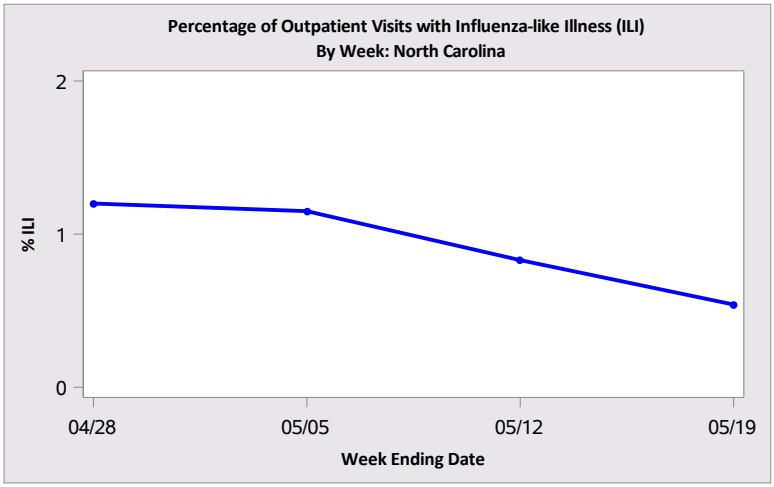
Final Summary 2017-2018

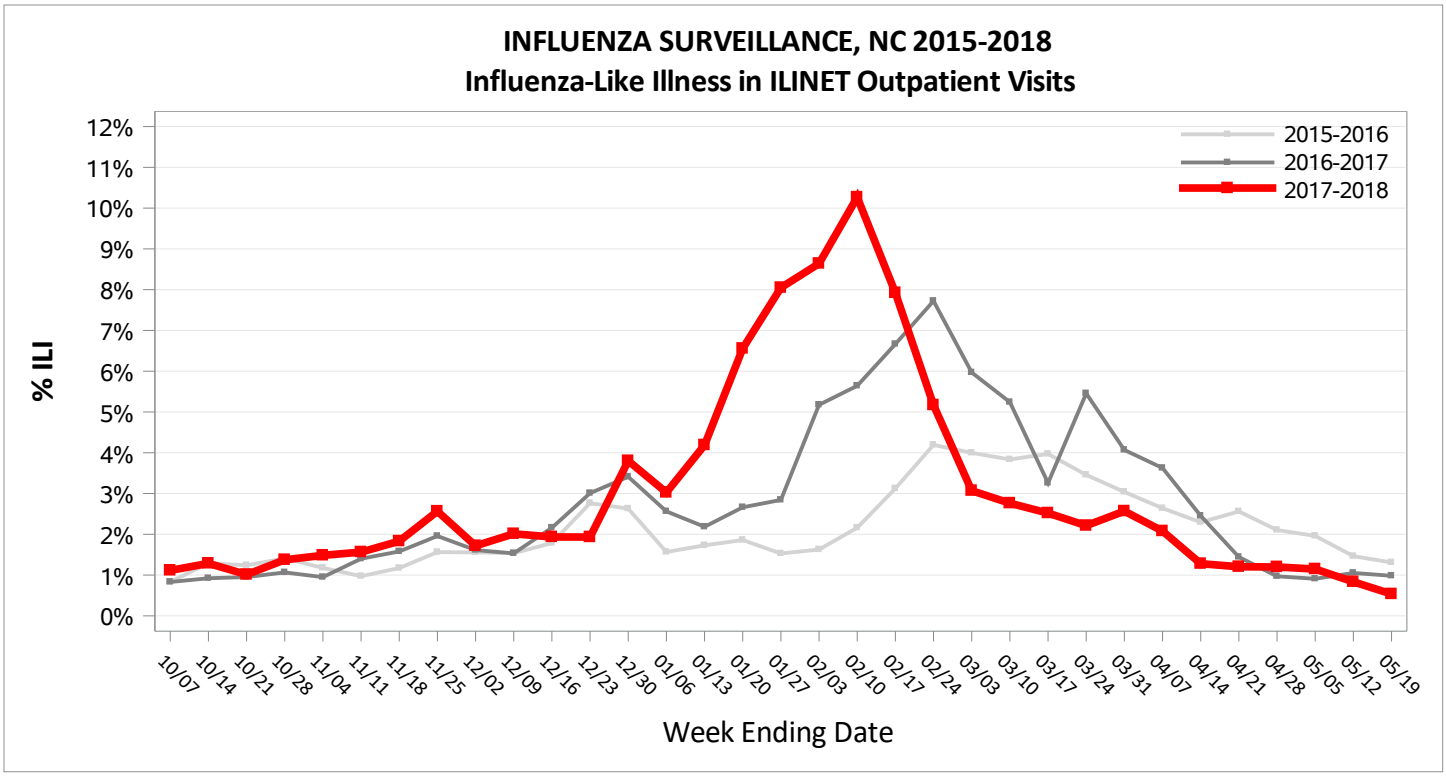
NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY
2017-2018 INFLUENZA SEASON
WEEK 20: ENDING MAY 19, 2018



