

Ontario Respiratory Pathogen Bulletin | 2016-2017

SURVEILLANCE WEEKS 35 AND 36 (August 28, 2016 – September 10, 2016)

This issue of the Ontario Respiratory Pathogen Bulletin provides information on the surveillance period from August 28, 2016 to September 10, 2016 (Weeks 35 and 36). Unless otherwise specified data extraction occurred on Wednesday, September 14, 2016. Weekly production of the expanded version of the bulletin will resume in the fall for the 2016-17 season.

Assessment of Influenza Activity in Ontario

Measure of activity	Assessment of measure compared to the previous week (Lower, Similar, Higher)	Reasoning behind assessment
Laboratory-confirmed influenza cases ¹	Similar	There were 3 influenza cases (1 influenza A and 2 influenza B) reported in Weeks 35 and 36, which was lower than the 6 influenza cases reported in Weeks 33 and 34 (4 influenza A and 2 influenza B).
Percent positivity for influenza ²	Similar	Percent positivity of laboratory tests for all influenza types in Weeks 35 and 36 was 0.4%, which was lower than the percent positivity in Weeks 33 and 34 (0.8%). In Weeks 35 and 36, percent positivity was 0.1% for influenza A and 0.3% for influenza B.
Institutional influenza outbreaks ³	Similar	There were no new influenza outbreaks reported in Weeks 35 and 36, which was similar to Weeks 33 and 34, when no influenza outbreaks were reported.
Influenza activity levels reported by health units	Similar	In Week 35, 0 public health units reported 'localized' activity, 2 reported 'sporadic' activity, 24 reported no activity and 10 did not report. In Week 36 , 0 public health units reported 'localized' activity, 1 health unit reported 'sporadic' activity, 32 reported no activity, and 3 did not report.
OVERALL ASSESSMENT	Similar	Overall, the indicators show that influenza activity for Weeks 35 and 36 was similar Weeks 33 and 34.
Measures of severity for influenza		
Hospitalizations among laboratory-confirmed cases of influenza ⁴	There was 0 hospitalized cases reported in Weeks 35 and 36; the number of hospitalized cases reported in Weeks 33 and 34 was 1.	
Deaths among laboratory-confirmed cases of influenza ⁴	There were 0 deaths reported in Weeks 35 and 36; there were 0 deaths reported in Weeks 33 and 34.	

Notes:

¹ Based on the date the case was reported to the public health unit.

² Positivity among specimens tested by Ontario laboratories that submit results to the Centre for Immunization and Respiratory Infectious Diseases (CIRID). Due to rounding, percentages presented here may not add up to the overall influenza percent positivity.

³ The number of new outbreaks reported for the current week is based on the date the outbreak was reported to the public health unit; when reported date is unavailable, the date the outbreak was created in iPHIS is used.

⁴ Hospitalization / death data are based on the date reported to the public health unit. These data are likely under-reported and may not be comparable to prior years.

