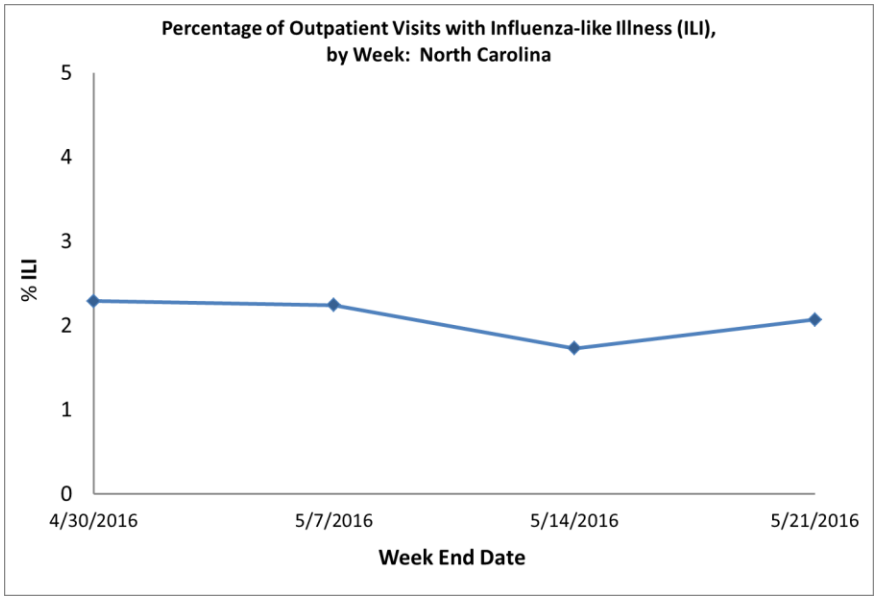
Final Summary 2015–16

NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY #33
2015–16 INFLUENZA SEASON
WEEK 20: ENDING MAY 21, 2016

Statewide Updates

- Influenza-like illness (ILI) increased slightly but remained below baseline during the week ending 5/21/2016.
- The geographic spread of flu was SPORADIC for the week ending 5/21/2016.
- Of the 4 samples submitted to the State Laboratory of Public Health (SLPH) for viral testing the week ending 5/21/2016, 1 was positive for influenza A (H1N1) and 1 was positive for influenza B.



- Hospital-based Public Health Epidemiologists (PHEs) reported 35 positive influenza results out of 474 samples tested during week 20 (ending 5/21/2016); 10 positive for influenza A(H1), 20 positive for influenza B, 4 positive for influenza A(unknown), and 1 positive for influenza A(H3).

Regional Updates

- The proportion of outpatient visits due to ILI in Region 4 (Southeastern US) was slightly above baseline at 1.7% for week 19 (ending 5/14/2016). The baseline for the region is 1.6%.

National Updates

- The proportion of outpatient visits due to ILI nationally was below baseline at 1.4% for week 19 (ending 5/14/2016). The national baseline for ILI is 2.1%.

International Updates: May 16, 2016 – Influenza activity in the northern hemisphere continued to decrease. A predominance of influenza B virus activity continued to be reported in most of the northern hemisphere and in some tropical areas. In a few countries in the southern hemisphere, slight increases in influenza-like illness (ILI) activity were reported.

Flu Information and Guidance	
North Carolina www.flu.nc.gov	CDC http://www.cdc.gov/flu

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INFLUENZA-LIKE ILLNESSES REPORTED BY ILINET SITES, 2015-16

Week # - Ending	(Sentinels Reporting)	# ILI	# Patients	% ILI
#40 - 10/10/2015	48	129	15432	0.84
#41 - 10/17/2015	50	196	15209	1.29
#42 - 10/24/2015	54	220	17735	1.24
#43 - 10/31/2015	52	227	16125	1.41
#44 - 11/07/2015	52	206	17507	1.18
#45 - 11/14/2015	54	163	16766	0.97
#46 - 11/21/2015	55	211	18006	1.17
#47 - 11/28/2015	52	150	9596	1.56
#48 - 12/05/2015	53	268	17215	1.56
#49 - 12/12/2015	49	213	13857	1.54
#50 - 12/19/2015	48	221	12378	1.79
#51 - 12/26/2015	47	187	6766	2.76
#52 - 01/02/2016	46	207	7716	2.68
#1 - 01/09/2016	51	214	13369	1.6
#2 - 01/16/2016	51	243	13713	1.77
#3 - 01/23/2016	50	178	9358	1.9
#4 - 01/30/2016	50	215	13767	1.56
#5 - 02/06/2016	48	235	14237	1.65
#6 - 02/13/2016	49	312	14196	2.2
#7 - 02/20/2016	47	408	12834	3.18
#8 - 02/27/2016	48	663	15466	4.29
#9 - 03/05/2016	47	620	15184	4.08
#10 - 03/12/2016	46	529	13473	3.93
#11 - 03/19/2016	44	519	12709	4.08
#12 - 03/26/2016	42	428	11482	3.73
#13 - 04/02/2016	41	384	11623	3.3
#14 - 04/09/2016	38	327	11520	2.84
#15 - 04/16/2016	37	295	11640	2.53
#16 - 04/23/2016	34	308	10879	2.83
#17 - 04/30/2016	36	264	11530	2.29
#18 - 05/07/2016	30	207	9258	2.24
#19 - 05/14/2016	27	172	9955	1.73
#20 - 05/21/2016	17	74	3573	2.07