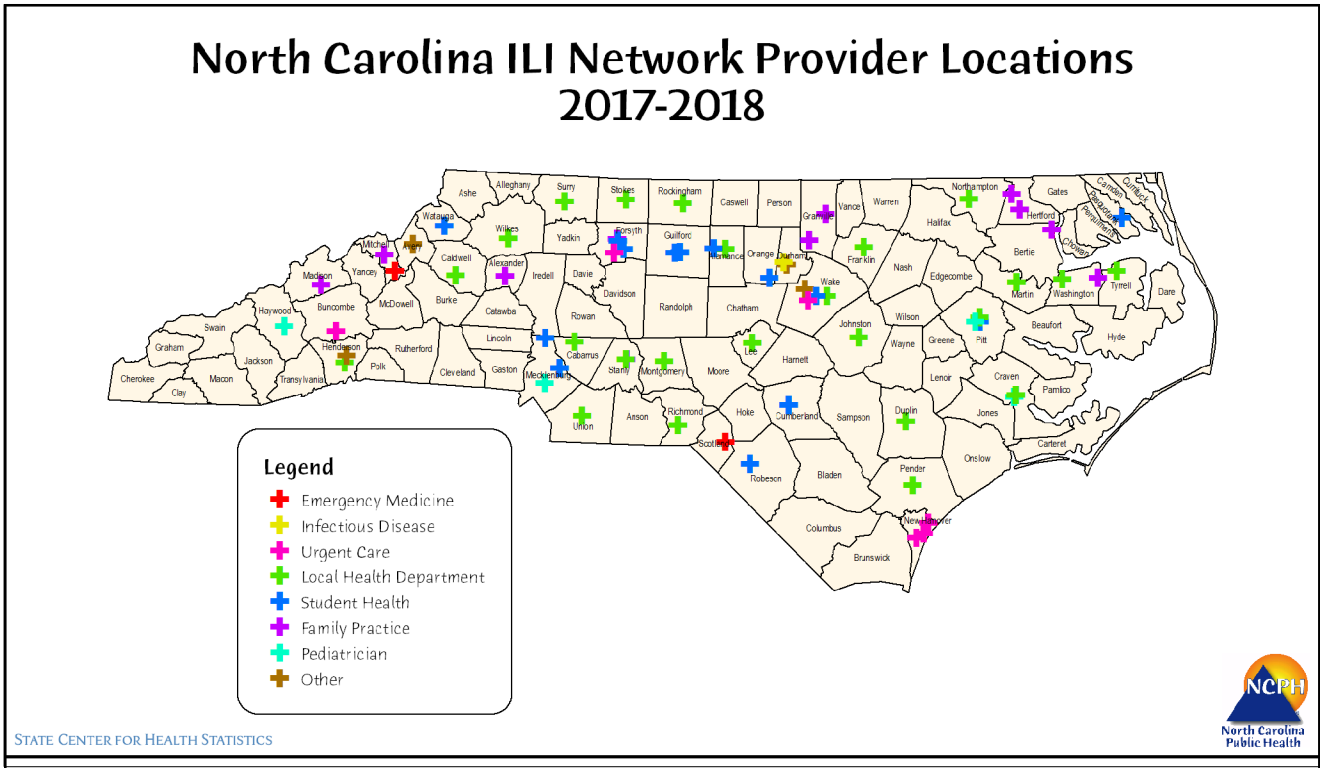
Statewide Updates	Influenza-like illness (ILI) decreased slightly during week 20. The geographic spread of flu was SPORADIC for the week ending 5/19/2018. Of the 4 samples submitted to the State Laboratory of Public Health (SLPH) for viral testing this week, 0 were positive for influenza virus. Hospital-based Public Health Epidemiologists (PHEs) reported 15 positive influenza results out of 354 samples tested during week 20 (ending 5/19/2018); 10 were positive for influenza B virus, 4 were positive for influenza A(unknown) and 1 was positive for influenza A(H1) virus.
Regional Updates	The proportion of visits due to ILI in Region 4 (Southeastern US) was at 1.00% for week 19 (ending 5/12/2018). The baseline for the region is 1.9%.
National Updates	The proportion of outpatient visits due to ILI nationally was at 1.15% for week 19 (ending 5/12/2018). The national baseline for ILI is 2.2%.
International Updates	May 14, 2018 - Influenza activity returned to inter-seasonal levels in most of the countries in the temperate zone of the northern hemisphere except for some countries in Eastern Europe. In the temperate zone of the southern hemisphere, influenza activity increased but remained below the seasonal thresholds. Worldwide, seasonal influenza subtypes A and B accounted for approximately the same proportion of influenza detections. Influenza indicators continued to decrease in Canada and the United States, with influenza A and B viruses predominating, respectively. Influenza like illness (ILI) rate and the proportion of other respiratory viruses increased slightly in Canada. In Mexico, influenza activity was reported as decreased, and respiratory illness indicators returned to inter-seasonal levels. In Europe, influenza activity generally decreased. In Africa, influenza activity decreased across the region with moderate flu virus detections in some countries. In Western and Eastern Asia, low influenza activity returned to inter-seasonal levels. In Northern and Southern Asia influenza activity remained low. In the Caribbean, influenza activity (all seasonal subtypes) continued in several countries while respiratory syncytial virus (RSV) activity was low in the region. In Central American countries, influenza activity remained low. In the temperate zone of the Southern Hemisphere, influenza activity increased slightly in most countries but stayed below thresholds.

INFLUENZA-LIKE ILLNESSES REPORTED BY SENTINEL SITES, 2017-2018

Week # - Ending	(Sentinels Reporting)	# ILI	# Patients	% ILI
#40 - 10/07/2017	44	149	13,369	1.11
#41 - 10/14/2017	47	189	14,695	1.29
#42 - 10/21/2017	47	160	15,803	1.01
#43 - 10/28/2017	48	244	17,751	1.37
#44 - 11/04/2017	49	282	19,014	1.48
#45 - 11/11/2017	51	263	16,822	1.56
#46 - 11/18/2017	51	354	19,329	1.83
#47 - 11/25/2017	50	276	10,764	2.56
#48 - 12/02/2017	51	324	18,856	1.72
#49 - 12/09/2017	49	340	16,903	2.01
#50 - 12/16/2017	49	305	15,768	1.93
#51 - 12/23/2017	47	214	11,074	1.93
#52 - 12/30/2017	45	234	6,155	3.80
#1 - 01/06/2018	47	260	8,593	3.03
#2 - 01/13/2018	47	606	14,469	4.19
#3 - 01/20/2018	47	773	11,790	6.56
#4 - 01/27/2018	50	1616	20,076	8.05
#5 - 02/03/2018	52	1804	20,879	8.64
#6 - 02/10/2018	51	1999	19,470	10.3
#7 - 02/17/2018	51	1445	18,240	7.92
#8 - 02/24/2018	46	832	16,096	5.17
#9 - 03/03/2018	42	462	15,052	3.07
#10 - 03/10/2018	44	347	12,561	2.76
#11 - 03/17/2018	47	361	14,326	2.52
#12 - 03/24/2018	44	337	15,231	2.21
#13 - 03/31/2018	43	361	14,058	2.57
#14 - 04/07/2018	43	265	12,745	2.08
#15 - 04/14/2018	40	196	15,319	1.28
#16 - 04/21/2018	37	172	14,289	1.20
#17 - 04/28/2018	37	176	14,685	1.20
#18 - 05/05/2018	36	152	13,243	1.15
#19 - 05/12/2018	34	93	11,147	0.83
#20 - 05/19/2018	21	26	4,859	0.54



