

A summary of influenza surveillance indicators reported to MDH for the week ending March 24, 2018

Prepared by the Infectious Disease Epidemiology and Outbreak Response Bureau Prevention and Health Promotion Administration Maryland Department of Health

The data presented in this document are provisional and subject to change as additional reports are received.

SUMMARY

During the week ending March 24, 2018, influenza-like illness (ILI) intensity in Maryland was MINIMAL and there was WIDESPREAD geographic activity. The proportion of outpatient visits for ILI reported by Sentinel Providers increased slightly. The proportion of outpatient visits for ILI reported by Maryland Emergency Departments remained similar. The proportion of MRITS respondents reporting ILI increased. Clinical laboratories reported an increase in the proportion of specimens testing positive for influenza. Ninety-two specimens tested positive for influenza at the MDH lab. There were 69 influenza-associated hospitalizations. The cumulative season number of influenza-associated deaths among hospitalized adults was 86. Seven respiratory outbreaks were reported to MDH.

ILI Intensity Levels

Minimal

Low

Moderate

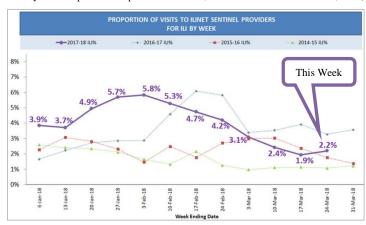
High

Influenza Geographic Activity		
No Activity		
Sporadic		
Local		
Regional		
✓ Widespread		

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ILINet Sentinel Providers

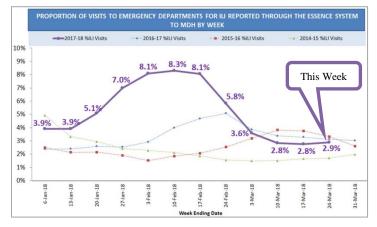
Twenty sentinel providers reported a total of 5,174 visits this week. Of those, 114 (2.2%) were visits for ILI. This is above the Maryland baseline of 2.0%.



ILI Visits To Sentinel Providers By Age Group	This Week Number (%)	Last Week Number (%)	Season Number (%)
Age 0-4	33 (29%)	37 (22%)	1,141 (23%)
Age 5-24	38 (33%)	78 (46%)	2,043 (40%)
Age 25-49	32 (28%)	37 (22%)	1,077 (21%)
Age 50-64	8 (7%)	16 (9%)	545 (11%)
Age ≥ 65	3 (3%)	3 (2%)	252 (5%)
Total	114 (100%)	171 (100%)	5,058 (100%)

Visits to Emergency Departments for ILI

Emergency Departments in Maryland reported a total of 41,252 visits this week through the ESSENCE surveillance system. Of those, 1,197 (2.9%) were visits for ILI.



ILI Visits To Emergency Departments By Age Group	This Week Number (%)	Last Week Number (%)	Season Number (%)
Age 0-4	226 (19%)	223 (19%)	9,345 (24%)
Age 5-24	348 (29%)	371 (31%)	11,048 (28%)
Age 25-49	363 (30%)	351 (29%)	10,092 (26%)
Age 50-64	140 (12%)	153 (13%)	4,895 (12%)
Age ≥ 65	120 (10%)	100 (8%)	3,824 (10%)
Total	1,197 (100%)	1,198 (100%)	39,204 (100%)

Neighboring states' influenza information:

Delaware http://dhss.delaware.gov/dph/epi/influenzahome.html

District of Columbia http://doh.dc.gov/service/influenza

Pennsylvania http://www.health.pa.gov/My%20Health/Diseases%20and%20Conditions/I-L/Pages/Influenza.aspx#.V-LtaPkrJD8

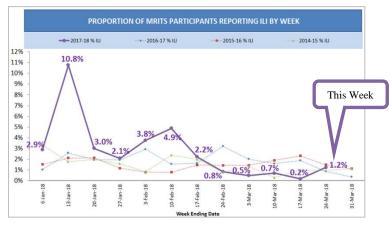
Virginia http://www.vdh.virginia.gov/epidemiology/influenza-flu-in-virginia/influenza-surveillance/

West Virginia http://dhhr.wv.gov/oeps/disease/flu/Pages/fluSurveillance.aspx

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Community-based Influenza Surveillance (MRITS)

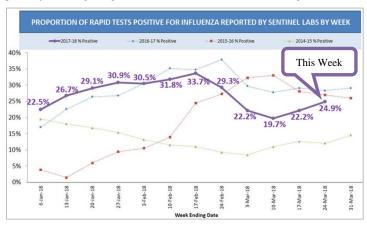
MRITS is the Maryland Resident Influenza Tracking System, a weekly survey for influenza-like illness (ILI). A total of 563 residents responded to the MRITS survey this week. Of those, 7 (1.2%) reported having ILI and missing 11 cumulative day of regular daily activities.