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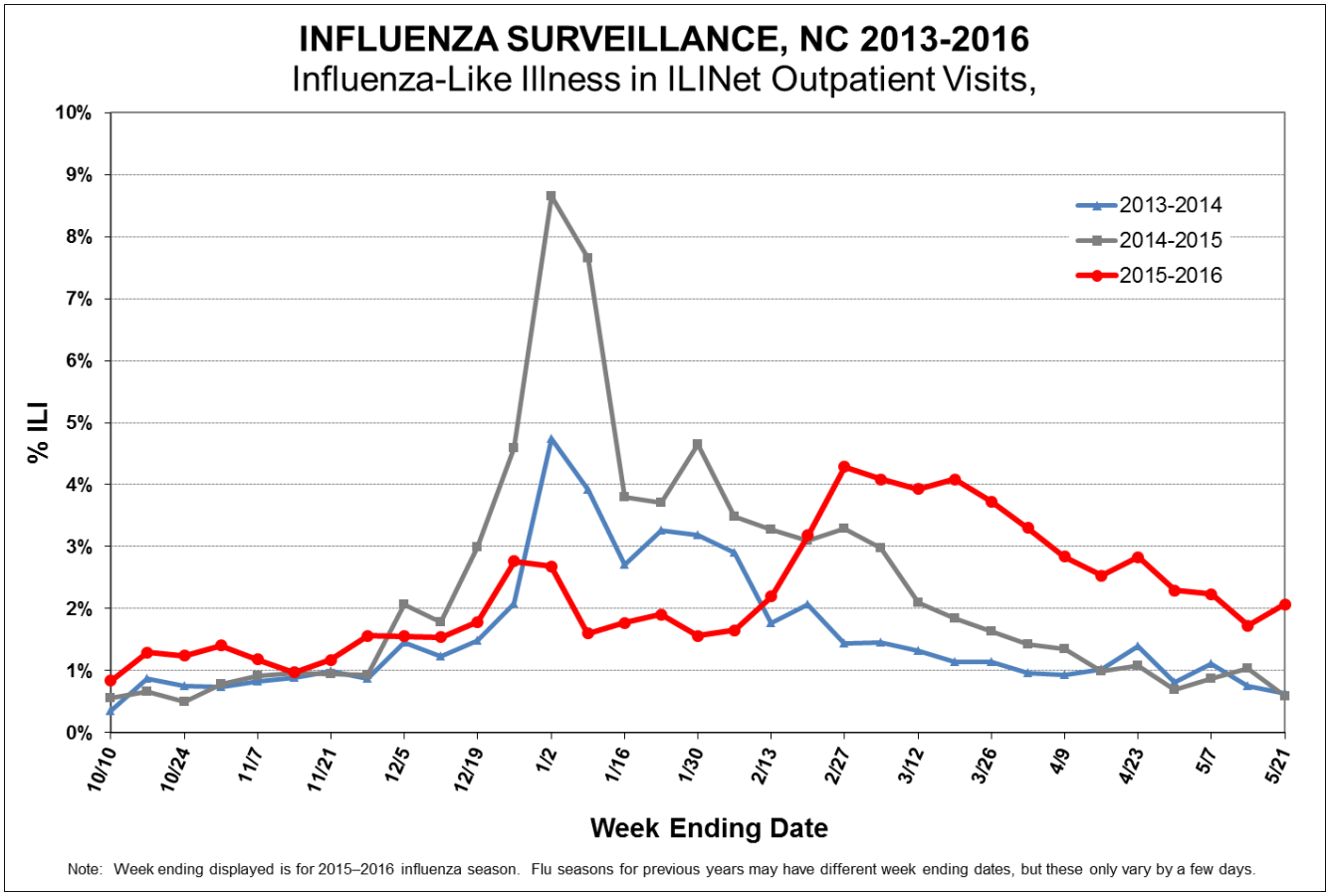
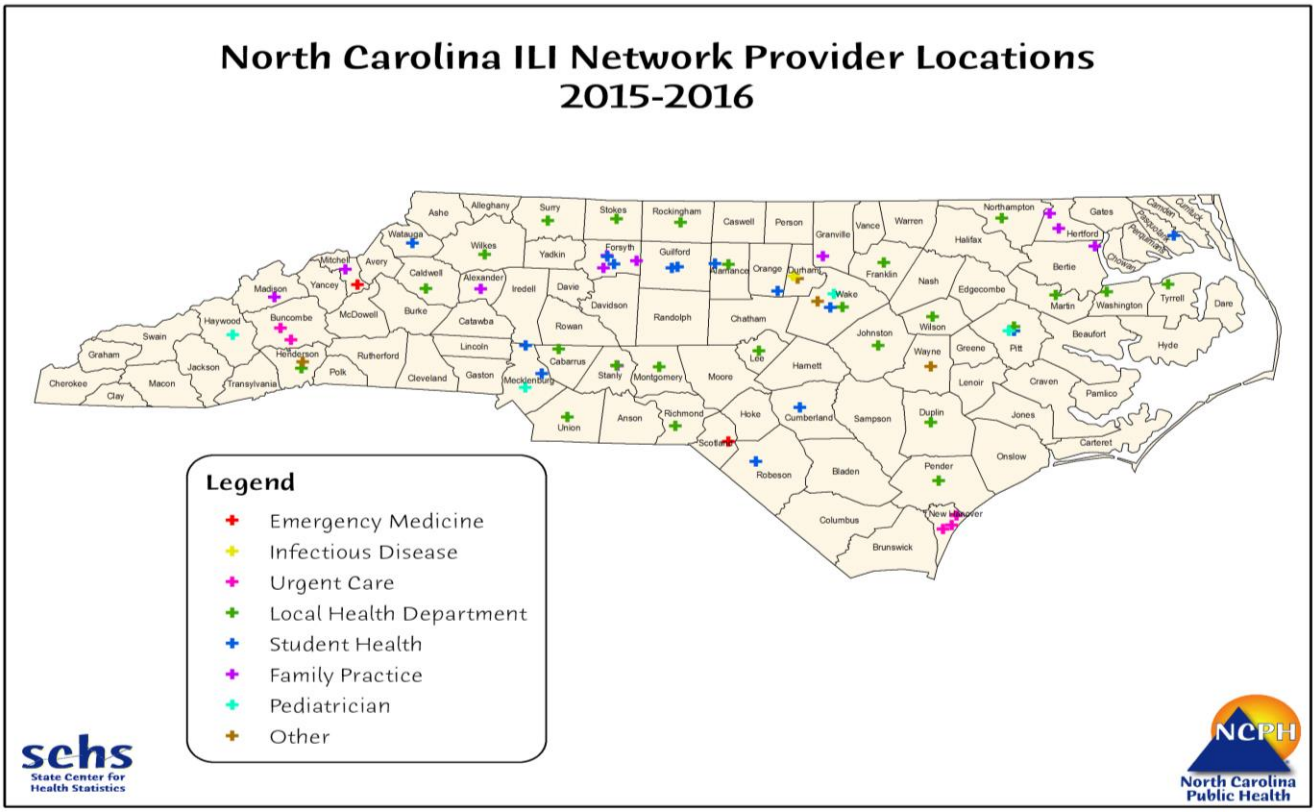


For more information about comparable national data, visit www.cdc.gov/ncidod/diseases/flu/weekly.htm and in particular, click on the link "View Chart Data" below "Percentage of Visits for Influenza-like Illness Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet)".