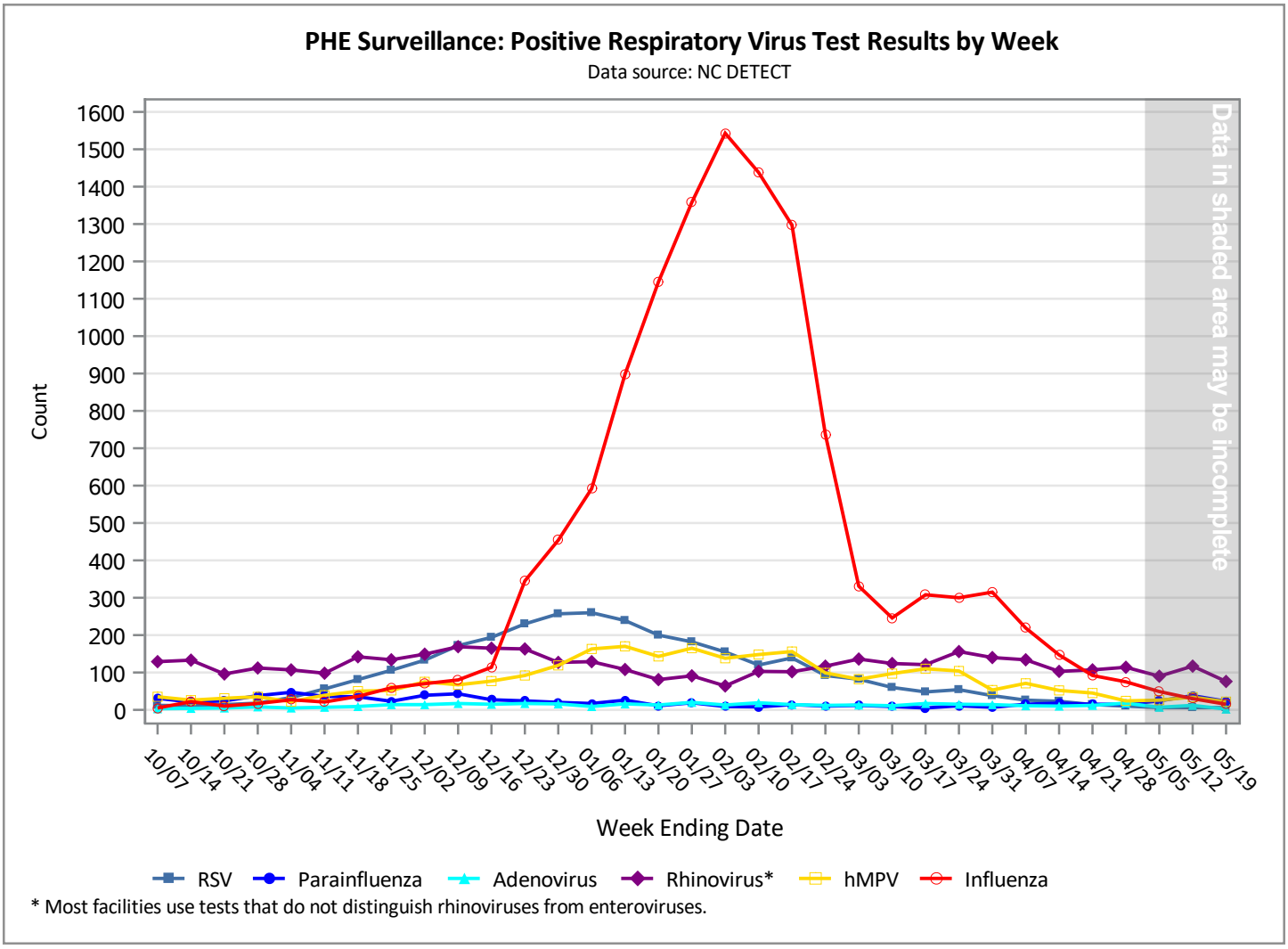
For more information about comparable national data, visit www.cdc.gov/ncidod/diseases/flu/weekly.htm and in particular, click on the link "View Chart Data" below "Percentage of Visits for Influenza-like Illness Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet)".



PHE Respiratory Viral Pathogen Surveillance

Positive test results for selected respiratory viruses are reported on a weekly basis by Public Health Epidemiologists (PHEs) located in seven of the largest hospital networks across North Carolina. The graph below shows the number of positive tests for respiratory syncytial virus (RSV), parainfluenza, adenovirus, rhinovirus, and human metapneumovirus (hMPV) by week.

These data provide a useful indication of which other respiratory viruses are circulating and possibly contributing to ILI in the state. Please note that the total number of tests performed is not available from all hospital networks, so the overall proportion testing positive cannot be calculated. Also, testing protocols and practices differ among hospitals. Finally, these numbers reflect test results from participating hospitals only and might not be reflective of the entire state.



- Rhinovirus* was the most frequently identified respiratory viral pathogen during week 20 (ending 05/19/2018) followed by Parainfluenza.

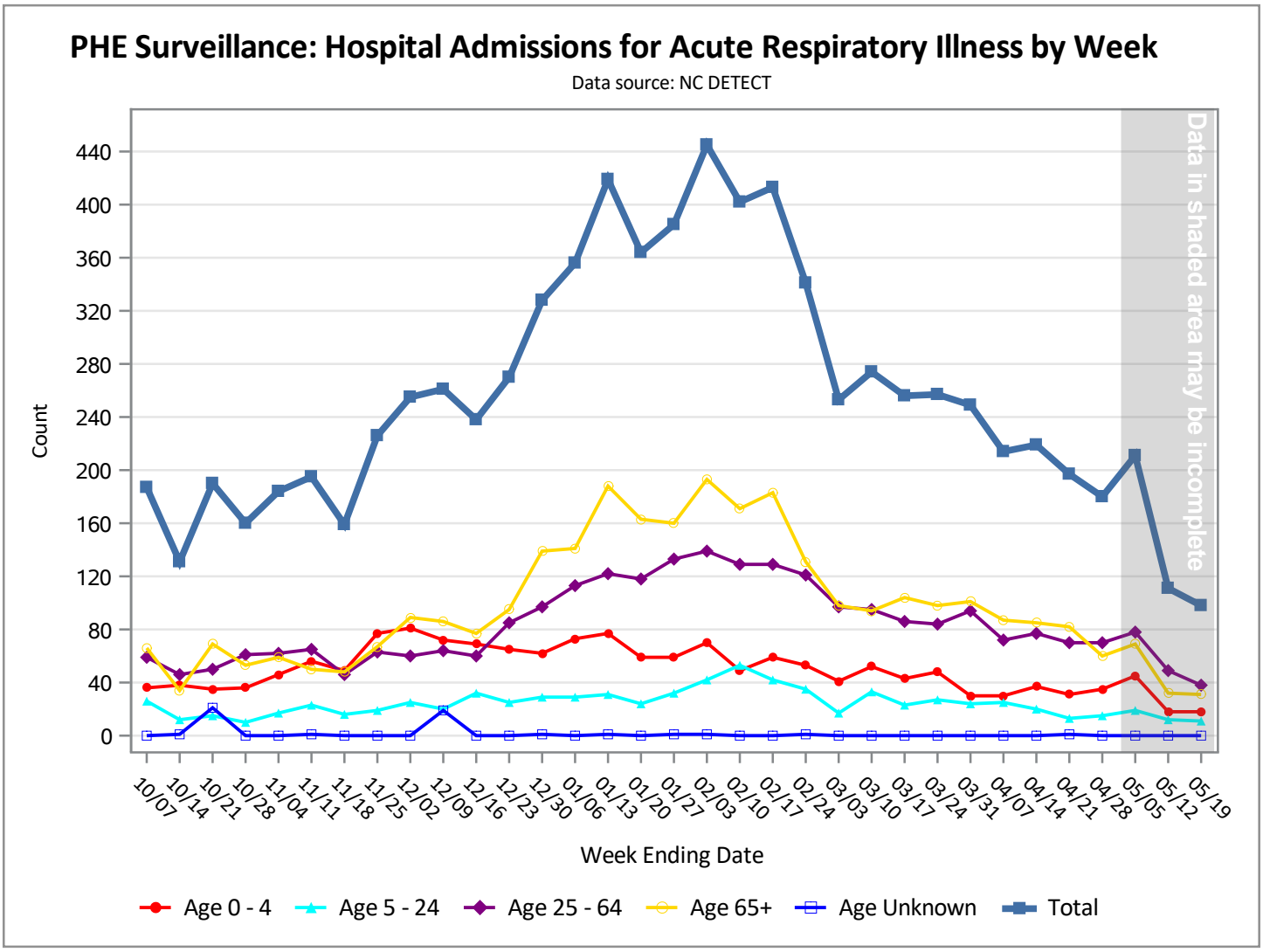
INFLUENZA VIRUS ISOLATES IDENTIFIED BY PHE FACILITIES FOR 2017–2018 SEASON*

Virus Type	# New positive results (5/13/2018-5/19/2018)	# Cumulative positive results (10/1/2017-5/19/2018)
A(H1)	1	546
A/H3	0	1829
A (subtype unknown)	4	6699
B	10	3322
Total	**15**	**12396**

