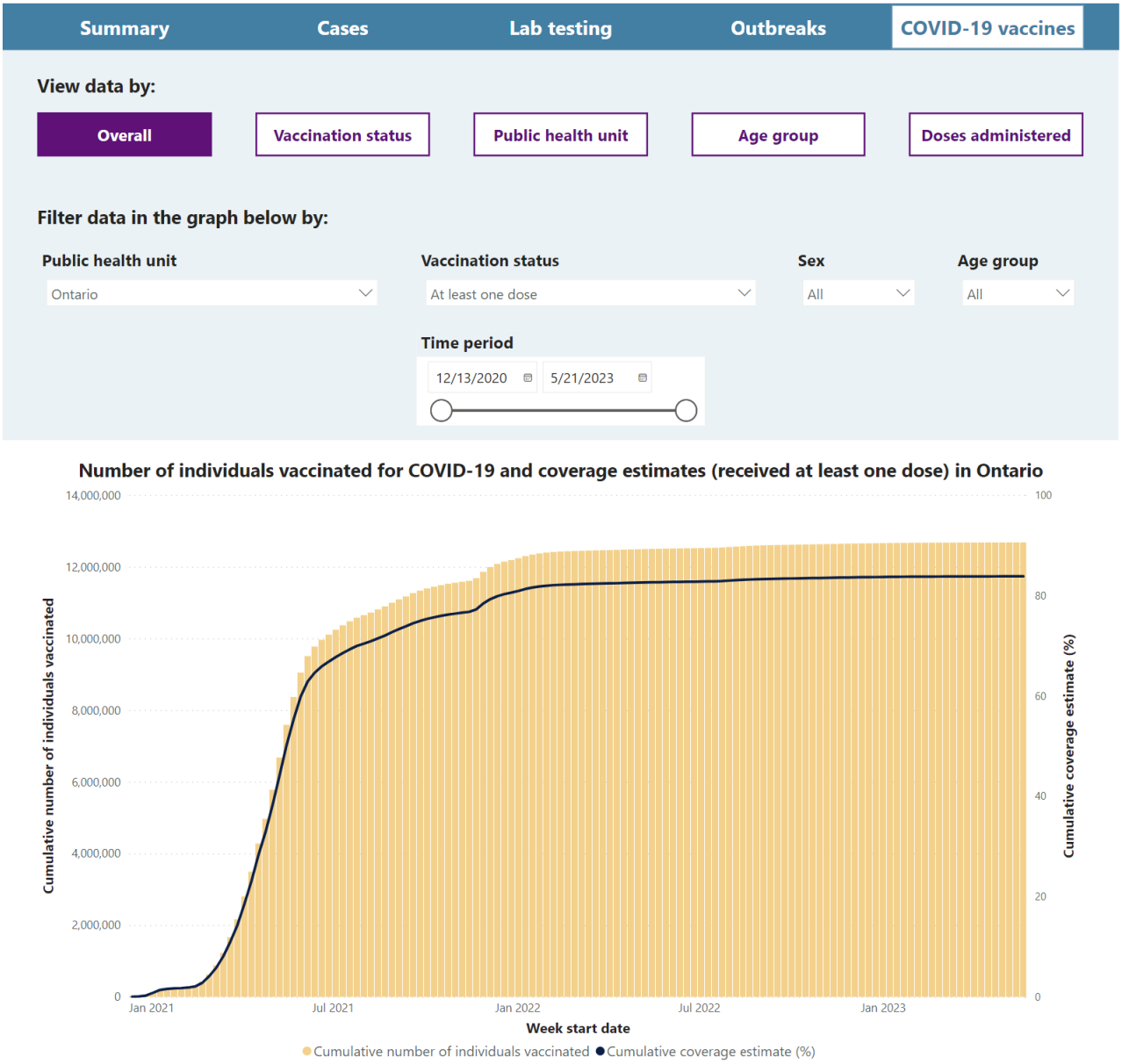
This section contains a multi-line graph displaying the number of outbreaks by week, allowing users to compare trends by public health unit. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza A, influenza B, entero/rhinovirus, parainfluenza, respiratory syncytial virus, other, more than one, none detected), setting (congregate care [long-term care homes, hospitals, retirement homes], congregate living [group home/supportive housing, correctional facility, shelter], other, unknown), and time period. Filtering by more than one public health unit will add lines to the graph for the selected public health units (by default only the provincial line is selected).

Setting

This section contains a stacked bar graph displaying the number of outbreaks by week, allowing users to compare trends by setting. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), disease (COVID-19, influenza A, influenza B, entero/rhinovirus, parainfluenza, respiratory syncytial virus, other, more than one, none detected), setting (congregate care [long-term care homes, hospitals, retirement homes], congregate living [group home/supportive housing, correctional facility, shelter], other, unknown), and time period. Filtering by more than one setting will add bars to the graph for the selected settings.

COVID-19 Vaccines Tab

This tab contains information on COVID-19 vaccination coverage in the province, with the ability to view data by key stratifiers, as well as filter the data.



This tab contains five sections:

Overall

This section contains a bar and line graph displaying the cumulative number of individuals vaccinated and the cumulative coverage estimate by week. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), vaccination status (at least one dose, completed primary series, completed primary series and 1 booster dose, completed primary series and 2+ booster doses), sex, age group, and time period.

Vaccination status

This section contains a multi-line graph displaying weekly trends for the selected measure (cumulative number of individuals vaccinated, cumulative coverage estimate, number of individuals vaccinated in that week), allowing users to compare trends by vaccination status. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), vaccination status (at least one dose, completed primary series, completed primary series and 1 booster dose, completed primary series and 2+ booster doses), sex, age group, and time period. Selecting more than one vaccination status in that filter will add those lines to the graph.

Public health unit

This section contains a multi-line graph displaying weekly trends by public health unit for the selected measure (cumulative number of individuals vaccinated, cumulative coverage estimate, number of individuals vaccinated in that week), allowing users to compare trends by public health unit. Users can filter the data by public health unit (province of Ontario or one of the 34 PHUs in the province), vaccination status (at least one dose, completed primary series, completed primary series and 1 booster dose, completed primary series and 2+ booster doses), sex, age group, and time period. Selecting more than one public health unit in that filter will add those lines for the selected public health units to the graph (by default just the provincial line is selected).

Age group

This section contains a multi-line graph displaying weekly trends for the selected measure (cumulative number of individuals vaccinated, cumulative coverage estimate, number of individuals vaccinated in that week), allowing users to compare trends by age group. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), vaccination status (at least one dose, completed primary series, completed primary series and 1 booster dose, completed primary series and 2+ booster doses), sex, age group, and time period. Filtering by more than one age group will add lines to the graph for the selected age groups. This tab also has a button which will switch the view to display a bar graph showing the distribution by age group and last dose status.

Doses administered

This section contains a stacked bar graph displaying weekly trends by dose number or vaccine product, allowing users to compare trends for the number of vaccine doses administered. Users can filter the data by public health unit (Ontario or one of the 34 PHUs in the province), vaccine product (Astrazeneca, Covishield, Janssen, Moderna, Moderna BA1, Moderna BA4/BA5, Moderna Xbb, Novavax, Novavax XBB, Pfizer, Pfizer BA4/BA5, Pfizer XBB), dose number, and time period. Filtering by more than one vaccine product or dose number will either add those add those bars to the graph depending on what is selected in the ‘Dose number or vaccine product filter’

Citation

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