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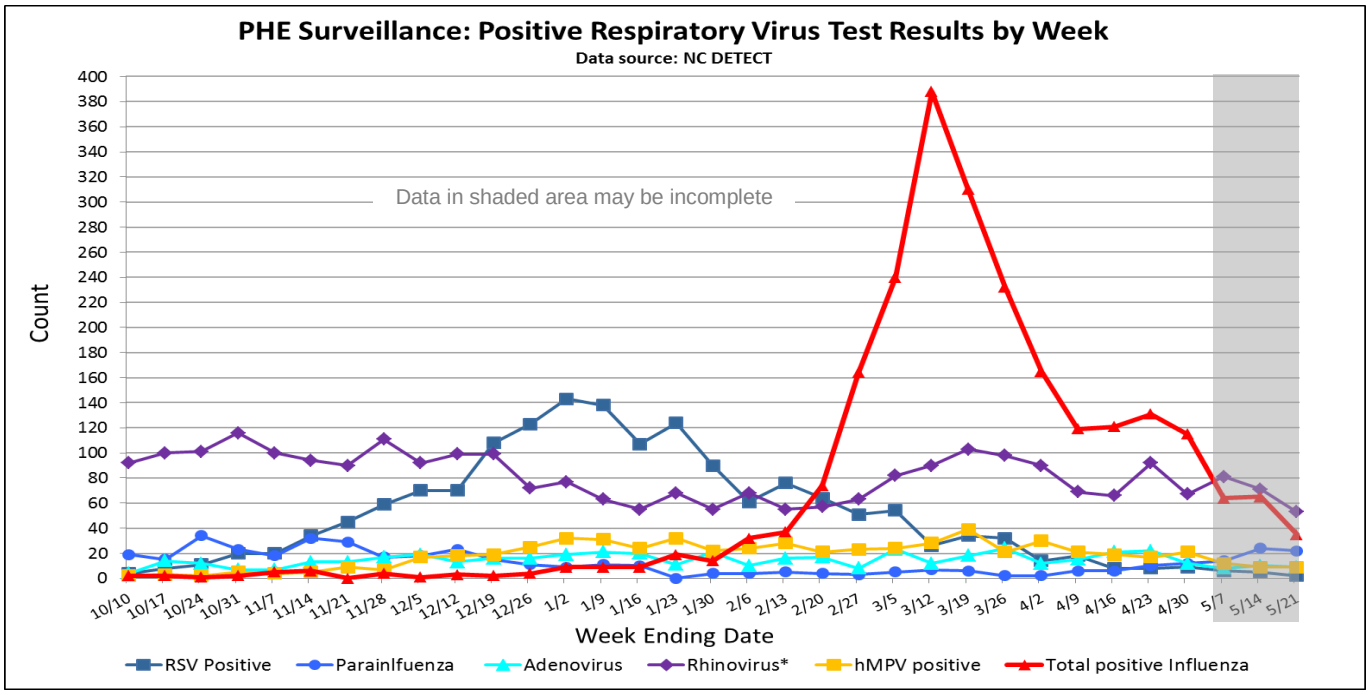
PHE Respiratory Viral Pathogen Surveillance

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.



* Most facilities use tests that do not distinguish rhinoviruses from enteroviruses.

- Rhinoviruses/enteroviruses were the most frequently identified respiratory viral pathogens during week 20 (ending 5/21/2016) followed by influenza.
- Hospital-based Public Health Epidemiologists (PHEs) reported 35 positive influenza results out of 474 samples tested during week 20 (ending 5/21/2016); 10 positive for influenza A(H1), 20 positive for influenza B, 4 positive for influenza A(unknown), and 1 positive for influenza A(H3).

INFLUENZA VIRUS ISOLATES IDENTIFIED BY THE PUBLIC HEALTH EPIDEMIOLOGIST NETWORK FOR THE 2015–2016 SEASON*

Virus Type	# New positive results (5/15/2016-5/21/2016)	# Cumulative positive results (10/4/2015-5/21/2016)
A(H1)	10	1027
A/H3	1	31
A (subtype unknown)	4	697
B	20	621
Total	35	2376

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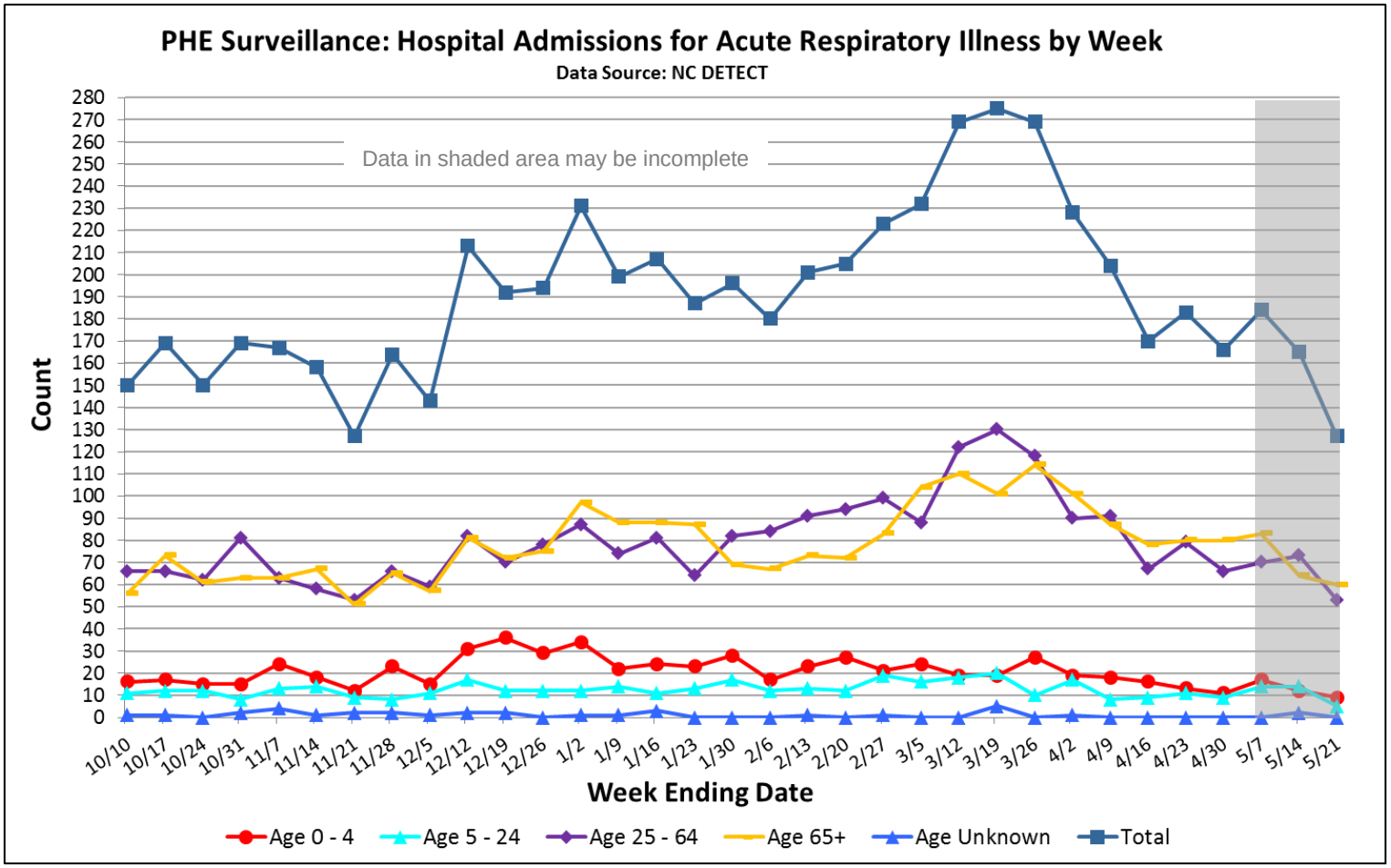
PHE Acute Respiratory Admissions Surveillance

