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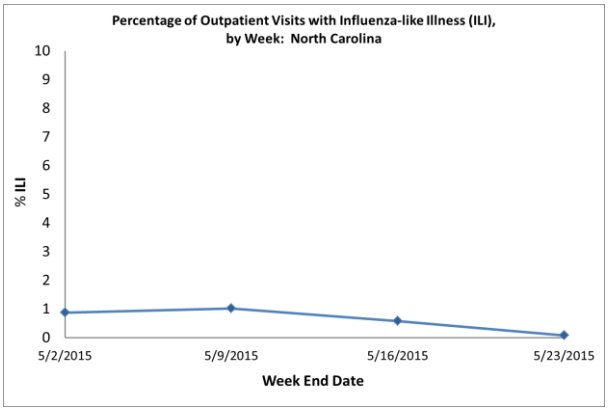
NORTH CAROLINA WEEKLY INFLUENZA SURVEILLANCE SUMMARY #34
2014–15 INFLUENZA SEASON
WEEK 20: ENDING MAY 23, 2015

Statewide Updates



- Influenza-like illness decreased during week 20.
- The geographic spread of flu was NO ACTIVITY for the week ending 5/23/2015.
- Of the 1 sample submitted to the State Laboratory of Public Health (SLPH) for viral testing this week 0 were positive for influenza.
- Hospital-based Public Health Epidemiologists (PHEs) reported 6 positive influenza results out of 246 specimens tested during week 20 (ending 5/23/2015); 1 influenza A (H3), 2 influenza A (H1), and 3 influenza B.

Regional Updates

- The proportion of visits due to ILI was 0.8% for week 19 (ending 5/16/2015). The baseline for the region is 1.9%.

National Updates

- The proportion of outpatient visits due to ILI nationally was 1.3% for week 19 (ending 5/16/2015). The national baseline for ILI is 2.0%.

International Updates: May 18, 2015 – Globally, influenza activity has been low. In the northern hemisphere influenza activity was nearing inter-seasonal levels and in the southern hemisphere influenza activity remained low. Countries in the tropical zones reported low influenza activity with the exception of some countries in tropical Asia and west Africa. In North America, influenza activity is near inter-seasonal levels. In Europe, influenza activity mainly associated with influenza B virus continued to decline in most countries. In northern Africa, influenza activity decreased to almost inter-seasonal levels with mainly influenza B detections. In west Africa, several countries reported increased influenza detections. In western Asia, influenza activity decreased further, with predominantly influenza A(H1N1) detections in recent weeks, especially in Jordan. In the temperate countries of Asia, there was little to no activity throughout the region. In tropical countries of the Americas, influenza activity remained low, with the exception of Guatemala which showed a slight increase in influenza A(H3N2) detections. In tropical Asia, influenza activity was low and continued to decrease in most countries. In the southern hemisphere, influenza activity remained at low or inter-seasonal levels.

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

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INFLUENZA-LIKE ILLNESSES REPORTED BY ILINET SITES, 2014-15				
Week # - Ending	(Sentinels Reporting)	# ILI	# Patients	% ILI
#40 – 10/4/2014	45	82	14730	0.55
#41 – 10/11/2014	49	102	15521	0.65
#42 – 10/18/2014	48	73	14860	0.49
#43 – 10/25/2014	52	133	16890	0.78
#44 – 11/1/2014	53	160	17384	0.92
#45 – 11/8/2014	51	169	17478	0.96
#46 – 11/15/2014	52	154	16174	0.95
#47 – 11/22/2014	52	169	18143	0.93
#48 – 11/29/2014	51	220	10677	2.06
#49 – 12/6/2014	53	314	17663	1.77
#50 – 12/13/2014	54	502	16789	2.99
#51 – 12/20/2014	52	688	14986	4.59
#52- 12/27/2014	50	695	9080	7.65
#53 – 1/3/2015	50	695	9080	7.65
#1 – 1/10/2015	52	567	14954	3.79
#2 – 1/17/2015	50	592	15974	3.7
#3 – 1/24/2015	51	703	15127	4.64
#4 – 1/31/2015	50	603	17323	3.48
#5 – 2/7/2015	54	592	18056	3.27
#6 – 2/14/215	47	478	15406	3.1
#7 – 2/21/2015	48	408	12378	3.29
#8 – 2/28/2015	46	363	12222	2.97
#9 – 3/7/2015	49	344	16465	2.08
#10 – 3/14/2015	45	227	12321	1.84
#11 – 3/21/2015	47	269	16414	1.63
#12 – 3/28/2015	42	213	14972	1.42
#13 – 4/4/2015	44	183	13595	1.34
#14 – 4/11/2015	39	130	13220	0.98
#15 – 4/18/2015	37	134	12336	1.08
#16 – 4/25/2015	39	93	13323	0.69
#17 – 5/2/2015	32	92	10543	0.87
#18 – 5/9/2015	34	107	10407	1.02
#19 – 5/16/2015	27	36	6187	0.58
#20 – 5/23/2015	17	4	4559	0.08