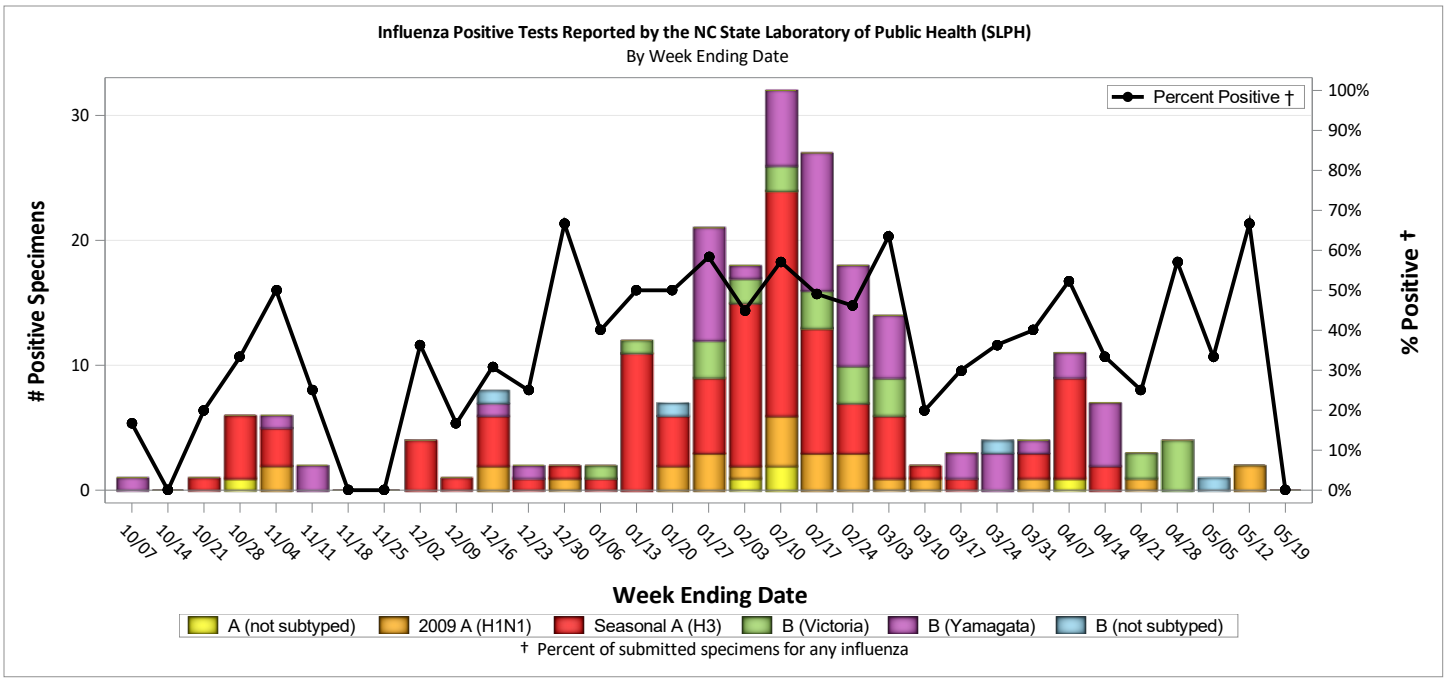
PHE Acute Respiratory Admissions Surveillance

The number of patients admitted to the hospital with fever plus respiratory symptoms in the absence of a known cause other than influenza is reported on a weekly basis by Public Health Epidemiologists (PHEs) located in seven of the largest hospital networks across North Carolina. The graph below shows the number of acute respiratory illness admissions to participating hospitals by age group.

In conjunction with other surveillance information, these data help us monitor for changes in severity of respiratory illness during periods when influenza is circulating. Please note that these reports are not limited to patients with laboratory-confirmed influenza infection. Also, these numbers reflect admissions to participating hospitals only and are not be reflective of the entire state.



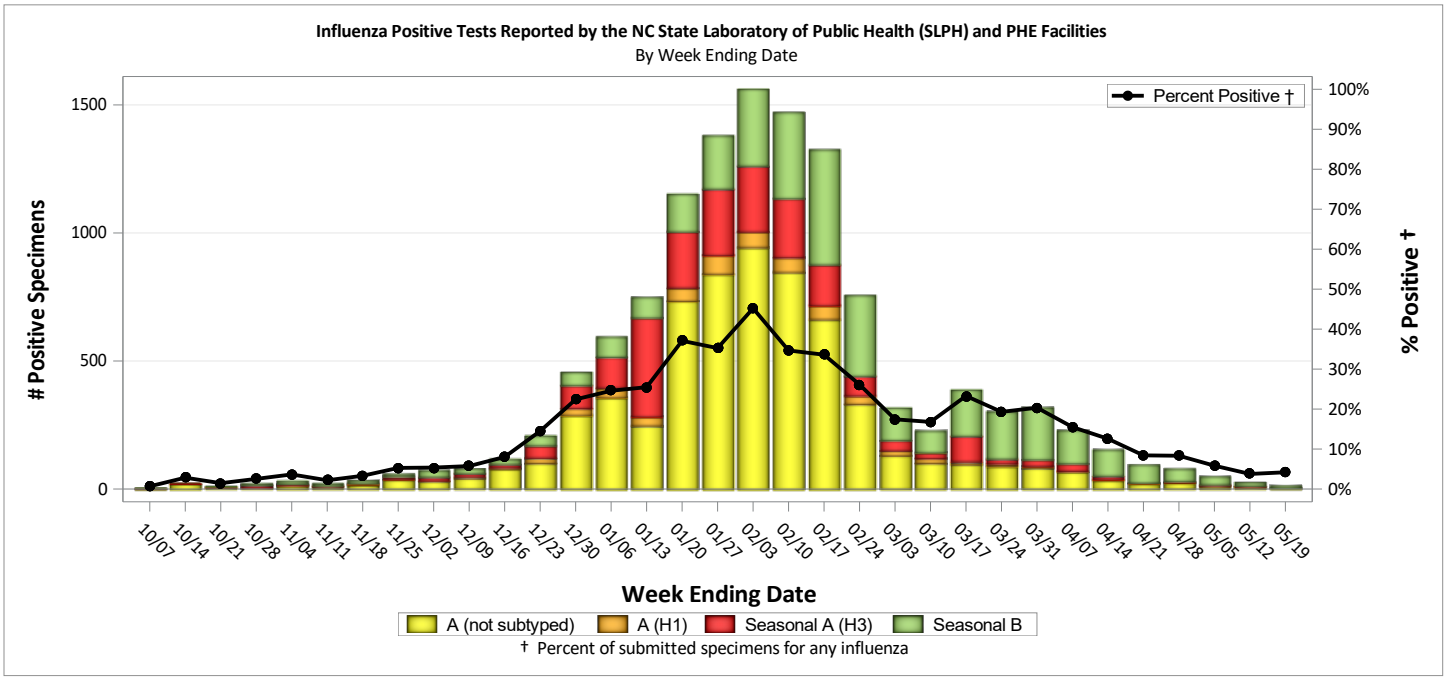
- Acute respiratory admissions decreased during week 20 (ending 05/19/2018).
- The highest number of acute respiratory admissions during week 20 was for patients Age 25 - 64 followed by Age 65+.