Summary of current and season-to-date respiratory virus activity in Ontario

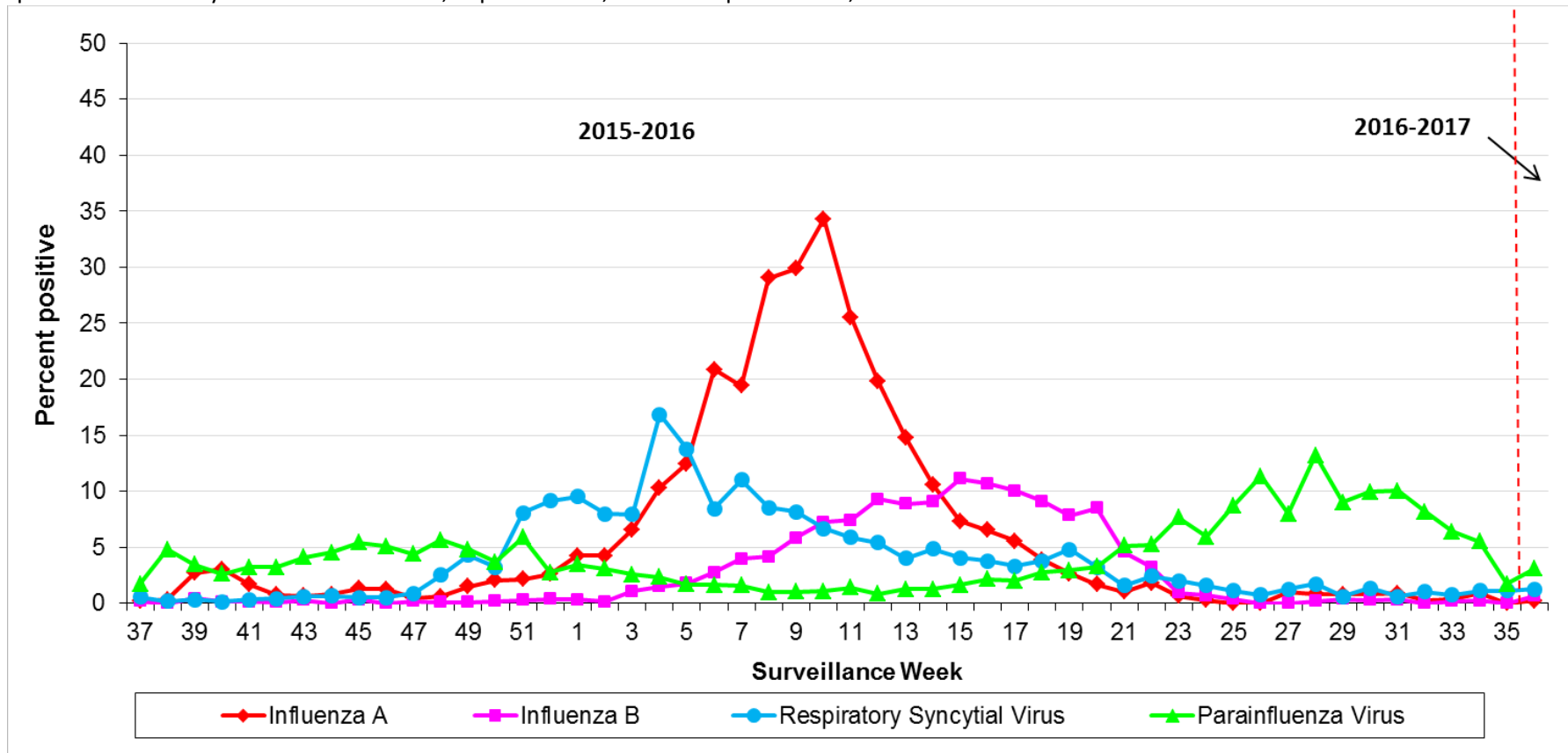
The 2016-2017 surveillance season began as of September 1.

- Influenza activity in the current surveillance weeks was similar compared to the previous weeks. Influenza A (H1N1)pdm09 was the dominant influenza subtype circulating during the 2015-2016 season.
 - Provincial percent positivity¹ was low for both influenza A and influenza B, at 0.1% and 0.3% respectively in Weeks 35 and 36 ([Figure 1](#)). The one influenza A positive specimen in Weeks 35 and 36, for which subtyping was reported, was H3N2. For the 2015-2016 season up to Week 35, 88.4% (3270/3700) of subtyped influenza A specimens were (H1N1)pdm09.¹ For the 2016-2017 season to date, the only influenza A positive specimen for which subtyping was reported was H3N2.
 - For the 2015-2016 surveillance season up to Week 35, 12,139 laboratory-confirmed influenza cases have been reported. Among these cases, 68.2% (8,275/12,139) were influenza A and 31.7% (3,842/12,139) were influenza B. For the 2016-2017 surveillance season to date, 0% (0/2) cases had influenza A and 100% (2/2) had influenza B.
 - No institutional influenza outbreaks were reported in Weeks 35 and 36. Influenza was detected in 20.8% (231/1112) of institutional respiratory infection outbreaks reported up to Week 35 for the 2015-2016 season. 13.0% (145/1112) were influenza A and 7.0% (77/1112) influenza B. Among the institutional influenza A outbreaks reported in the 2015-2016 season, 67 (43.5%) were (H1N1)pdm09 and 21 (13.6%) were H3N2 with the subtype not reported for the remaining influenza A outbreaks. No influenza outbreaks were reported for the 2016-2017 season to date.
 - For the 2015-2016 season up to Week 35, 2,653 hospitalizations and 127 deaths have been reported among laboratory-confirmed influenza cases. The majority of hospitalizations (1,948/2,653 or 73.4%) and deaths (94/127 or 74.0%) have occurred among influenza A cases. Of the 664 hospitalized laboratory-confirmed influenza cases where subtype was reported, 88.7% (588) were (H1N1)pdm09 and 11.4% (76) were H3N2. For the 2016-2016 season to date, 0 hospitalizations and 0 deaths have been reported among laboratory-confirmed influenza cases.
- Among other circulating non-influenza respiratory viruses identified through laboratory testing:
 - Rhinovirus was the dominant circulating virus in Weeks 35 and 36, with provincial positivity at 14.9% ([Figure 2](#)).