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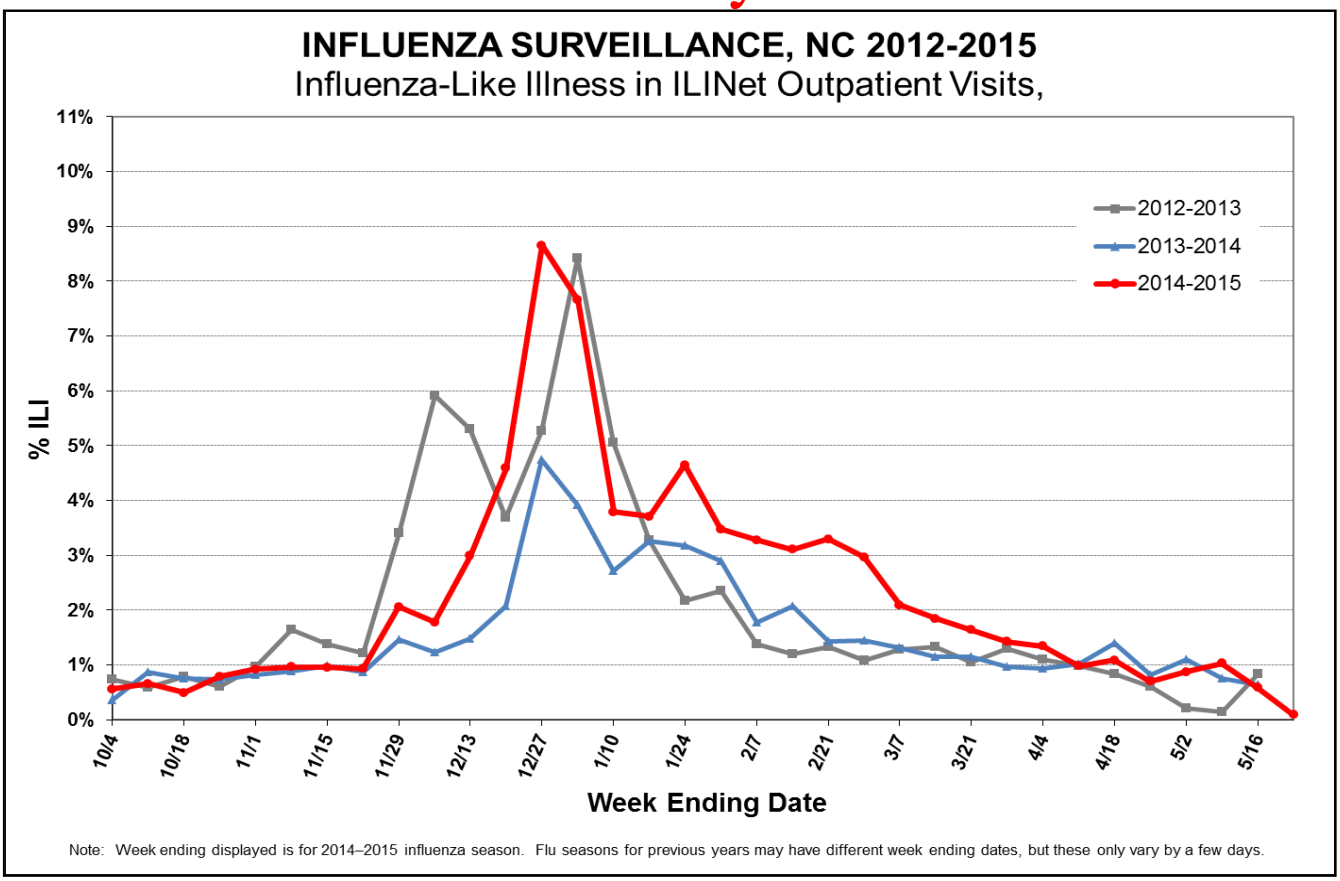
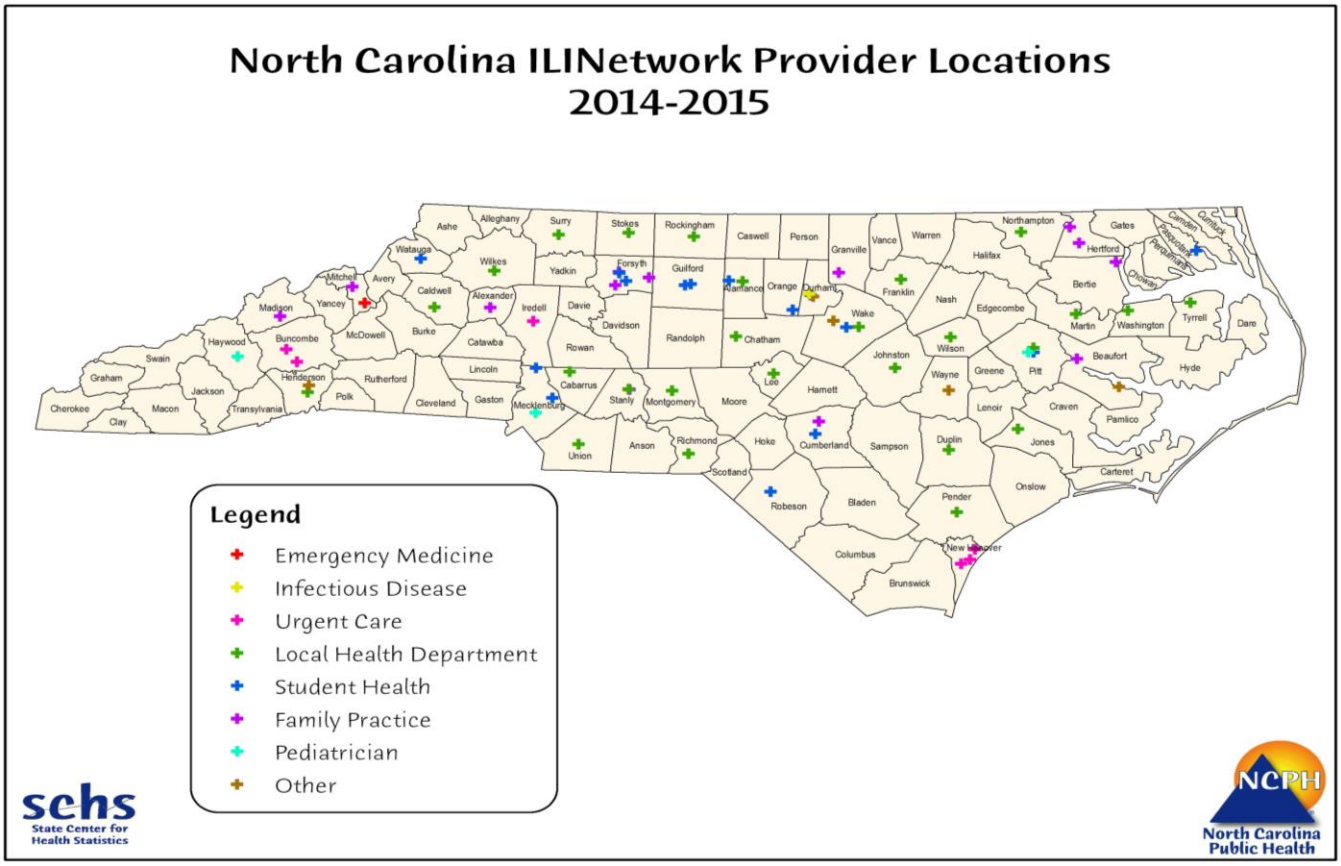