INFLUENZA VIRUS ISOLATES FROM IN-STATE PATIENTS IDENTIFIED BY THE STATE LABORATORY OF PUBLIC HEALTH 2017–2018 SEASON*

Virus Type	# New Positive Results (5/13/2018-5/19/2018)	# Cumulative Positive Results (10/1/17 - 5/19/18)
A (unknown)	0	5
2009 A(H1N1)	0	27
A(H3)	0	106
B (unknown)	0	4
B (Victoria)	0	24
B (Yamagata)	0	59
Total	**0**	**225**

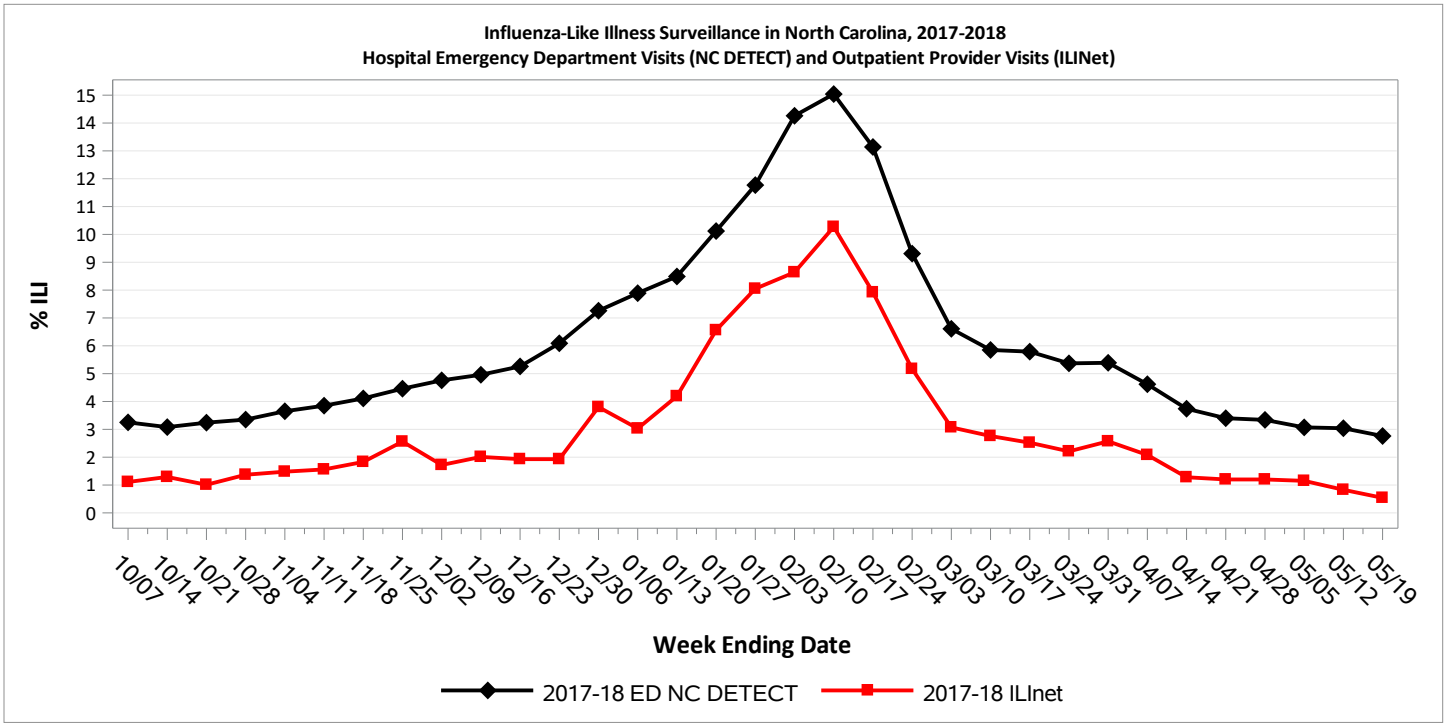
*** 2017-2018 influenza season began October 1, 2017.**
NOTE: This table includes isolates tested as of 10/01/2017
This table does not include influenza isolates identified by other laboratories



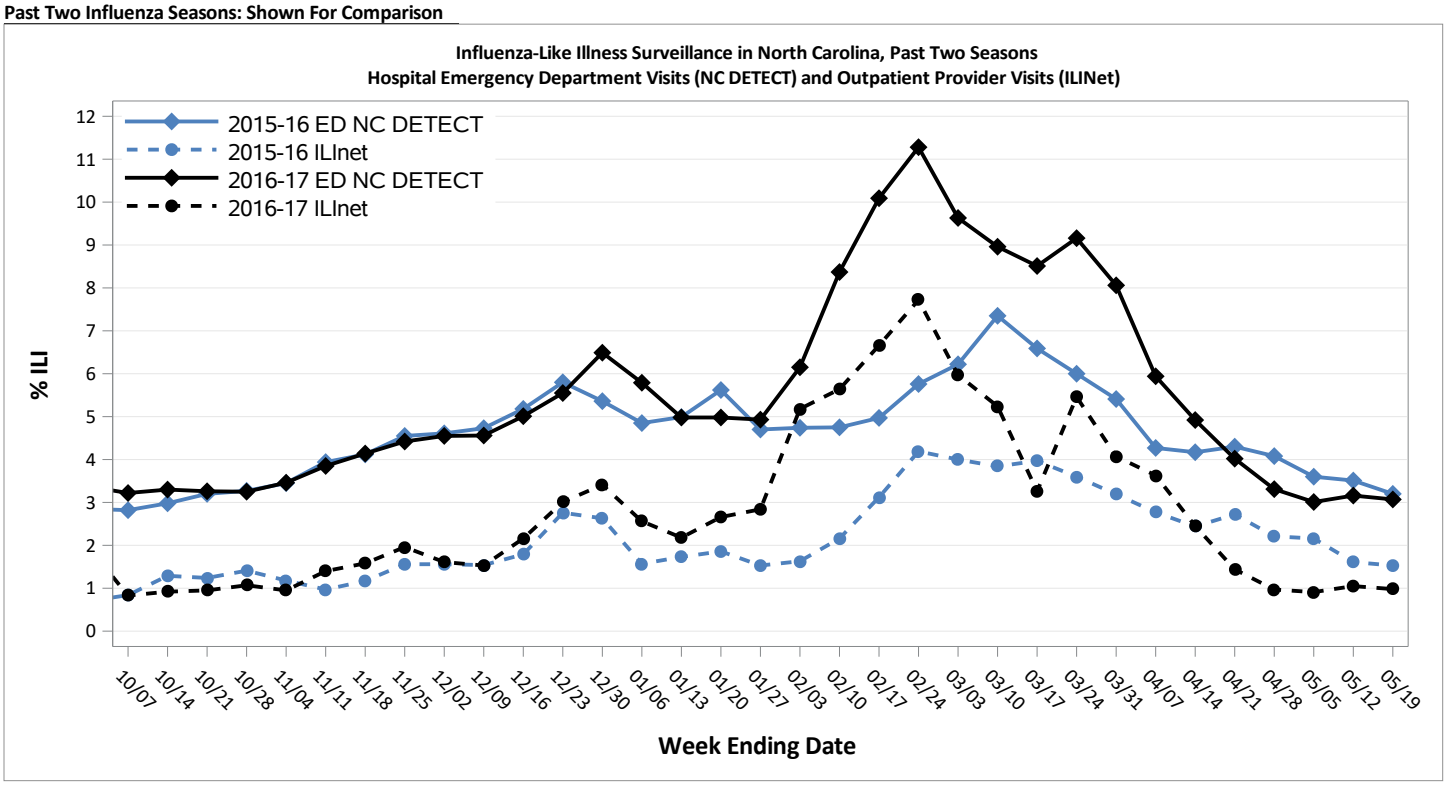
North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) ILI Surveillance