Note: A full summary bulletin for the 2015-2016 respiratory pathogen surveillance season will be released in October 2016.

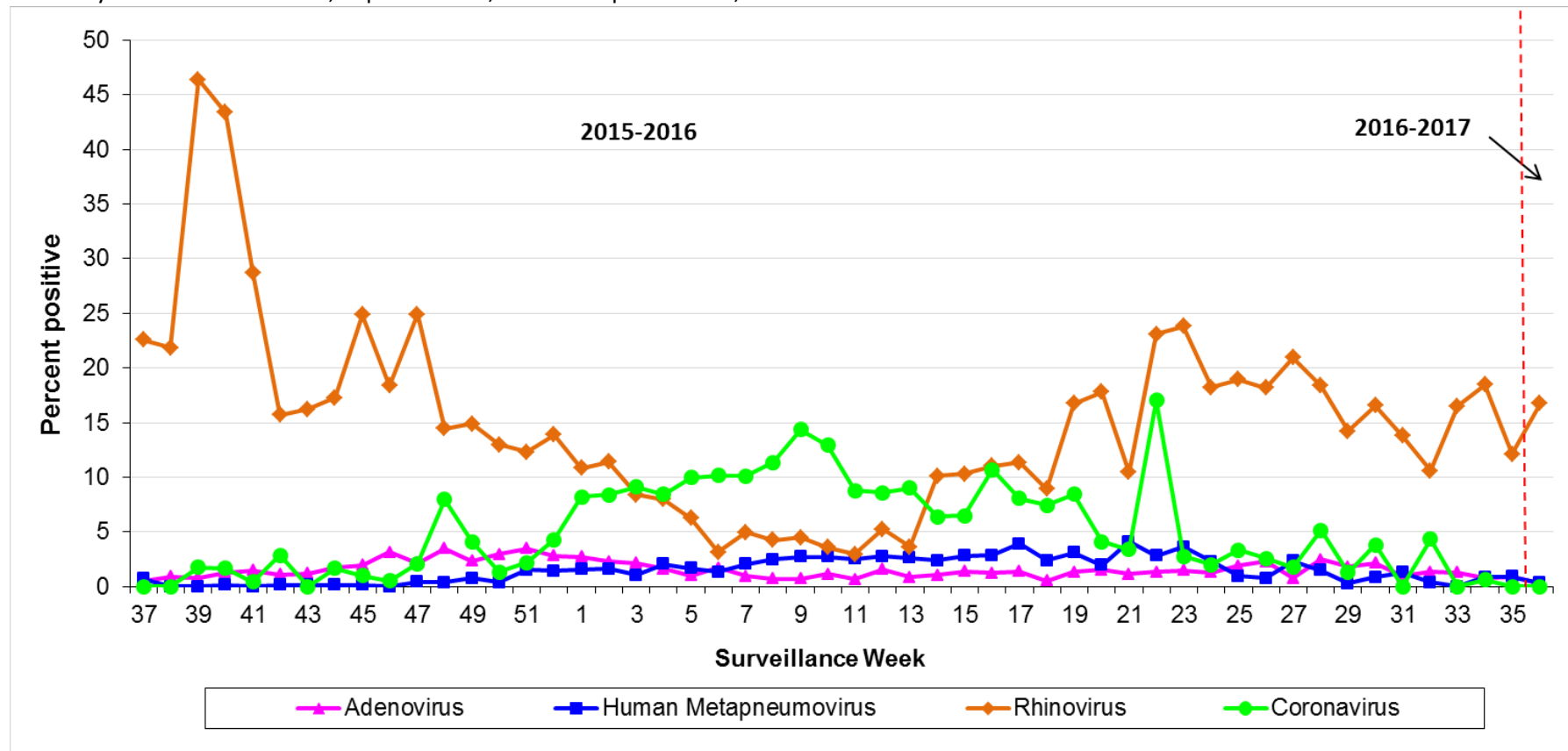
¹ Based on percent positivity among specimens submitted for testing to laboratories reporting to the Public Health Agency of Canada's Centre for Immunization and Respiratory Infectious Diseases (CIRID).

