

## **RESPIRATORY VIRUS SURVEILLANCE REPORT**

Week 41: Ending October 12, 2019

Wisconsin Department of Health Services | Division of Public Health Bureau of Communicable Diseases | Communicable Diseases Epidemiology Section <u>dhs.wi.gov/dph/bcd.htm</u> | <u>dhsdphbcd@dhs.wi.gov</u>





#### STATE OF WISCONSIN

**REGION V OF US** (WI, MN, IL, MI, OH, IN) **UNITED STATES** 







ILI: MODERATE LEVELS **ILI: BELOW BASELINE**  ILI: INSUFFICIENT DATA

**October 1, 2019** 

### **AT-A-GLANCE:**

ILI: HIGH LEVELS

- Weekly Respiratory Report Description
- **Predominant Viruses of the Week:**

Rhino/enteroviruses are currently the predominant viruses.

#### **CURRENT ALERTS:**

Three influenza associated deaths have been reported in Wisconsin during the 2019-2020 influenza season.



Week 41, 2019

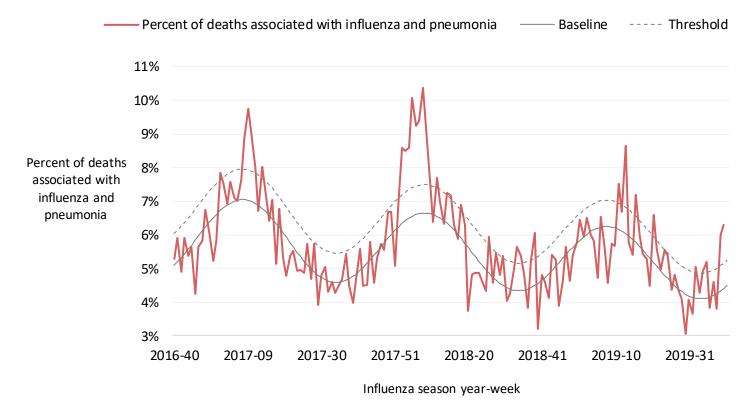
**PEDIATRIC DEATHS REPORTED:** 

INFLUENZA-ASSOCIATED

For National US influenza surveillance statistics visit: <a href="http://www.cdc.gov/flu/weekly/">www.cdc.gov/flu/weekly/</a>



#### Influenza- and pneumonia-associated deaths by influenza season year and week, Wisconsin



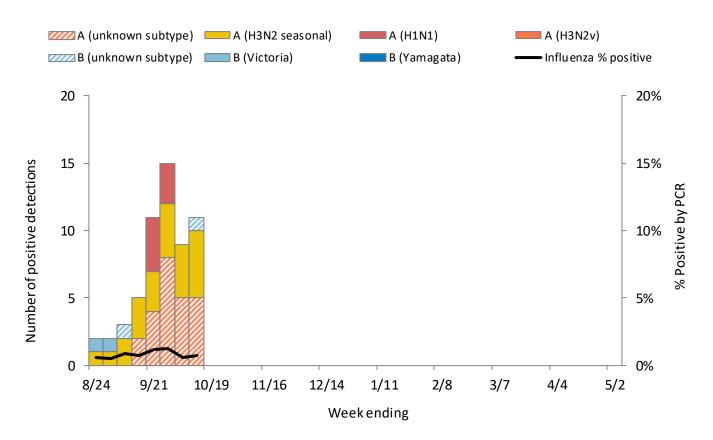
#### Influenza- and pneumonia-associated deaths by most recent influenza season week, Wisconsin, 2019-2020 season

| Influenza season week | Influenza-<br>associated<br>deaths (I) | Pneumonia-<br>associated<br>deaths (P) | Percent I+P of<br>all deaths | Baseline I+P<br>of all deaths | Threshold I+P<br>of all deaths |
|-----------------------|--|--|------------------------------|-------------------------------|--------------------------------|
| 39                    | 0                                      | 39                                     | 3.8%                         | 4.3%                          | 5.0%                           |
| 40                    | 1                                      | 54                                     | 6.0%                         | 4.3%                          | 5.1%                           |
| 41                    | 2                                      | 47                                     | 6.3%                         | 4.4%                          | 5.2%                           |
| Seasonal total        | 3                                      | 184                                    | 5.1%                         | 4.4%                          | 5.2%                           |