For more information about comparable national data, visit www.cdc.gov/ncidod/diseases/flu/weekly.htm and in particular, click on the link "View Chart Data" below "Percentage of Visits for Influenza-like Illness Reported by the US Outpatient Influenza-like Illness Surveillance Network (ILINet)".



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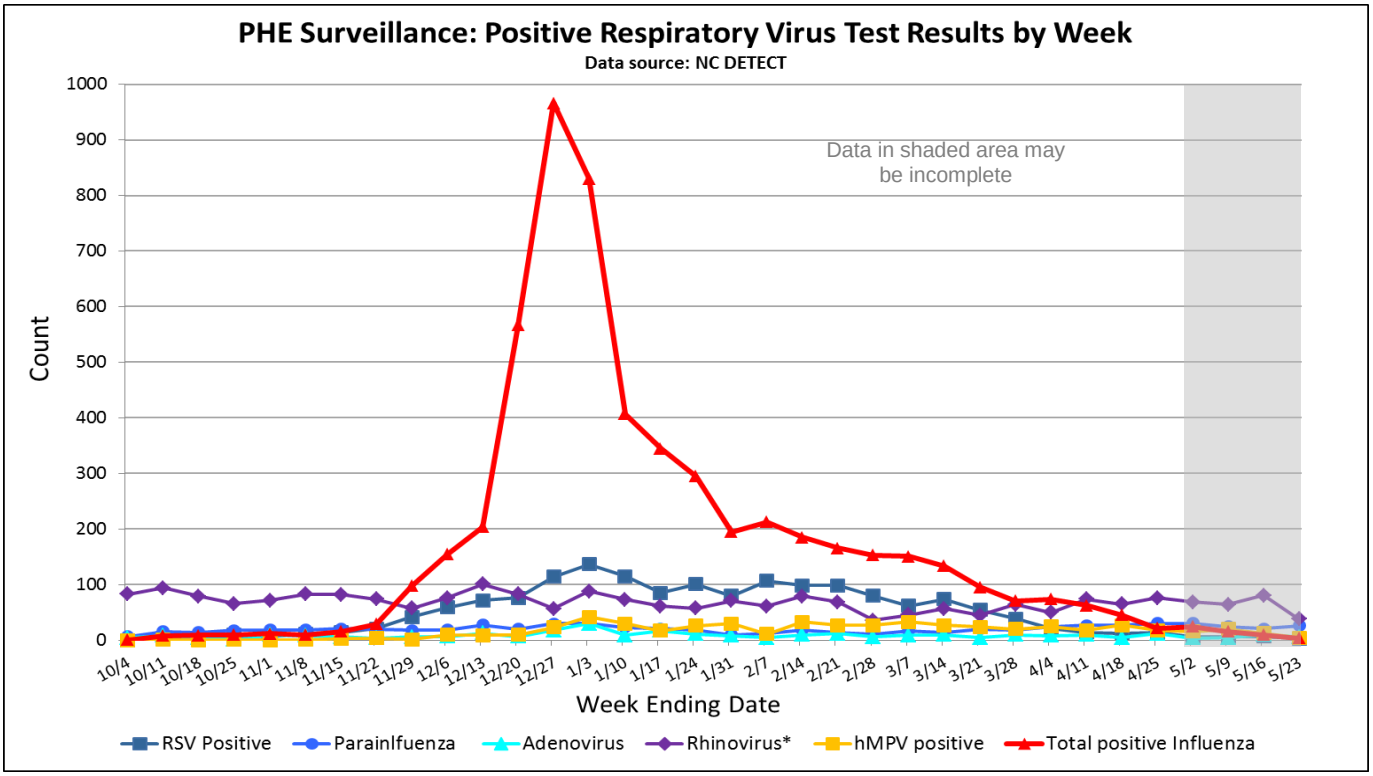
PHE Respiratory Viral Pathogen Surveillance

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 ending with 10/4/2014.

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.

- Rhinovirus was the most frequently identified respiratory viral pathogens during week 20 (ending 5/23/2015) followed by parainfluenza.