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 might not be reflective of the entire state.

- Acute respiratory admissions decreased during week 20 (ending 5/21/2016).
- The highest number of acute respiratory admissions during week 20 was among patients age 65+ years, followed by patients age 25-64.



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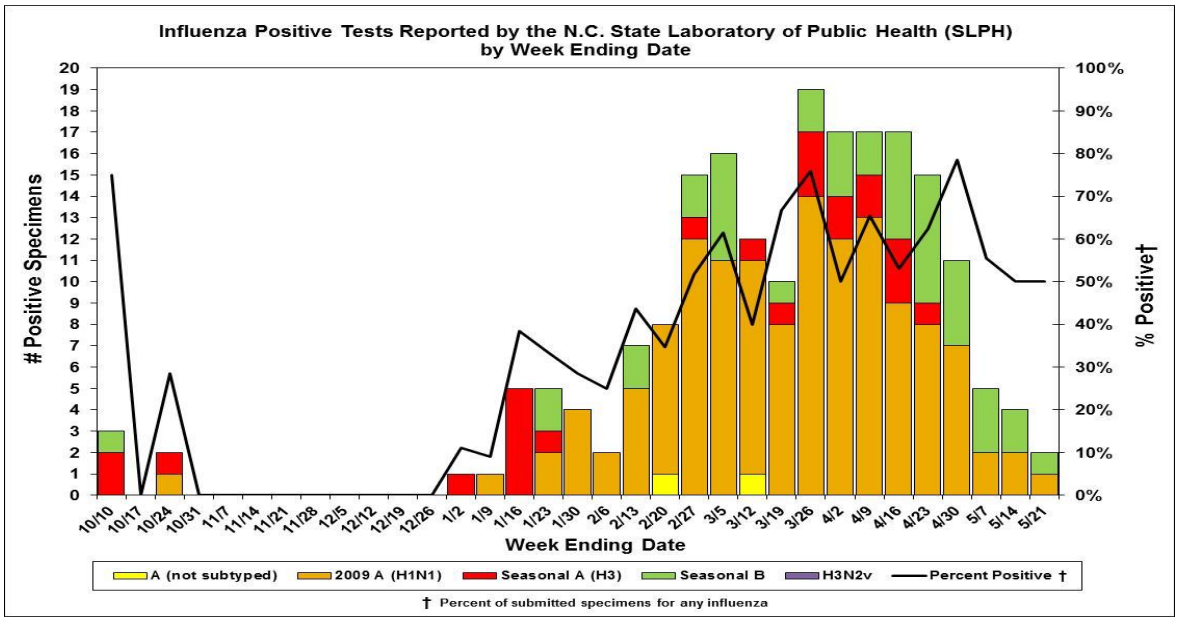
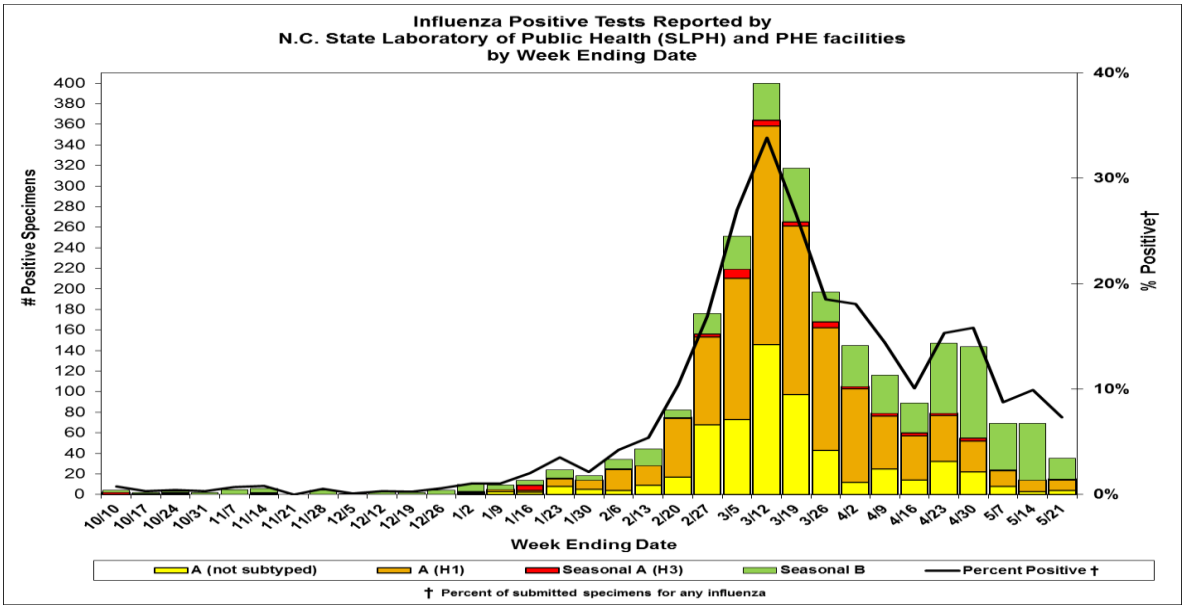
Virologic Surveillance Information from the North Carolina State Laboratory of Public Health



INFLUENZA VIRUS ISOLATES FROM IN-STATE PATIENTS IDENTIFIED BY THE STATE LABORATORY OF PUBLIC HEALTH 2015–2016 SEASON*

Virus Type	# New Positive Results (5/15/16–5/21/16)	# Cumulative Positive Results (10/4/15–5/21/16)
A (subtype unknown)	0	2
2009 A(H1N1)	1	131
A/H3	0	24
A/H3N2v	0	0
B	1	41
Total	2	198

* 2015-2016 influenza season began October 4, 2015.
NOTE: This table includes isolates tested as of 5/14/2016.
This table does not include influenza isolates identified by other laboratories.