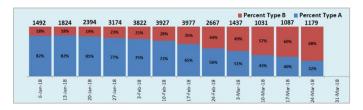
MRITS Respondents Reporting ILI By Age Group	This Week Number (%)	Last Week Number (%)	Season Number (%)
Age 0-4	1	-	7 (3%)
Age 5-24	1 (14%)		76 (32%)
Age 25-49	1 (14%)	1 (100%)	46 (19%)
Age 50-64	5 (71%)	-	82 (35%)
Age ≥ 65	-		26 (11%)
Total	7 (100%)	1 (100%)	237 (100%)

Clinical Laboratory Influenza Testing

There were 54 clinical laboratories reporting 4,737 influenza diagnostic tests, mostly rapid influenza diagnostic tests (RIDTs). Of those, 1,179 (24.9%) were positive for influenza. Of those testing positive, 376 (32%) were influenza Type A and 803 (68%) were influenza Type B. The reliability of RIDTs depends largely on the conditions under which they are used. False-positive (and true-negative) results are more likely to occur when the disease prevalence in the community is low, which is generally at the beginning and end of the influenza season and during the summer.

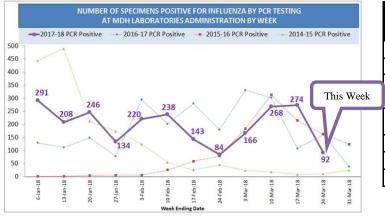


Positive Rapid Flu Tests by Type	This Week Number (%)	Last Week Number (%)	Season Number (%)
Type A	376 (32%)	432 (40%)	20,966 (69%)
Туре В	803 (68%)	655 (60%)	9,635 (31%)
Total	1,179 (100%)	1,087 (100%)	30,601 (100%)



State Laboratories Administration Influenza Testing

The MDH Laboratories Administration performed a total of 109 PCR tests for influenza and 92 (84.4%) were positive for influenza. Of those testing positive, 49 (53.3%) were positive for Type A (H3), 18 (19.6%) were positive for Type A (H1), 15 (16.3%) were positive for Type B (Yamagata), 9 (9.8%) were positive for Type B (Victoria), and there was 1 (1.1%) that were positive for dual Type A(H3)/B. PCR testing is more reliable than RIDT. The MDH testing identifies subtypes of influenza A and lineages of influenza B, information that is not available from the RIDT results. The table below summarizes results by type, subtype, and lineage.

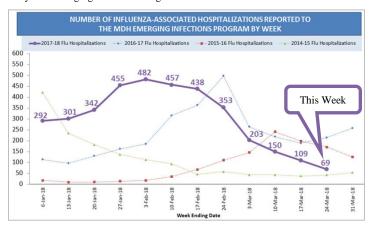


Positive PCR Tests by Type (Subtype)	This Week Number (%)	Last Week Number (%)	Season Number (%)
Type A (H1)	18 (20%)	46 (17%)	483 (18%)
Type A (H3)	49 (53%)	142 (52%)	1,688 (64%)
Type B (Victoria)	9 (10%)	9 (3%)	42 (2%)
Type B (Yamagata)	15 (16%)	75 (27%)	396 (15%)
Dual Type A (H1/H3)	1	1	2 (<1%)
Dual Type A(H3)/B	1 (1%)	2 (1%)	6 (<1%)
Type A (H3N2v)	-	1	3 (<1%)
Total	92 (100%)	274 (100%)	2,620 (100%)

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Influenza-associated Hospitalizations

A total of 69 influenza-associated hospitalizations were reported this week. (A person with an overnight hospital stay along with a positive influenza test of any kind, e.g., RIDT or PCR, is considered an "influenza-associated hospitalization" for purposes of influenza surveillance.) This surveillance is conducted as a component of the Maryland Emerging Infections Program.