Data source: DPH, Office of Health Informatics



#### Wisconsin positive influenza results and subtypes by PCR

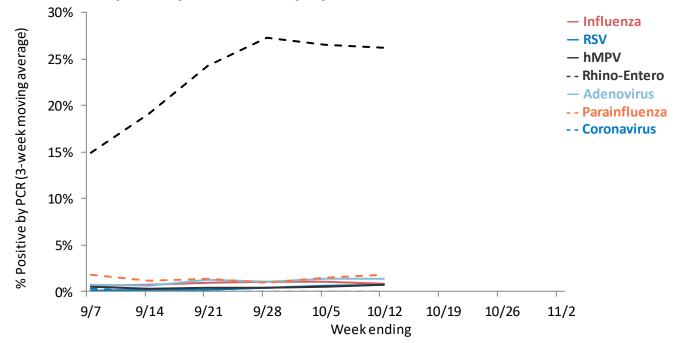


#### Cumulative number of positive influenza PCR tests by subtype September 1, 2019 to present

|                     | A (2009 H1N1) | Influenza A:<br>A (H3N2) | 96%<br>A (Unknown) | B (Victoria) | Influenza B:<br>B (Yamagata) | 4%<br>B (Unknown) | Total |
|---------------------|---------------|--------------------------|--------------------|--------------|------------------------------|-------------------|-------|
| Total positive (n)  | 7             | 21                       | 24                 | 0            | 0                            | 2                 | 54    |
| % of total positive | 13%           | 39%                      | 44%                | 0%           | 0%                           | 4%                | 100%  |

## WISCONSIN LABORATORY SURVEILLANCE FOR RESPIRATORY VIRUSES BY PCR

#### Trends in respiratory virus activity by PCR



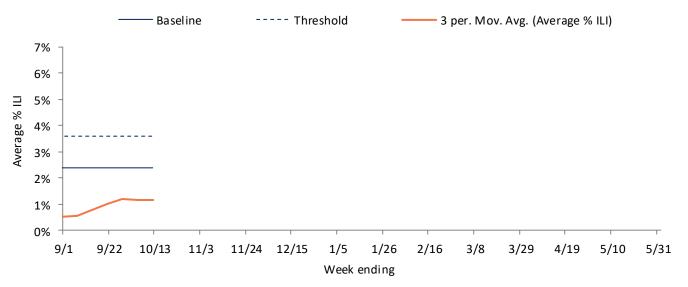
#### Week 41: Ending on October 12, 2019

| Description       | Tested  | Positi | ive Po          | ositive |                |       | Influenza A |              |             |        | Influenza        | a B   |               |
|-------------------|---------|--------|-----------------|---------|----------------|-------|-------------|--------------|-------------|--------|------------------|-------|---------------|
| Respiratory virus | Tested  | (n)    |                 | (%)     | H3N            | 2     | 2009 H1N1   | Unknown      |             | toria  | Yamagata         |       | Unknown       |
| Influenza         | 1493    | 11     | . 0             | ).7%    | 5              |       | 0           | 5            |             | 0      | 0                |       | 1             |
| Respiratory virus | s Te    | sted   | Positive<br>(n) |         | ositive<br>(%) | Parai | influenza 1 | Parainfluen  | za <b>2</b> | Parair | influenza 3 Para |       | rainfluenza 4 |
| Parainfluenza     | 5       | 34     | 13              | 2       | 2.4%           |       | 10          | 0            |             |        | 1                |       | 2             |
| Respiratory virus | 5 Tes   | ted    | Positive<br>(n) |         | sitive<br>(%)  | Co    | oV 229E     | CoV OC4      | 3           | Co     | CoV NL63         |       | CoV HKU1      |
| Coronavirus (Co   | V) 2    | 92     | 0               |         | 0%             |       | 0           | 0            |             |        | 0                |       | 0             |
| Respiratory       | v virus |        |                 | Те      | ested          |       |             | Positive (n) |             |        | Pos              | itive | (%)           |
| RSV               |         |        |                 | 7       | 731            |       |             | 4            |             |        |                  | 0.5%  | ,<br>)        |
| Human metapn      | eumovi  | rus    |                 | 5       | 552            |       | 5           |              |             | 0.9%   | ,                |       |               |
| Rhino-enter       | rovirus |        |                 | 5       | 525            |       |             | 148          |             | 28.2%  |                  |       | %             |
| Adenovi           | rus     |        |                 | 2       | 292            |       |             | 7            |             |        |                  | 2.4\$ |               |