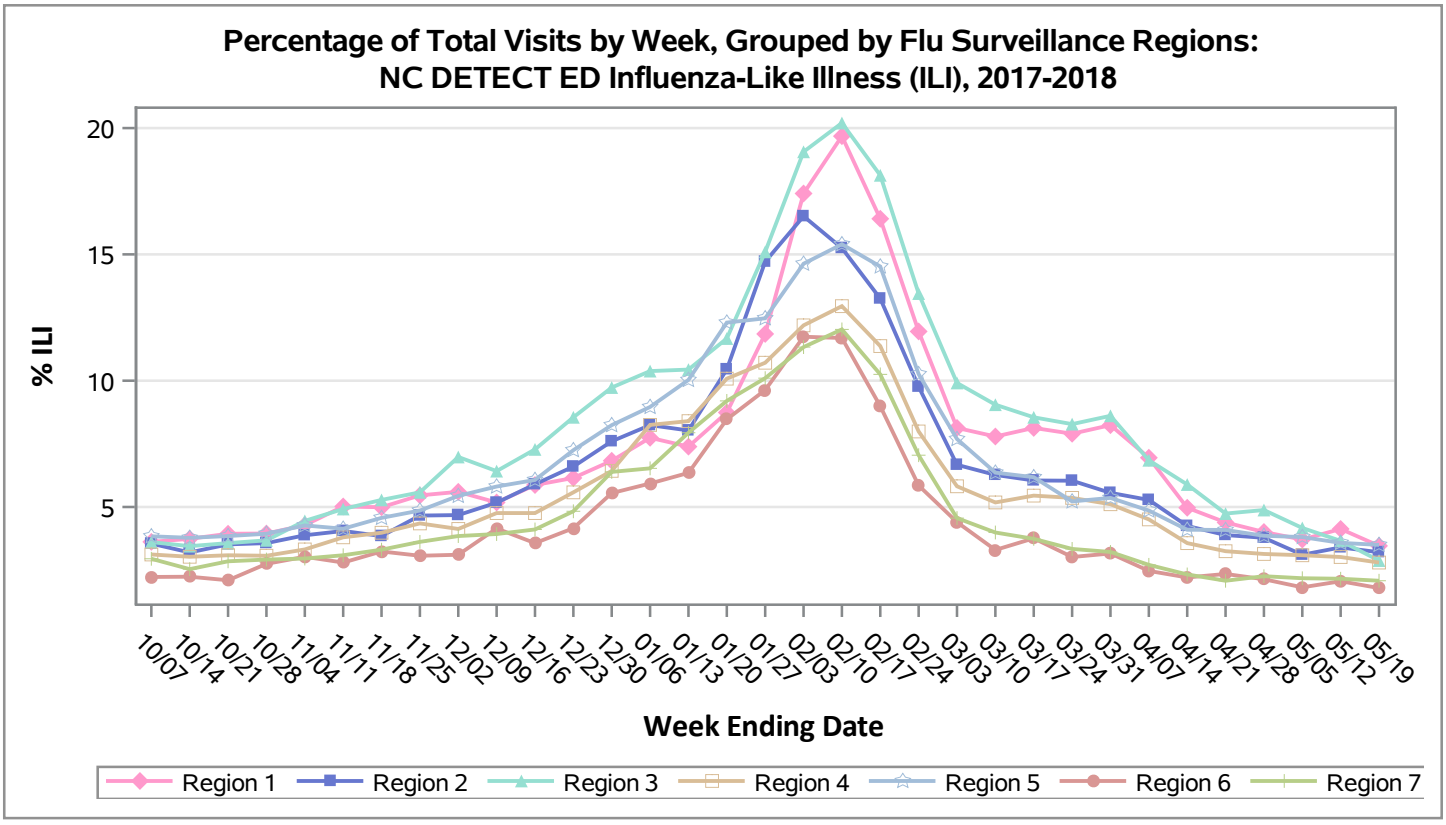
Near real-time syndromic surveillance for ILI is conducted through the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). This system uses a variety of data sources including emergency departments (EDs). NC DETECT is currently receiving data daily from 122 of the 123 24/7 EDs in North Carolina. The NC DETECT ILI syndrome case definition includes any case with the term 'flu' or 'influenza', or at least one fever term and one influenza-related symptom.

The proportion of ED visits meeting the ILI syndrome definition is monitored throughout the year and compared to data obtained from Influenza-like Illness Surveillance Network (ILINet). In past years, data from the two systems have shown similar trends (below). The higher proportion of ILI seen in NC DETECT compared to ILINet reflects differences in the case definitions and patient populations rather than a difference in the sensitivity of these surveillance systems.