Influenza- Associated Hospitalizations by Age Group	This Week Number (%)	Last Week Number (%)	Season Number (%)
Age 0-4	4 (6%)	7 (6%)	261 (6%)
Age 5-17	3 (4%)	8 (7%)	198 (5%)
Age 18-24	2 (3%)	2 (2%)	108 (3%)
Age 25-49	10 (14%)	13 (12%)	520 (12%)
Age 50-64	18 (26%)	20 (18%)	886 (21%)
Age ≥ 65	32 (46%)	59 (54%)	2,191 (53%)
Total	69 (100%)	109 (100%)	4,164 (100%)

Influenza-associated Deaths

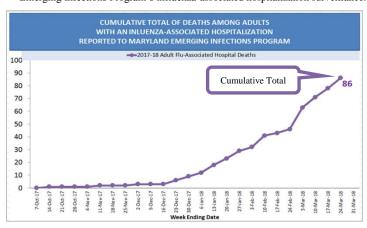
An influenza-associated death is one with a clinically compatible illness and a positive influenza test of any kind.

Pediatric Deaths: The total number of pediatric (< 18 years of age) deaths reported this influenza season is 3.

Influenza-associated pediatric mortality is a reportable condition in Maryland. Pediatric deaths are tracked without regard to hospitalization.

Adult Deaths Among Hospitalized Patients: A total of 86 deaths have been reported among adults admitted to Maryland hospitals this influenza season.

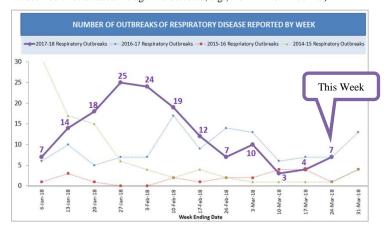
Influenza-associated adult mortality is not a reportable condition in Maryland. However, adult mortality surveillance is conducted as a component of the Maryland Emerging Infections Program's influenza-associated hospitalization surveillance.



Influenza-Associated Deaths	Cumulative Season Total
Pediatric Deaths (Age < 18)	3
Adult Deaths (in hospitalized cases)	86

Outbreaks of Respiratory Disease

There were seven respiratory outbreaks reported to MDH this week. (Disease outbreaks of any kind are reportable in Maryland. Respiratory outbreaks may be reclassified once a causative agent is detected, e.g., from ILI to influenza.)



Respiratory Outbreaks by Type	This Week Number (%)	Last Week Number (%)	Season Number (%)
Influenza	6 (86%)	4 (100%)	135 (79%)
Influenza-like Illness	1 (14%)	1	23 (14%)
Pneumonia		-	12 (7%)
Other Respiratory		1	
Total	7 (100%)	4 (100%)	170 (100%)

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National Influenza Surveillance (CDC)

During week 12 (March 18-24, 2018), influenza activity decreased in the United States.

- Viral Surveillance: Overall, influenza A(H3) viruses have predominated this season. However, in recent weeks the proportion of influenza A viruses has declined, and during week 12, influenza B viruses were more frequently reported than influenza A viruses. The percentage of respiratory specimens testing positive for influenza in clinical laboratories decreased.
- Pneumonia and Influenza Mortality: The proportion of deaths attributed to pneumonia and influenza (P&I) was above the system-specific epidemic threshold in the National Center for Health Statistics (NCHS) Mortality Surveillance System.
- Influenza-associated Pediatric Deaths: Four influenza-associated pediatric deaths were reported.
- Influenza-associated Hospitalizations: A cumulative rate of 96.1 laboratory-confirmed influenza-associated hospitalizations per 100,000 population was reported.
- Outpatient Illness Surveillance: The proportion of outpatient visits for influenza-like illness (ILI) was 2.5%, which is above the national baseline of 2.2%. Nine of 10 regions reported ILI at or above region-specific baseline levels. Four states experienced high ILI activity; eight states experienced moderate ILI activity; New York City, Puerto Rico, the District of Columbia, and 14 states experienced low ILI activity; and 24 states experienced minimal ILI activity.
- Geographic Spread of Influenza: The geographic spread of influenza in Puerto Rico and 16 states was reported as widespread; 22 states reported regional activity; the District of Columbia, Guam and eight states reported local activity; four states reported sporadic activity; and the U.S. Virgin Islands reported no influenza activity.