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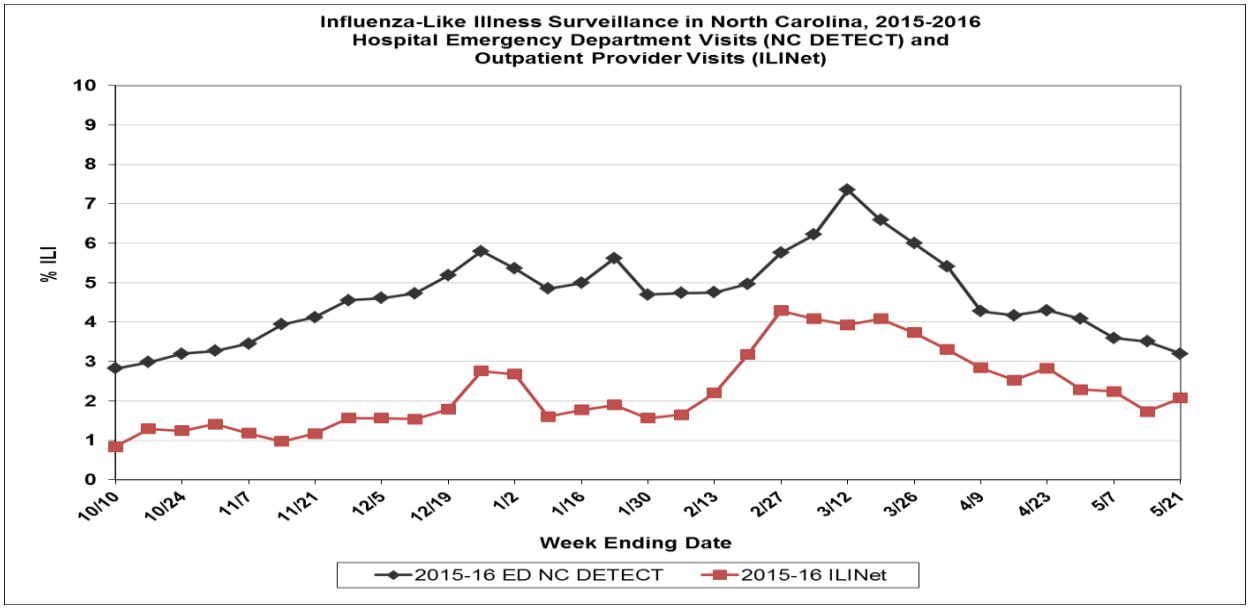
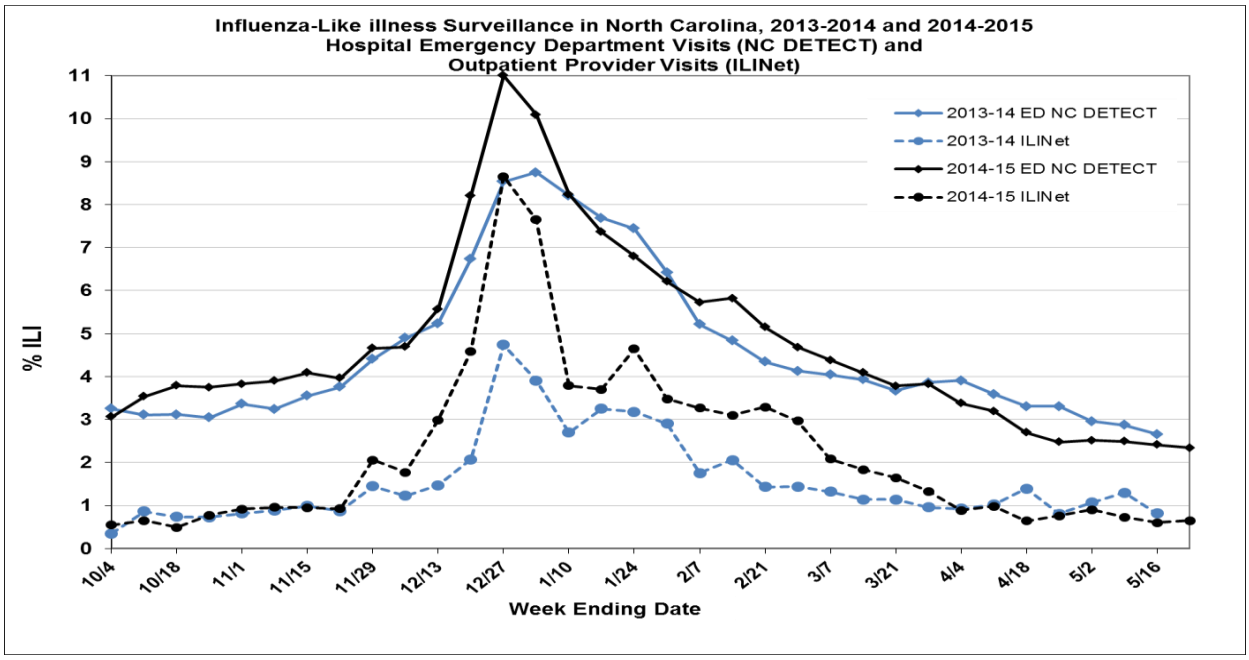
North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) ILI Surveillance

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.