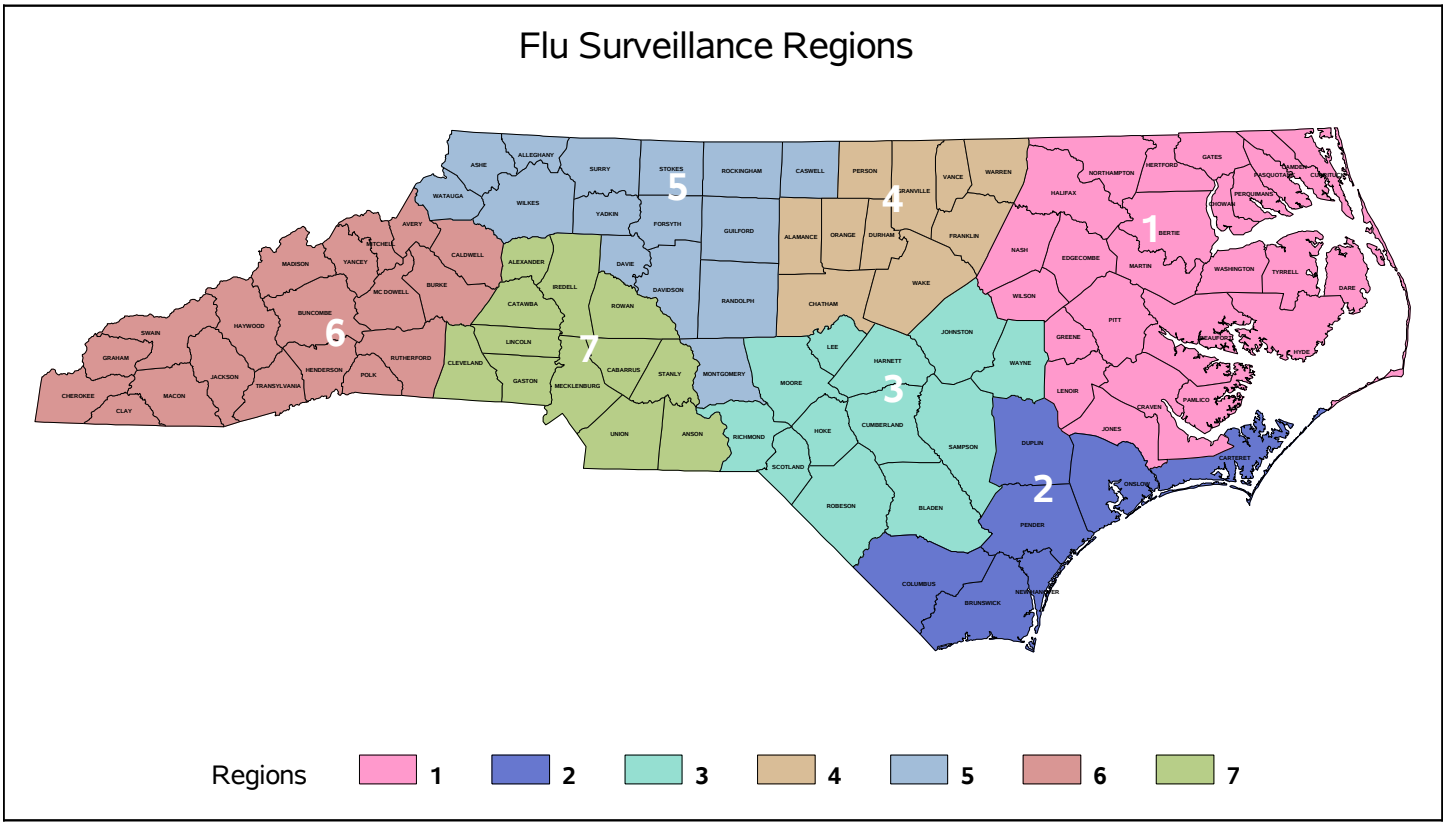


Past Two Influenza Seasons: Shown For Comparison





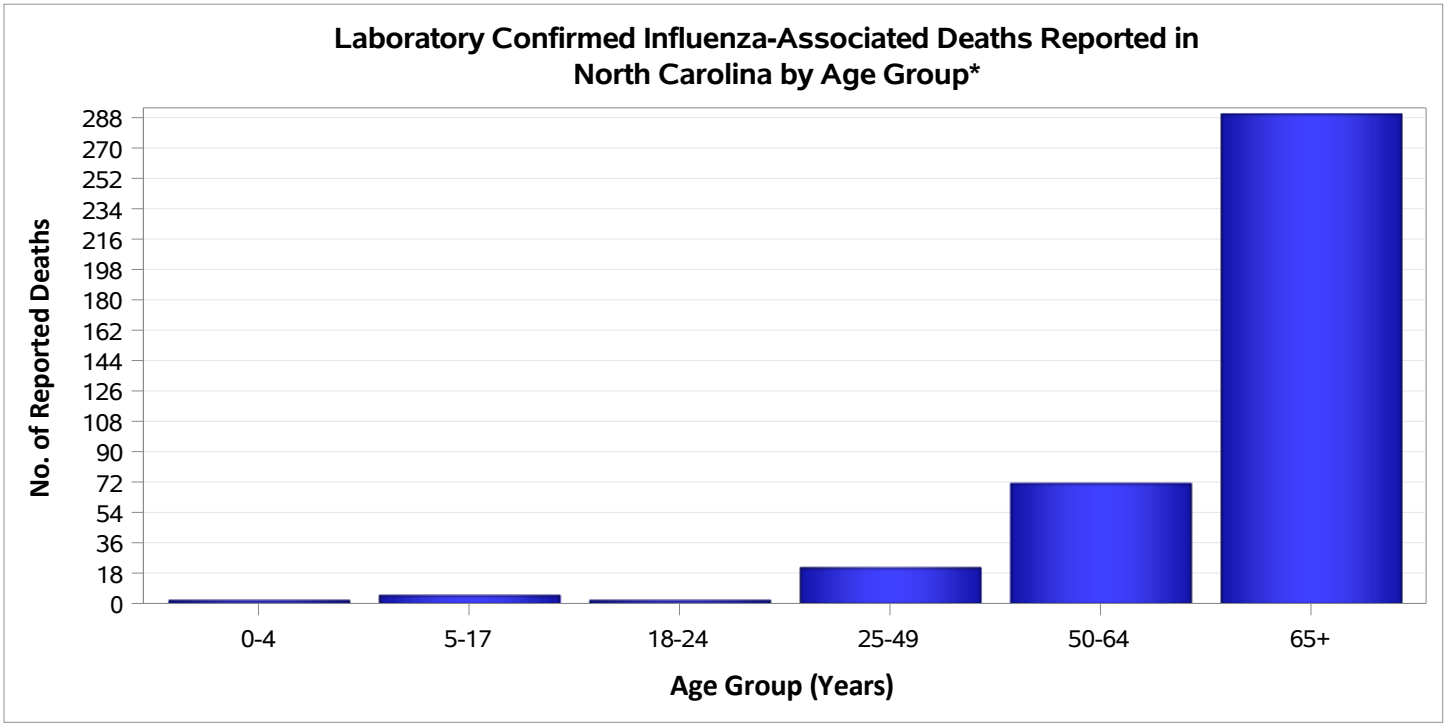
NOTE: This graph begins with data starting week ending October 7, 2017 for the 2017-2018 influenza season.