- Hospital-based Public Health Epidemiologists (PHEs) reported 6 positive influenza results out of 246 specimens tested during week 20 (ending 5/23/2015); 1 influenza A (H3), 2 influenza A (H1), and 3 influenza B.

INFLUENZA VIRUS POSITIVES IDENTIFIED BY PHE HOSPITALS 2014–2015 SEASON		
Virus Type	# New positive results (5/17/2015 - 5/23/2015)	# Cumulative positive results (9/28/2014 - 5/23/2015)
A (subtype unknown)	0	3236
2009 A(H1N1)	2	61
A/H3	1	1364
B	3	911
Total	6	5588

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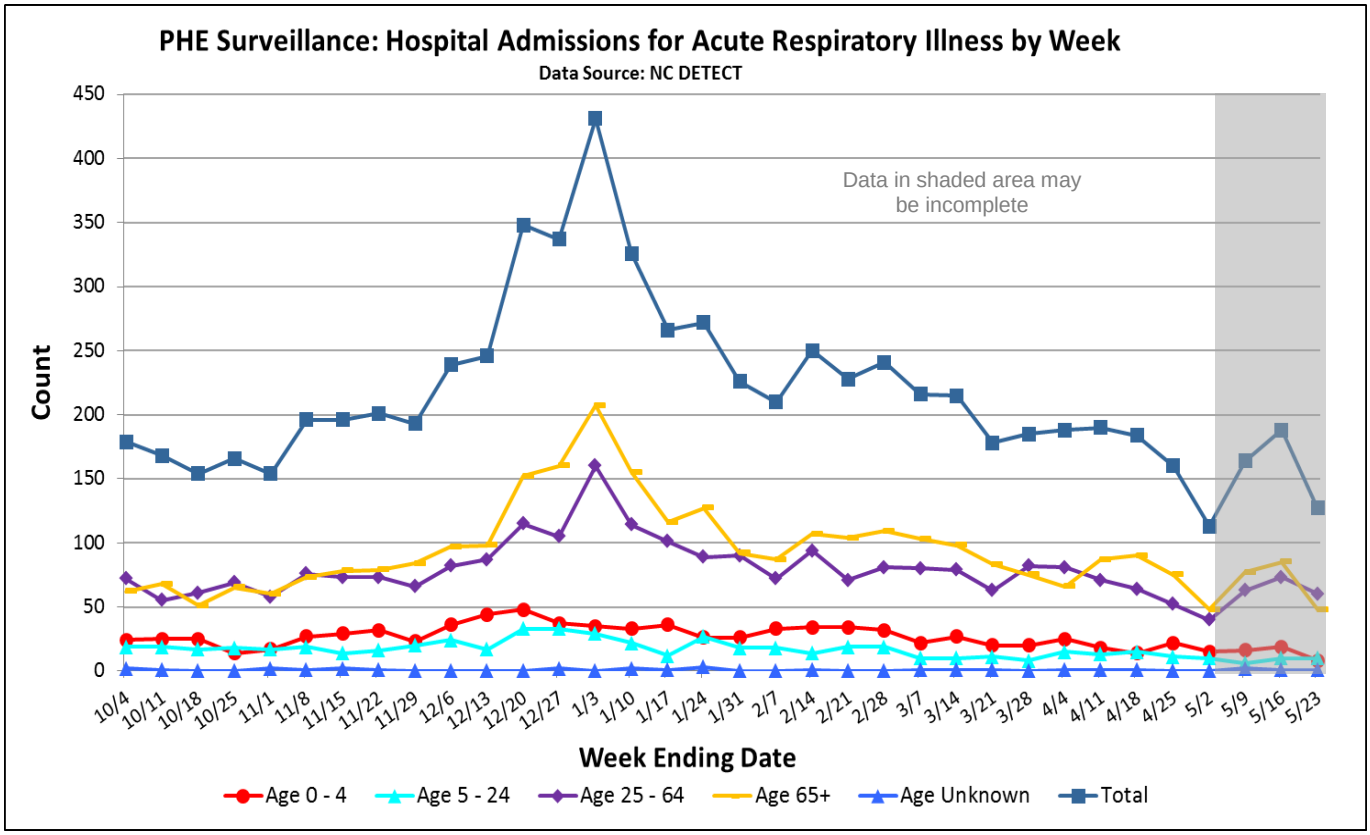
PHE Acute Respiratory Admissions Surveillance

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 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 5/23/2015).
- The highest number of acute respiratory admissions was reported among patients age 25-64 years followed age 65 and over by during week 20.