2013-2015 Influenza Seasons: Shown For Comparison



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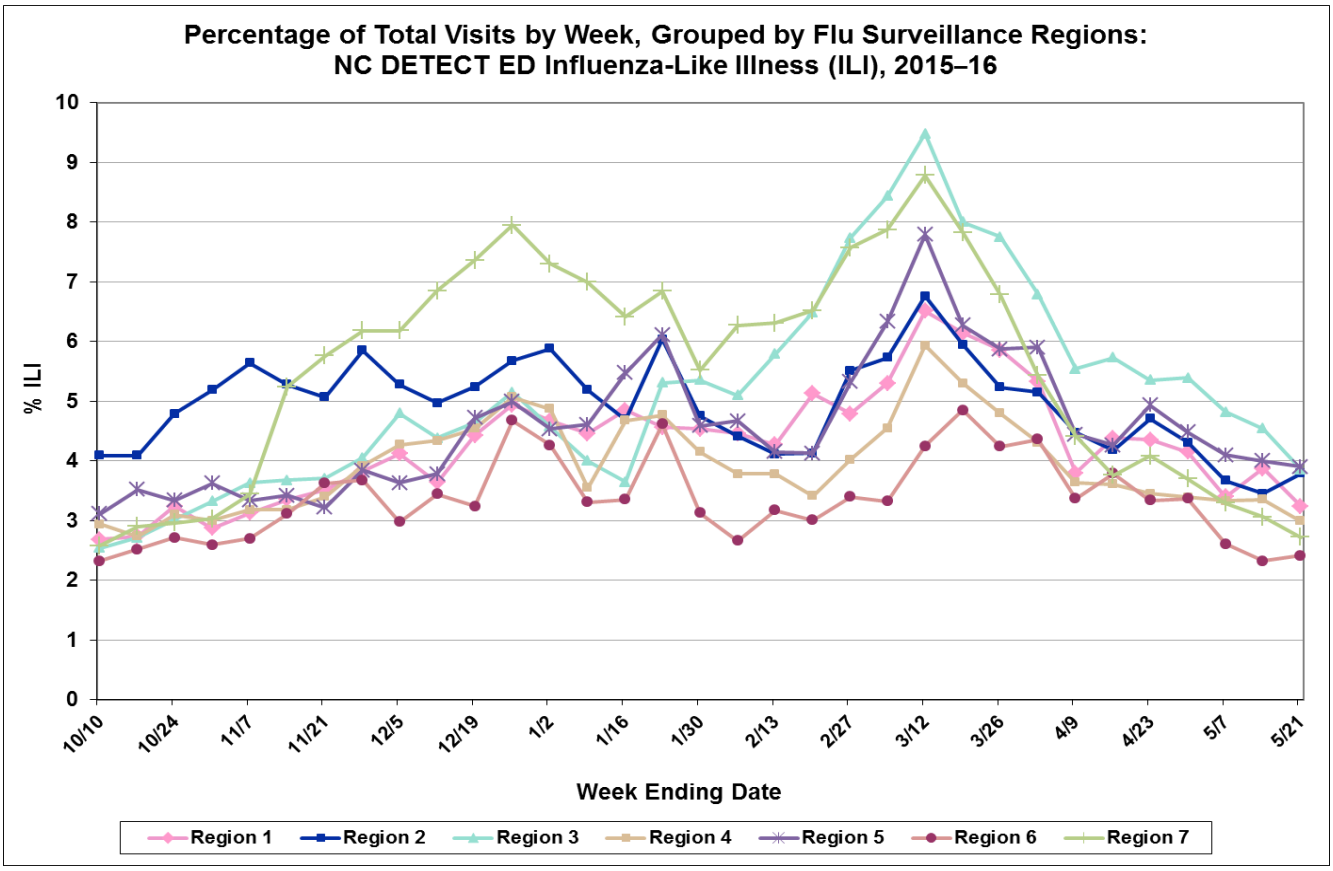
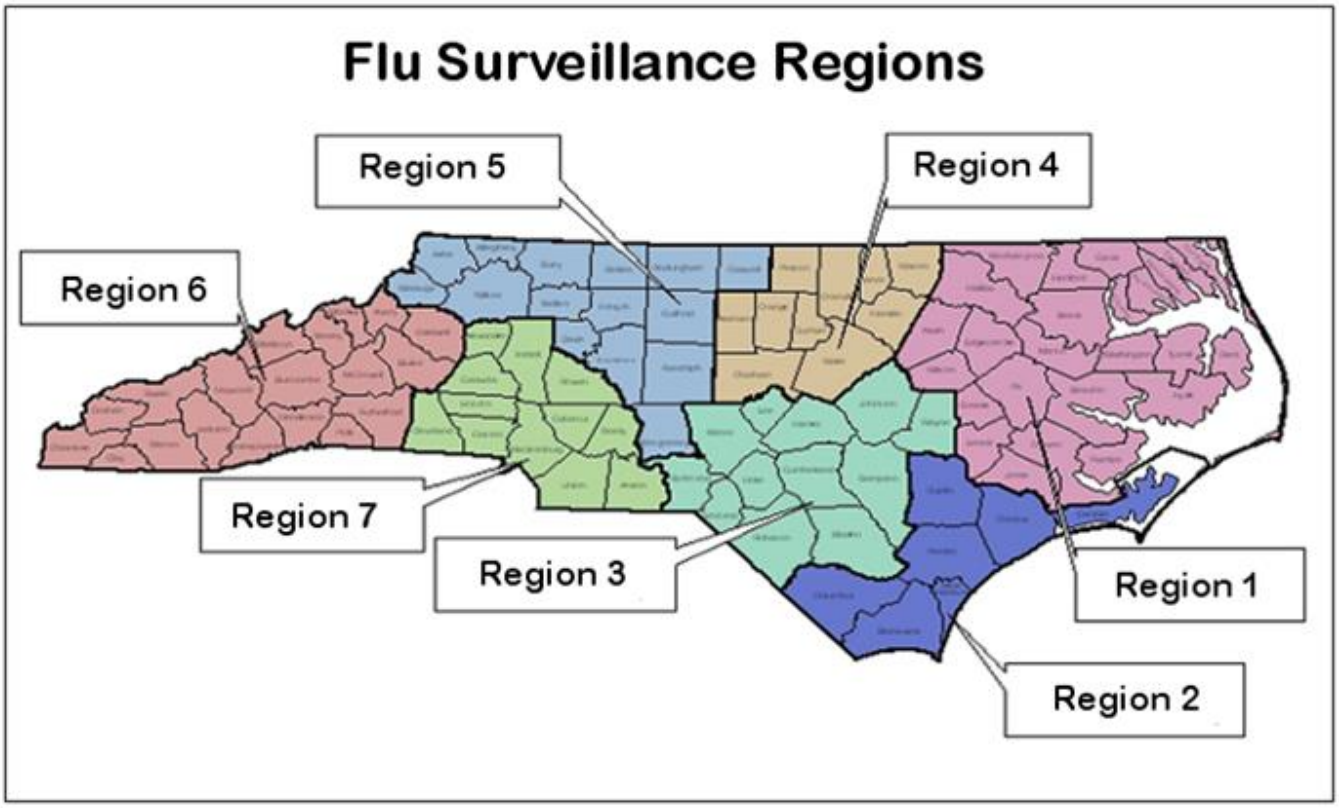


NOTE: This graph begins with data starting week ending October 10, 2015 for the 2015–2016 influenza season.