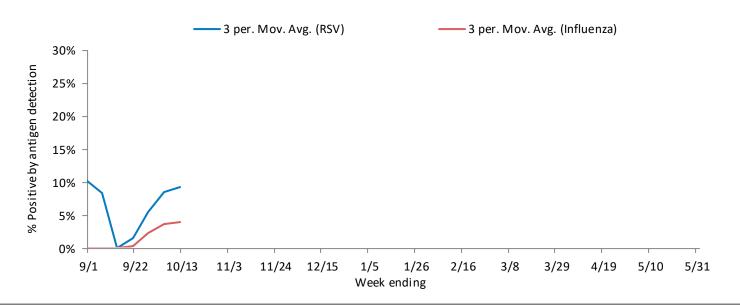


| Influenza rapid antigen tests |             |              |       |            | RSV r  | apid antigen | tests      | Influenza-like illness (ILI) |          |           |  |
|-------------------------------|-------------|--------------|-------|------------|--------|--------------|------------|------------------------------|----------|-----------|--|
| Tested                        |             | Positive (n) |       | % Positive | Tested | Positive (n) | % Desitive | ILI %                        | Baseline | Threshold |  |
| Tested                        | Influenza A | Influenza B  | Total | % Positive |        |              | % Positive | ILI %                        |          |           |  |
| 326                           | 4           | 2            | 6     | 1.8%       | 74     | 5            | 6.8%       | 1.2%                         | 2.4%     | 3.6%      |  |

#### ILI activity trend analysis

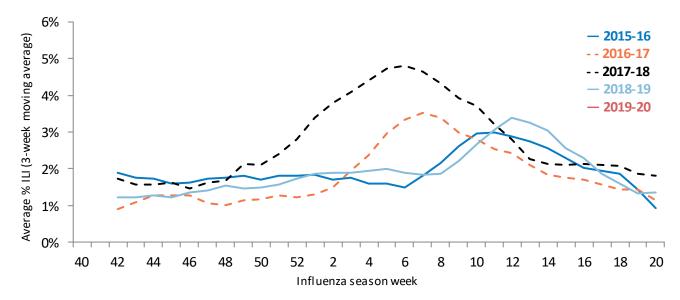


Influenza and RSV trend analysis



### WISCONSIN STATE SUMMARY

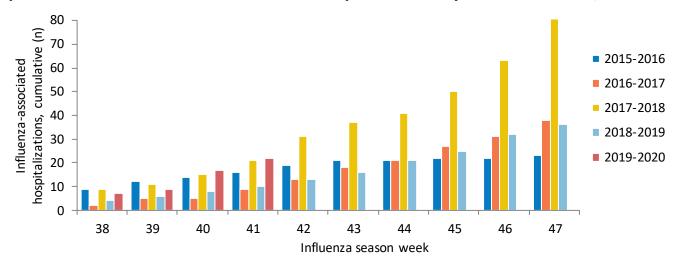
ILI activity trend analysis by influenza season, Wisconsin



Influenza-associated hospitalizations, Wisconsin Electronic Disease Surveillance System September 1, 2019 to present

| Age group | Total           |                  | In          | fluenza subty  | уре |            | Admitted | Required               |   | Postpartum |
|-----------|-----------------|------------------|-------------|----------------|-----|------------|----------|------------------------|---|------------|
| (years)   | reported<br>(n) | A (2009<br>H1N1) | A<br>(H3N2) | A<br>(Unknown) | В   | B reported | to ICU   | mechanical ventilation |   | (≤6 weeks) |
| <1        | 0               | 0                | 0           | 0              | 0   | 0          | 0        | 0                      | 0 | 0          |
| 1-4       | 1               | 0                | 0           | 1              | 0   | 0          | 0        | 0                      | 0 | 0          |
| 5-17      | 0               | 0                | 0           | 0              | 0   | 0          | 0        | 0                      | 0 | 0          |
| 18-49     | 2               | 0                | 0           | 1              | 1   | 0          | 1        | 0                      | 0 | 0          |
| 50-64     | 2               | 0                | 1           | 1              | 0   | 0          | 1        | 0                      | 0 | 0          |
| 65+       | 17              | 0                | 6           | 4              | 7   | 0          | 2        | 0                      | 0 | 0          |
| Total     | 22              | 0                | 7           | 7              | 8   | 0          | 4        | 0                      | 0 | 0          |