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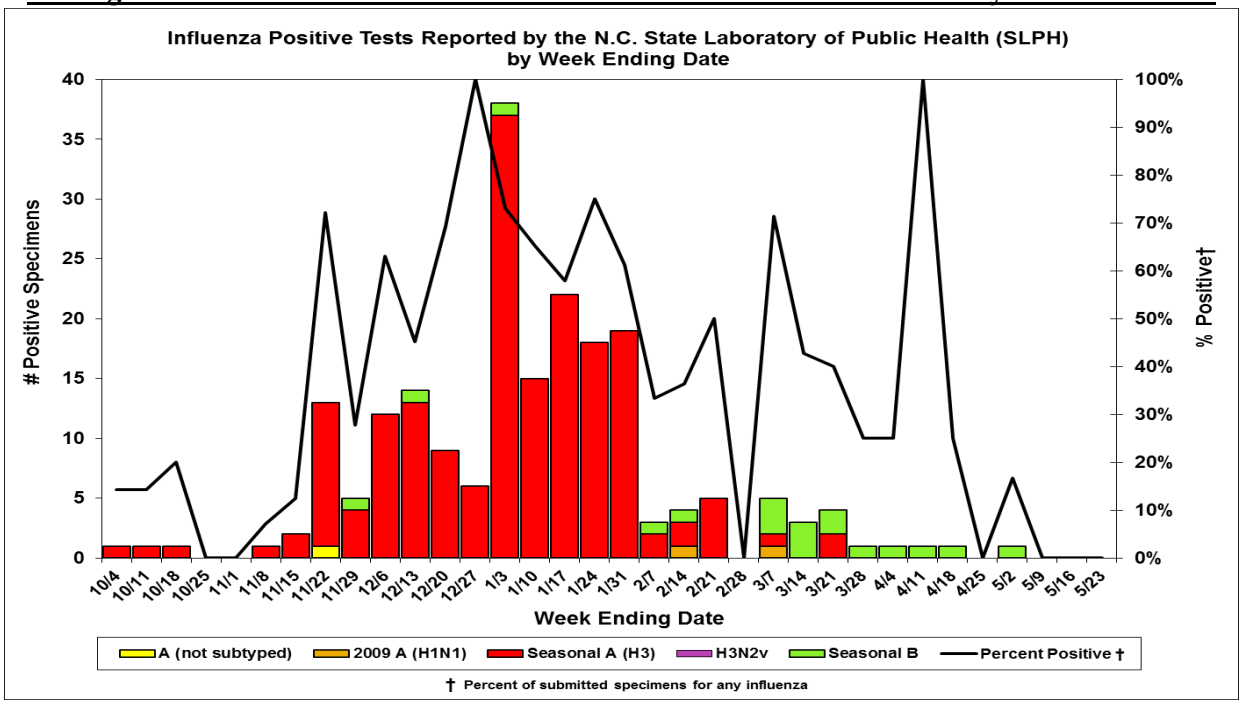
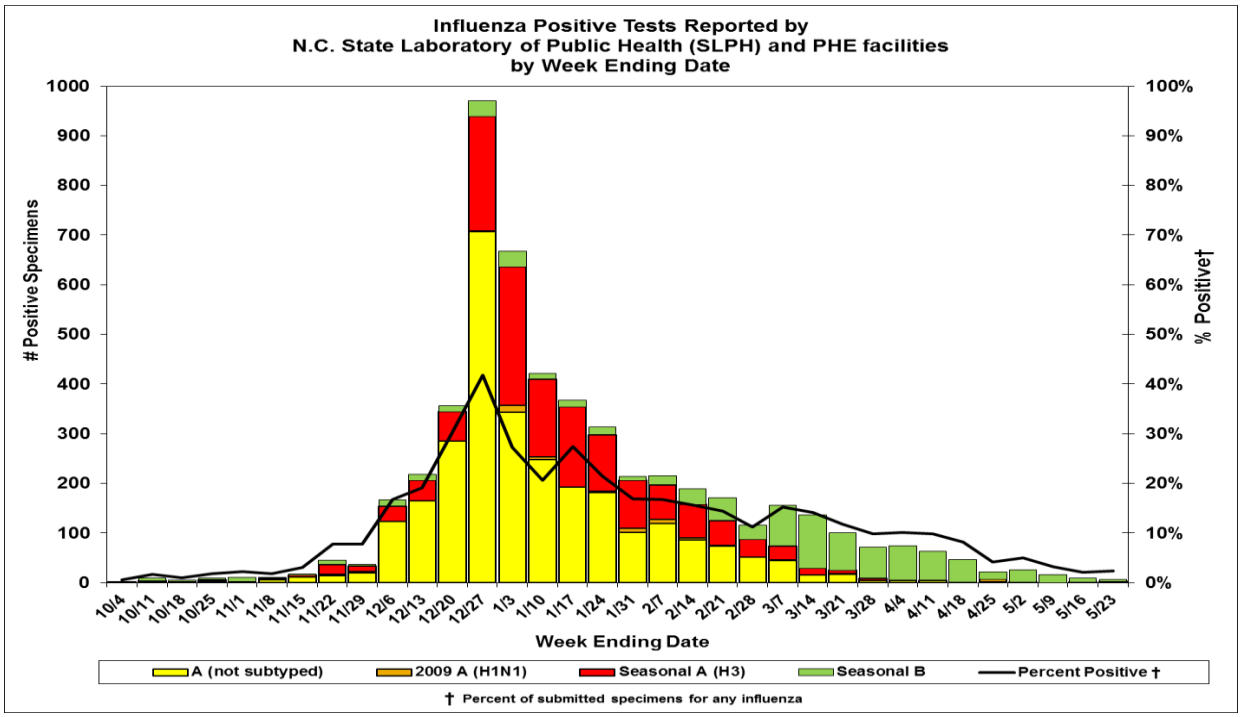
Virologic Surveillance Information from the North Carolina State Laboratory of Public Health