Figure 1. Percentage of respiratory viral pathogens (influenza A, influenza B, respiratory syncytial virus, and parainfluenza virus) detected among specimens tested by all methods: Ontario, September 13, 2015 to September 10, 2016



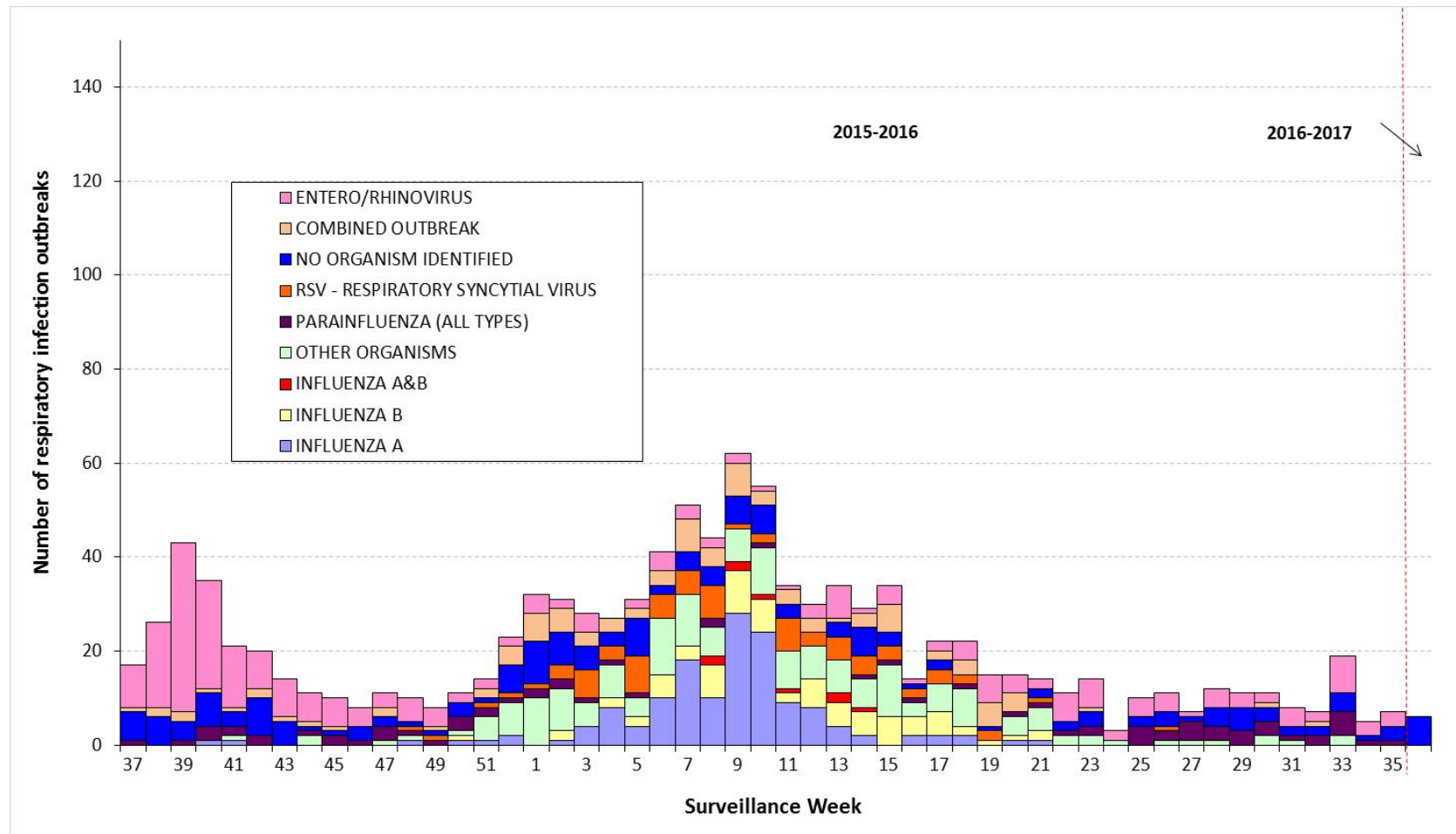
[Source: Centre for Immunization and Respiratory Infectious Diseases \(CIRID\)](#)