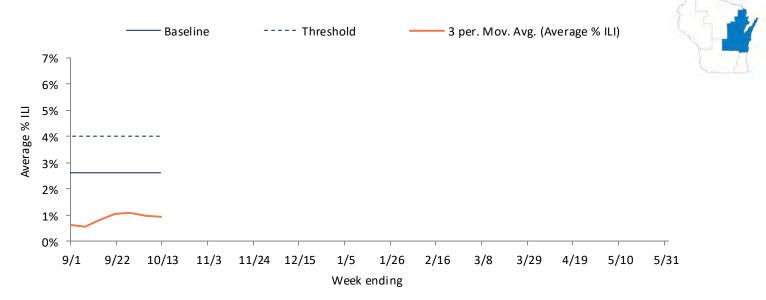
Reported cumulative influenza-associated hospitalizations by influenza season, Wisconsin

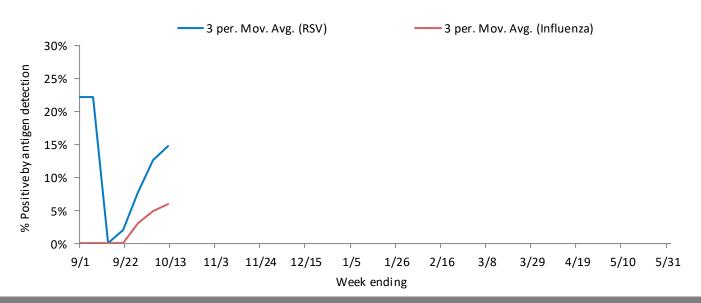




| Influenza rapid antigen tests |                            |             |       |            | RSV r  | apid antigen  | tests       | Influenza-like illness (ILI) |          |           |  |
|-------------------------------|----------------------------|-------------|-------|------------|--------|---------------|-------------|------------------------------|----------|-----------|--|
| Tested                        | Positive (n)<br>% Positive |             |       |            | Tested | Positive (n)  | % Positive  | ILI %                        | Baseline | Threshold |  |
| Testeu                        | Influenza A                | Influenza B | Total | % Positive | Testeu | Positive (II) | 70 FOSILIVE | ILI 70                       | Dasenne  | mesholu   |  |
| 123                           | 3                          | 1           | 4     | 3.3%       | 40     | 5             | 12.5%       | 1.3%                         | 2.6%     | 4.0%      |  |