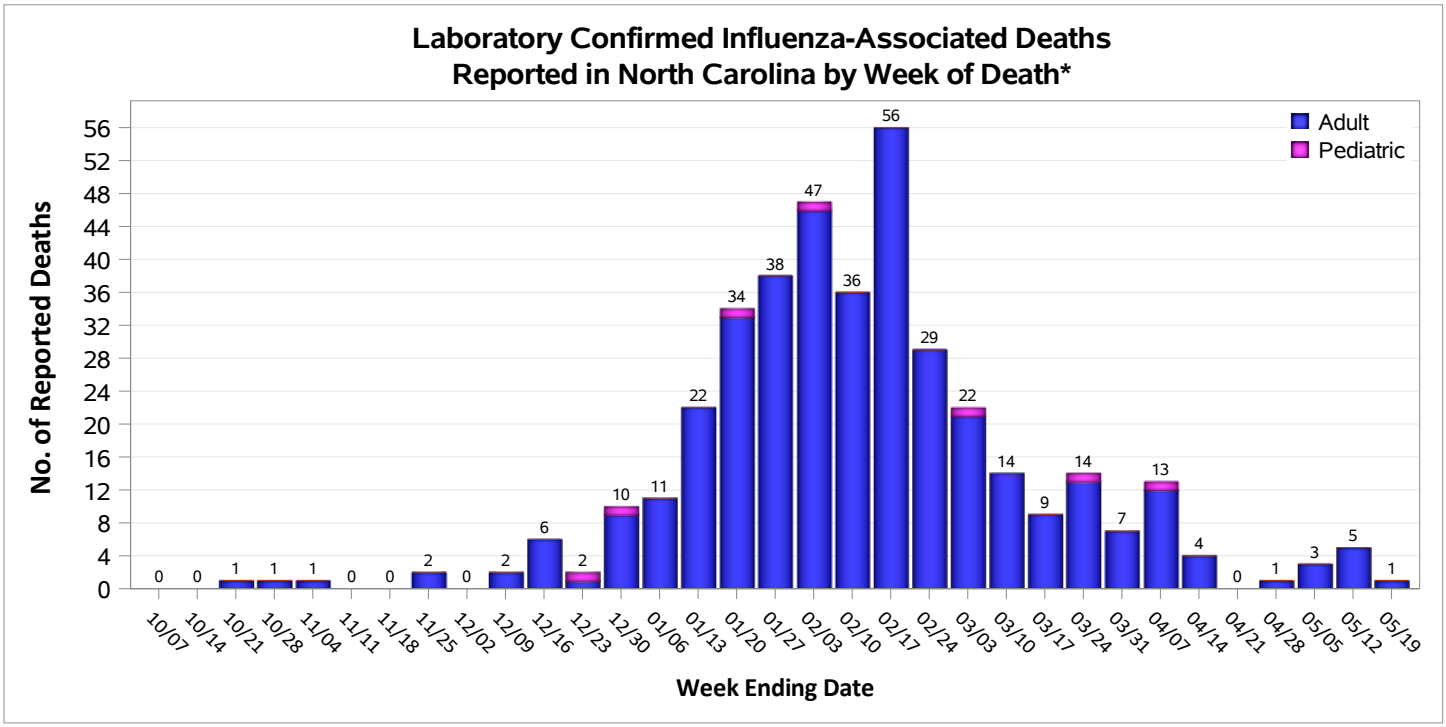


NC Influenza-Associated Deaths*

Influenza-Associated Deaths This Week (05/13/2018 – 05/19/2018)	Total Influenza-Associated Deaths This Season (starting 10/01/2017)
1	391

***Influenza-associated Deaths** – This number is based on reports submitted by providers to the NC Division of Public Health. An influenza-associated death is defined for surveillance purposes as a death (adult or pediatric) resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test with no period of complete recovery between the illness and death. Data are preliminary and subject to change as updated information becomes available. Deaths that occurred on or after 10/01/2017 will be reflected in this report for the 2017-2018 season.





PARTICIPANTS IN NORTH CAROLINA'S INFLUENZA SENTINEL SURVEILLANCE PROGRAM THAT HAVE REPORTED DATA TO CDC

LOCAL HEALTH DEPARTMENT/DISTRICT OFFICES - 22

Alamance County Health Department
Cabarrus Health Alliance
Caldwell County Health Department
Craven County Health Department
Duplin County Health Department
Franklin County Health Department
Henderson County Health Department
Johnston County Health Department
Lee Primary Care
Montgomery County Health Department
Northampton County Health Department
Pender County Health Department
Pitt County Public Health Center
Richmond County Health Department
Rockingham County Health Department
Rowan County Health Department
Stanly County Health Department
Stokes Family Health Center
Surry County Health and Nutrition Center
Union County Health Department
Wake County Health Department, Children's Clinic
Wilkes County Health Department

COLLEGES AND UNIVERSITIES STUDENT HEALTH PROGRAMS - 15

Appalachian State University Student Health Services
Davidson College Student Health Center
ECU Student Health Services
Elizabeth City State University Student Health Services
Elon University R. N. Ellington Health and Counseling Center
Fayetteville State University
Meredith College Student Health Center
NC Agricultural &Technical State University Student Health Services
NC State University Student Health Services
UNC-Chapel Hill Student Health Services
UNC-Charlotte Student Health Services
UNC-Greensboro Student Health Services
UNC-Pembroke Student Health Services
Wake Forest University Student Health Services
Winston-Salem State University

PRIVATE PRACTITIONERS - 24

Bakersville Community Medical Center
Blue Cross and Blue Shield of N.C.
Blue Ridge Community Health Services
Butner-Creedmoor Family Medicine
Coastal Childrens Clinic
Colerain Primary Care
Creswell Primary Care
Dilworth Pediatrics
ECU Brody School of Medicine – Department of Pediatrics
Family Care Center
Haywood Pediatric and Adolescent Medicine Group, PA
Hot Springs Health Program
MEDAC Health Services at Shipyard Blvd.
MEDAC Health Services at Porter's Neck
MEDAC Health Services at Military Cutoff
Minute Clinic - Cary
Murfreesboro Primary Care
Novant Health Urgent Care
Oxford Family Physicians
PrimeCare of Northpoint
Roanoke Chowan Community Health Center
SAS Institute Health Care Center
Sisters of Mercy Urgent Care, South
Stanly Family Care Clinic

HOSPITALS - 3

Blue Ridge Regional Hospital
Durham VAMC
Scotland Healthcare System

Total Sentinels Enrolled - 64

Counties Covered - 42:
Alamance (2), Alexander (1), Bertie (1), Buncombe (1), Cabarrus (1), Caldwell (1), Craven (2), Cumberland (1), Duplin (1), Durham (2), Forsyth (4), Franklin (1), Granville (2), Guilford (2), Haywood (1), Henderson (2), Hertford (2), Johnston (1), Lee (1), Madison (1), Mecklenburg (3), Mitchell (2), Montgomery (1), New Hanover (3), Northampton (1), Orange (1), Pasquotank (1), Pender (1), Pitt (3), Richmond (1), Robeson (1), Rockingham (1), Rowan (1), Scotland (1), Stanly (2), Stokes (1), Surry (1), Union (1), Wake (5), Washington (1), Watauga (1), Wilkes (1)