Figure 2. Percentage of respiratory viral pathogens (adenovirus, human metapneumovirus, rhinovirus and coronavirus) detected among specimens tested by all methods: Ontario, September 13, 2015 to September 10, 2016



[Source: Centre for Immunization and Respiratory Infectious Diseases \(CIRID\)](#)

Figure 3. Institutional respiratory infection outbreaks by week of illness onset in the first case: Ontario, September 13, 2015 to September 10, 2016

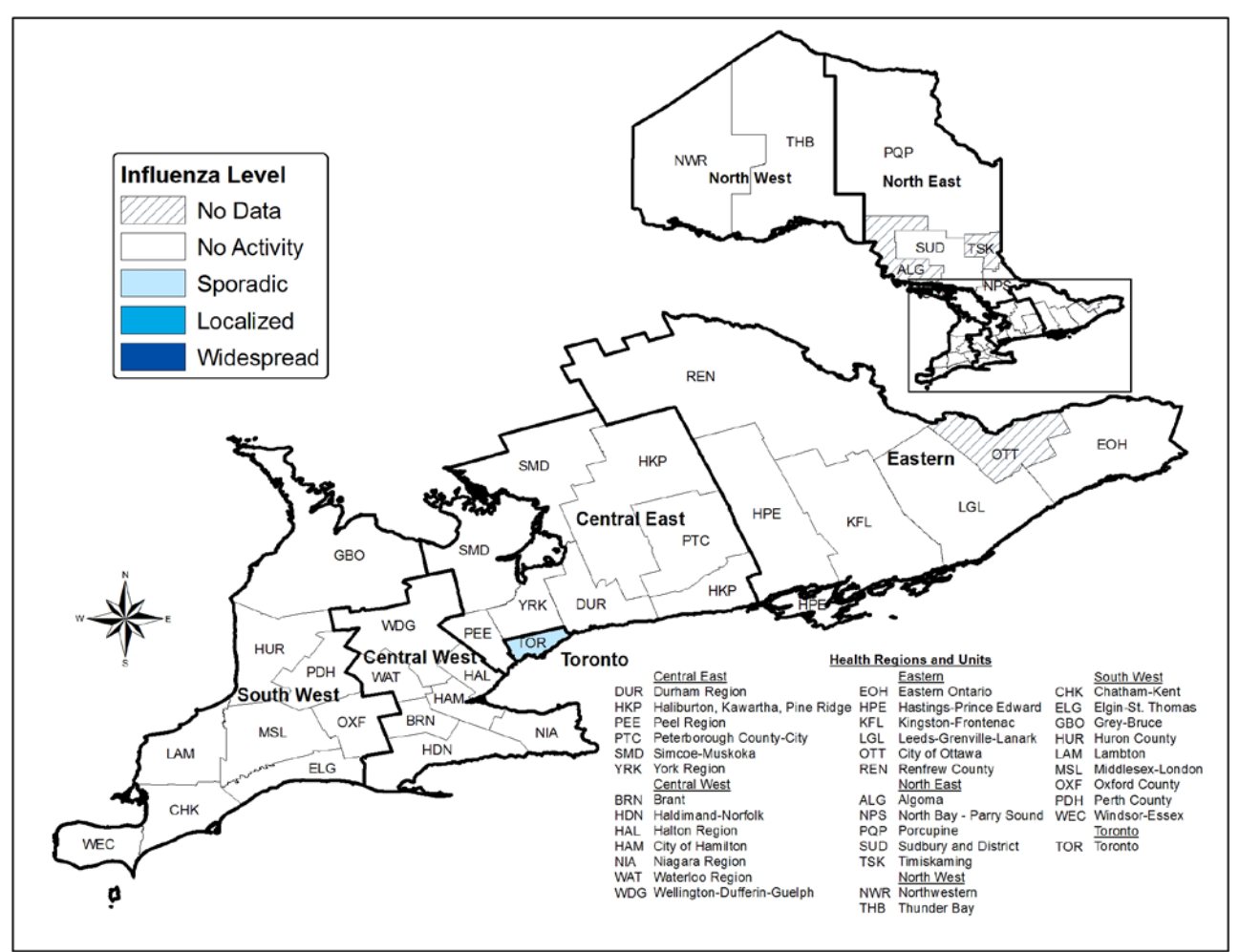


[Source: Integrated Public Health Information System \(iPHIS\)](#)

Notes:

- Interpret most recent outbreak counts for the current season with caution due to reporting lags.
- Institutional respiratory infection outbreaks for which the date of onset of illness for the first case is missing are excluded in this figure. However, these outbreaks are counted in the cumulative outbreaks section of Table 1.
- Any outbreak where influenza was identified is reported under the appropriate influenza category (“Influenza A”, “Influenza B”, or “Both influenza A & B”) regardless of what other virus is also identified in the outbreak

Figure 4. Influenza activity levels reported by public health units: Ontario, September 4, 2016 to September 10, 2016 (Week 36)



[Source: Public Health Ontario from public health units](#)

Data sources for this report

- **Integrated Public Health Information System (iPHIS):** provides information on laboratory-confirmed cases of influenza reported to local public health units, and institutional outbreaks of influenza and other respiratory pathogens reported to local public health units. iPHIS is administered by the Ontario Ministry of Health and Long-Term Care; data for this issue was extracted by Public Health Ontario on September 14, 2016.

Case counts for influenza A and B cases are based on the 'Reported Date', which was the date the public health unit was notified of the case; however, cases are assigned to a particular surveillance week based on the episode date entered in iPHIS for the case. Episode date for a case corresponds to the earliest date on record for the case according to the iPHIS hierarchy (Symptom Date > Clinical Diagnosis Date > Specimen Collection Date > Lab Test Date > Reported Date). Cases are excluded from these counts if the episode date is based on reported date, and the reported date occurs after the latest surveillance week.