#### ILI activity trend analysis

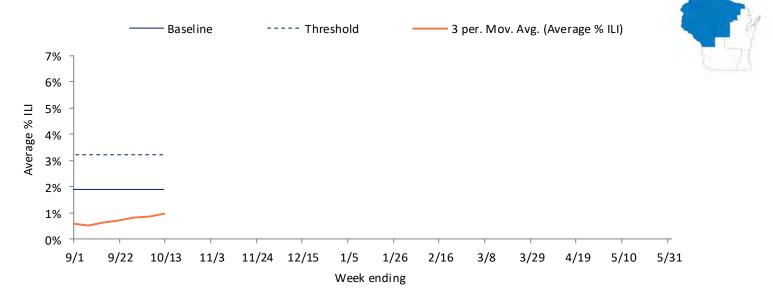


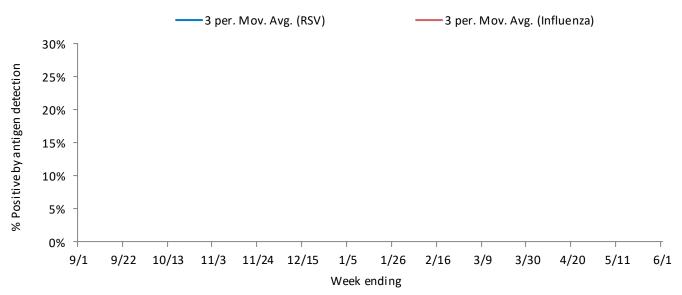


# **NORTHWESTERN REGION**

| Influenza rapid antigen tests |              |             |       |            | RSV r  | apid antigen  | tests       | Influenza-like illness (ILI) |          |           |  |
|-------------------------------|--------------|-------------|-------|------------|--------|---------------|-------------|------------------------------|----------|-----------|--|
| Tested                        | Positive (n) |             |       |            | Tested | Positive (n)  | % Positive  | ILI %                        | Baseline | Threshold |  |
| Testeu                        | Influenza A  | Influenza B | Total | % Positive | Tested | Positive (II) | 70 POSILIVE | ILI 70                       | Daseinie | mesholu   |  |
| 83                            | 1            | 1           | 2     | 2.4%       | 16     | 0             | 1.0%        | 1.1%                         | 1.9%     | 3.2%      |  |

#### ILI activity trend analysis

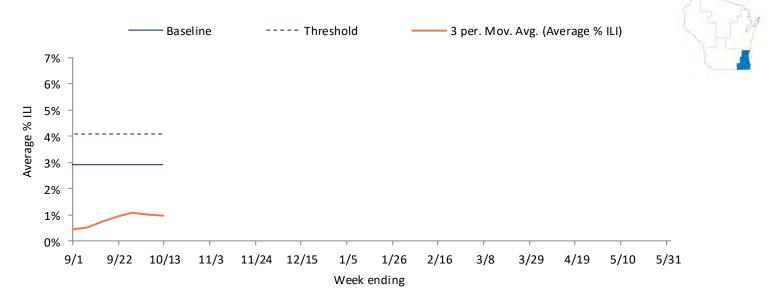


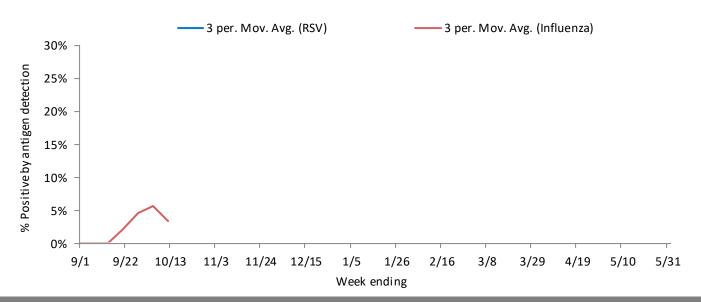




|        | Influenza rapid antigen tests |       |             |        |                | apid antigen | tests      | Influenza-like illness (ILI) |          |           |  |
|--------|-------------------------------|-------|-------------|--------|----------------|--------------|------------|------------------------------|----------|-----------|--|
| Tested | Positive (n)<br>% Pos         |       |             |        | Tested         | Positive (n) | % Positive | ILI %                        | Baseline | Threshold |  |
| resteu | Influenza A Influenza B Total | Total | 70 POSITIVE | resteu | i ositive (ii) | 701 0310100  | ILI 70     | Dasenne                      | mesholu  |           |  |
| 82     | 0                             | 0     | 0           | 0.0%   | 12             | 0            | 0.0%       | 1.0%                         | 2.9%     | 4.1%      |  |