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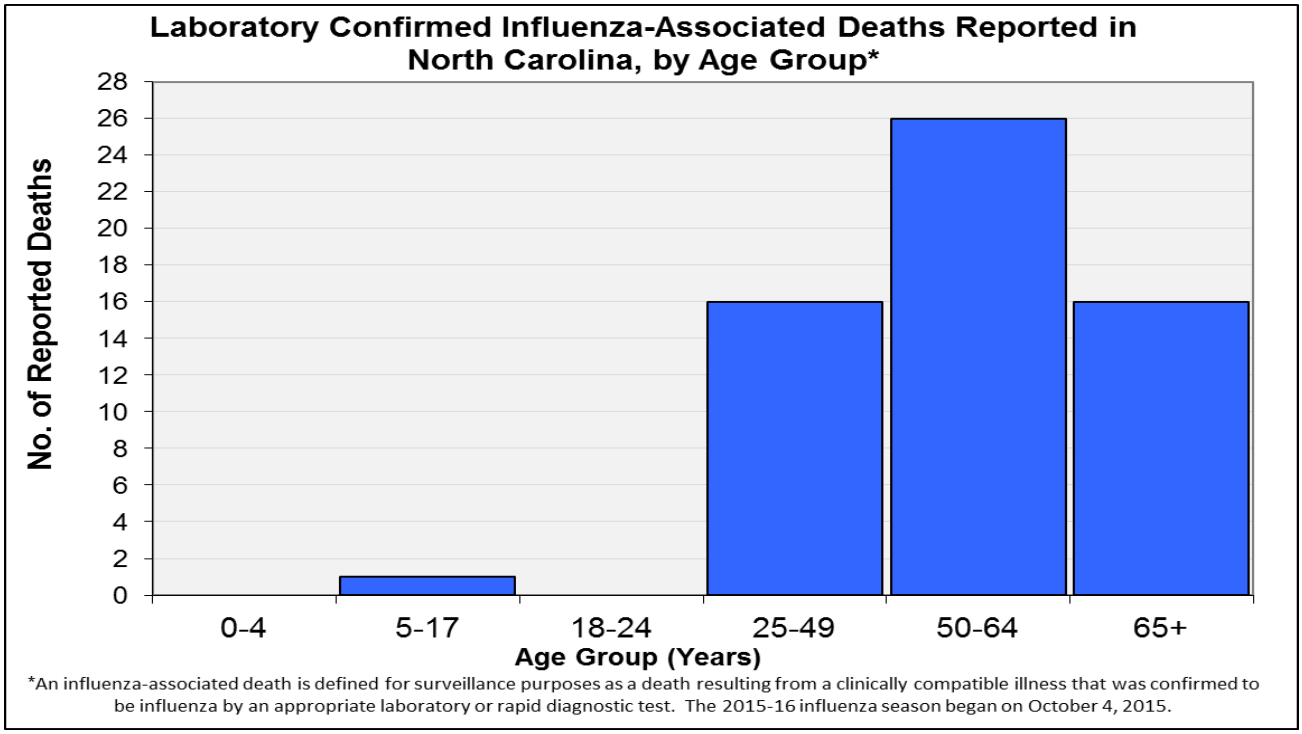
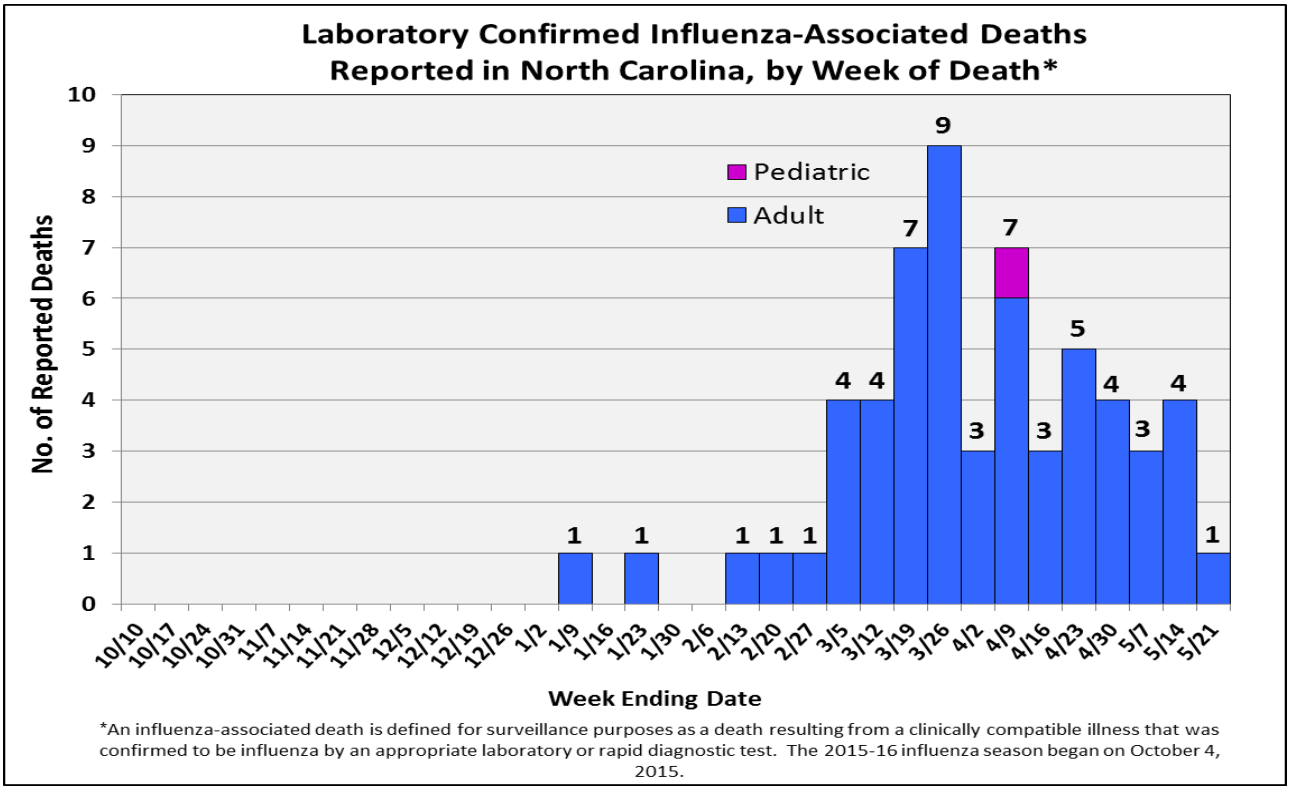
NC Influenza-Associated Deaths*	
Influenza-Associated Deaths 5/15/2016–5/21/2016	**Total Influenza-Associated Deaths Since Week 40 (ending 10/10/15)**
1	**59**