- **Centre for Immunization and Respiratory Infectious Diseases (CIRID) of the Public Health Agency of Canada (PHAC):** provides information on the number of influenza tests and number that are positive based on submissions from 16 participating laboratories in Ontario including 11 Public Health Ontario Laboratories (PHOLs) and five hospital-based laboratories. The results are assigned to a particular surveillance week based on when test results are reported to PHAC; these data are not updated when results are submitted late for previous surveillance weeks. These data represent the number of specimens tested, which may not necessarily correspond with the number of patients as more than one specimen may have been submitted per patient. Cumulative numbers for the season to date are also available through [FluWatch](#).
- **Public Health Ontario from public health units:** Public health units provide Public Health Ontario with weekly reports of influenza activity levels in their areas [Provincial Influenza Activity Report (Appendix C) Database]. Influenza activity levels are assigned by local public health units and reported to Public Health Ontario by 4:00 pm on the Tuesday following the end of each surveillance week. Activity levels are assigned based on laboratory confirmations, ILI reports from various sources, and laboratory-confirmed institutional respiratory infection outbreaks. Please refer to the [detailed definitions for the 2015-2016 season for more information](#). Activity levels reported for a particular surveillance week may not necessarily correspond to the number of new outbreaks reported in the same week in Table 3 because ongoing outbreaks from previous weeks, as well as laboratory confirmed outbreaks in schools, may be included in the assessment of the activity level.