#### ILI activity trend analysis

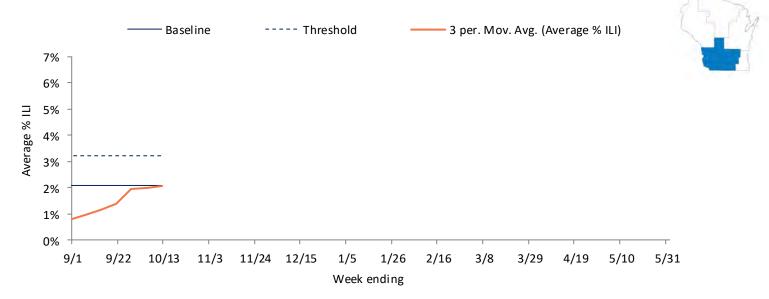


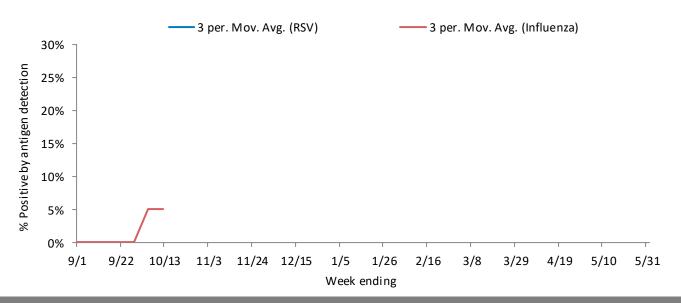


## **SOUTHERN REGION**

|        | Influenz     | a rapid anti              | gen tests |            | RSV r  | apid antigen  | tests       | Influenza-like illness (ILI) |          |           |  |
|--------|--------------|---------------------------|-----------|------------|--------|---------------|-------------|------------------------------|----------|-----------|--|
| Tested | Positive (n) |                           |           | % Positive | Tested | Positive (n)  | % Positive  | ILI %                        | Baseline | Threshold |  |
| resteu | Influenza A  | uenza A Influenza B Total | Total     | % POSITIVE | Testeu | FOSILIVE (II) | 701 0310100 | ILI 70                       | Dasenne  | mesholu   |  |
| 38     | 0            | 0                         | 0         | 0.0%       | 6      | 0             | 0.0%        | 1.8%                         | 2.1%     | 3.2%      |  |

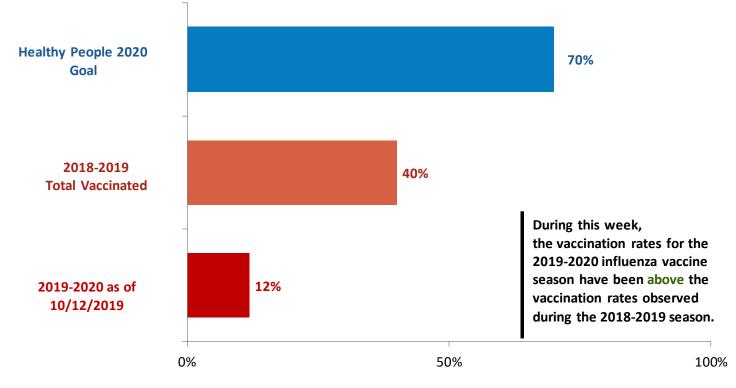
#### ILI activity trend analysis







Cumulative percentage of Wisconsin residents who received 1 or more doses of influenza vaccine, 2019-2020 influenza season



Data source: All influenza vaccination rates presented were calculated using data from the Wisconsin Immunization Registry (numerator) and Wisconsin population estimates (denominator).

#### Influenza vaccine composition 2019-2020:

The **trivalent** vaccines for use in the 2019-2020 influenza season contain the following:

- A/Brisbane/02/2018 (H1N1)pdm09–like virus (updated)
- A/Kansas/14/2017 (H3N2)-like virus (updated)
- B/Colorado/06/2017-like (Victoria lineage) virus

It is recommended that **<u>quadrivalent</u>** vaccines containing two influenza B viruses contain the above three viruses and:

• B/Phuket/3073/2013-like virus (Yamagata lineage)

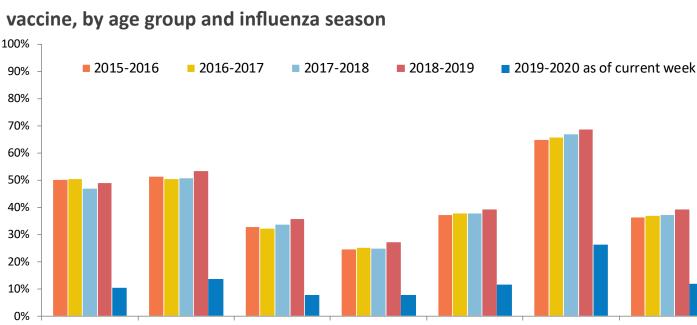
0 years

1 to 4 years

All Ages

## SEASONAL INFLUENZA VACCINATION

Percentage of Wisconsin residents who received one or more doses of influenza



5 to 17 years

Each season includes doses administered during the same time period (August 1 through May 3).

Percentage of Wisconsin residents who received one or more doses of influenza vaccine, by race and ethnicity and region, 2019-2020 influenza season

18 to 49 years

50 to 64 years

65 years plus