***Influenza-associated Deaths** –This number is based on reports submitted by providers to the North Carolina 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. Deaths that occurred on or after 10/4/2015 will be reflected in this report for the 2015-2016 season.





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

LOCAL HEALTH DEPARTMENT/DISTRICT OFFICES [24]:

Alamance County Health Department (Burlington)
Cabarrus Health Alliance (Kannapolis)
Caldwell County Health Department (Lenoir)
Craven County Health Department (New Bern)
Duplin County Health Department (Kenansville)
Franklin County Health Department (Louisburg)
Henderson County Health Department (Hendersonville)
Johnston County Health Department (Smithfield)
Lee Primary Care (Sanford)
Martin County Office [Martin-Tyrrell-Washington County Health District] (Williamston)
Montgomery County Health Department (Troy)
Northampton County Health Department (Jackson)
Pender County Health Department (Burgaw)
Pitt County Public Health Center (Greenville)
Richmond County Health Department (Rockingham)
Rockingham County Health Department (Wentworth)
Stanly County Health Department (Albemarle)
Stokes Family Health Center (Danbury)
Surry County Health and Nutrition Center (Dobson)
Tyrrell County Office [Martin-Tyrrell-Washington County Health District] (Columbia)
Union County Health Department (Monroe)
Wake County Health Department, Children's Clinic (Raleigh)
Washington County [Martin-Tyrell-Washington County Health District] (Plymouth)
Wilkes County Health Department (Wilkesboro)
Wilson County Health Department (Wilson)

COLLEGES AND UNIVERSITIES STUDENT HEALTH PROGRAMS [14]:

Appalachian State University Student Health Services (Boone; Watauga Co.)
Davidson College Student Health Center (Davidson; Mecklenburg Co.)
ECU Student Health Services (Greenville; Pitt Co.)
Elizabeth City State University Student Health Services (Elizabeth City; Pasquotank Co.)
Elon University R. N. Ellington Health and Counseling Center (Elon; Alamance Co.)
Fayetteville State University (Fayetteville; Cumberland Co.)
NC Agricultural &Technical State University Student Health Services (Greensboro; Guilford Co.)
NC State University Student Health Services (Raleigh; Wake Co.)
UNC-Chapel Hill Student Health Services (Chapel Hill; Orange Co.)
UNC-Charlotte Student Health Services (Charlotte, Mecklenburg Co.)
UNC-Greensboro Student Health Services (Greensboro; Guilford Co.)
UNC-Pembroke Student Health Services (Pembroke; Robeson Co.)
Wake Forest University Student Health Services (Winston-Salem; Forsyth Co.)
Winston-Salem State University (Winston-Salem; Forsyth Co.)

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PRIVATE PRACTITIONERS [24]:

Bakersville Community Medical Center (Bakersville; Mitchell Co.)
Blue Cross and Blue Shield of N.C. (Durham; Durham Co.)
Blue Ridge Community Health Services (Hendersonville; Henderson Co.)
Butner-Creedmoor Family Medicine (Creedmore; Granville Co.)
Colerain Primary Care (Colerain; Bertie Co.)
Dilworth Pediatrics (Charlotte; Mecklenburg Co.)
ECU Brody School of Medicine – Department of Pediatrics (Greenville; Pitt Co.)
Family Care Center (Taylorsville; Alexander Co.)
Growing Child Pediatrics (Raleigh, Wake Co.)
Haywood Pediatric and Adolescent Medicine Group, PA (Clyde; Haywood Co.)
High Country Community Health (Newland; Avery, NC)
Hot Springs Health Program (Marshall; Madison Co.)
MEDAC Health Services at Shipyard Blvd. (Wilmington; New Hanover Co.)
MEDAC Health Services at Porter's Neck (Wilmington; New Hanover Co.)
MEDAC Health Services at Military Cutoff (Wilmington; New Hanover Co.)
Murfreesboro Primary Care (Murfreesboro; Hertford Co.)
Oxford Family Physicians (Oxford; Granville Co.)
PrimeCare (Winston-Salem; Forsyth Co.)
PrimeCare of Kernersville (Kernersville; Forsyth Co.)
PrimeCare of Northpoint (Winston-Salem; Forsyth Co.)
Roanoke Chowan Community Health Center (Ahoskie; Hertford Co.)
SAS Institute Health Care Center (Cary; Wake Co.)
Sisters of Mercy Urgent Care, South (Asheville; Buncombe Co.)
Sisters of Mercy Urgent Care, West (Asheville; Buncombe Co.)
Stanly Family Care Clinic (Albemarle; Stanly Co.)

HOSPITALS [4]:

Blue Ridge Regional Hospital (Spruce Pine; Mitchell Co.)
Durham VAMC (Durham; Durham Co.)
Scotland Healthcare System (Laurinburg, Scotland Co.)

TOTAL SENTINELS ENROLLED – 67

Counties covered (48): Alamance (2), Alexander, Avery, Bertie, Buncombe (2), Cabarrus, Caldwell, Craven, Cumberland, Duplin, Durham (2), Forsyth (5), Franklin, Granville (2), Guilford (2), Haywood, Henderson (2), Hertford (2), Johnston, Lee, Madison, Martin, Mecklenburg (3), Mitchell (2), Montgomery, New Hanover (3), Northampton, Orange, Pasquotank, Pender, Pitt (3), Richmond, Robeson, Rockingham, Scotland, Stanly (2), Stokes, Surry, Tyrrell, Union, Wake (4), Washington, Watauga, Wilkes, Wilson