INFLUENZA VIRUS ISOLATES FROM IN-STATE PATIENTS IDENTIFIED BY THE STATE LABORATORY OF PUBLIC HEALTH 2014–2015 SEASON*

Virus Type	# New Positive Results (5/17/15 - 5/23/15)	# Cumulative Positive Results (10/4/14 - 5/23/2015)
A (subtype unknown)	0	1
2009 A(H1N1)	0	2
A/H3	0	185
B	0	18
Total	0	206

* 2014-2015 influenza season began September 28, 2014.
NOTE: This table only includes isolates tested as of 5/23/15.
This table does not include influenza isolates identified by other laboratories.



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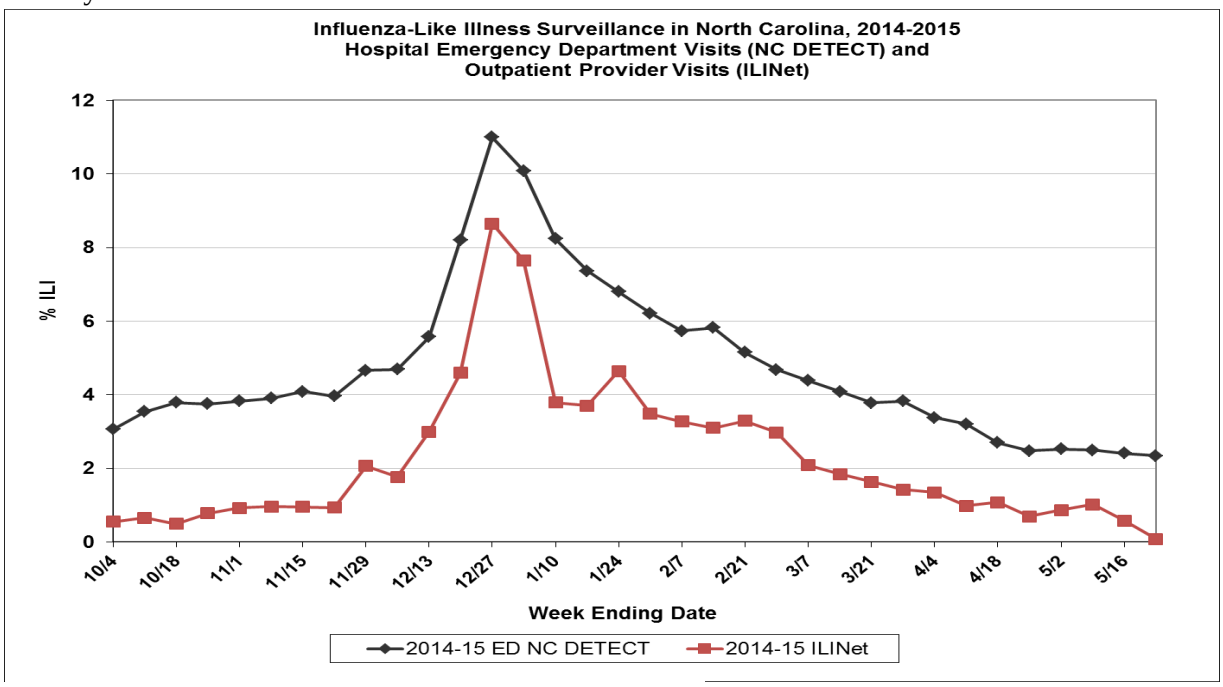
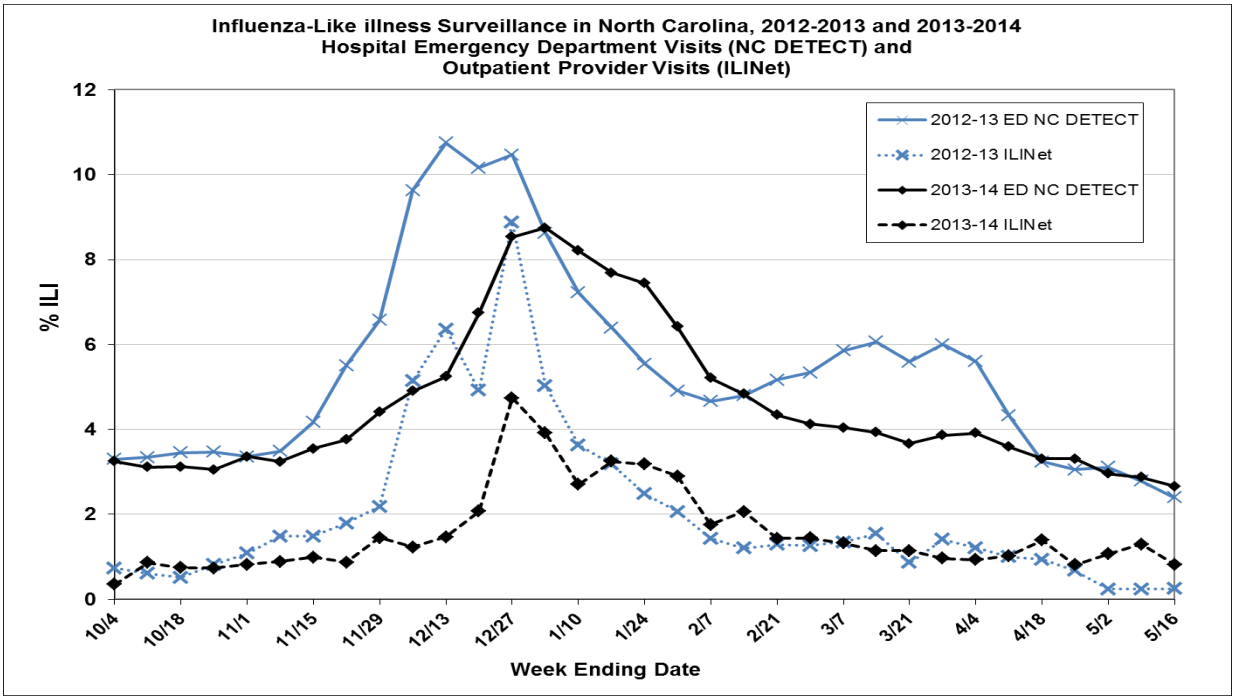
North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT) ILI Surveillance

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.



2012-2014 Influenza Season: Shown For Comparison



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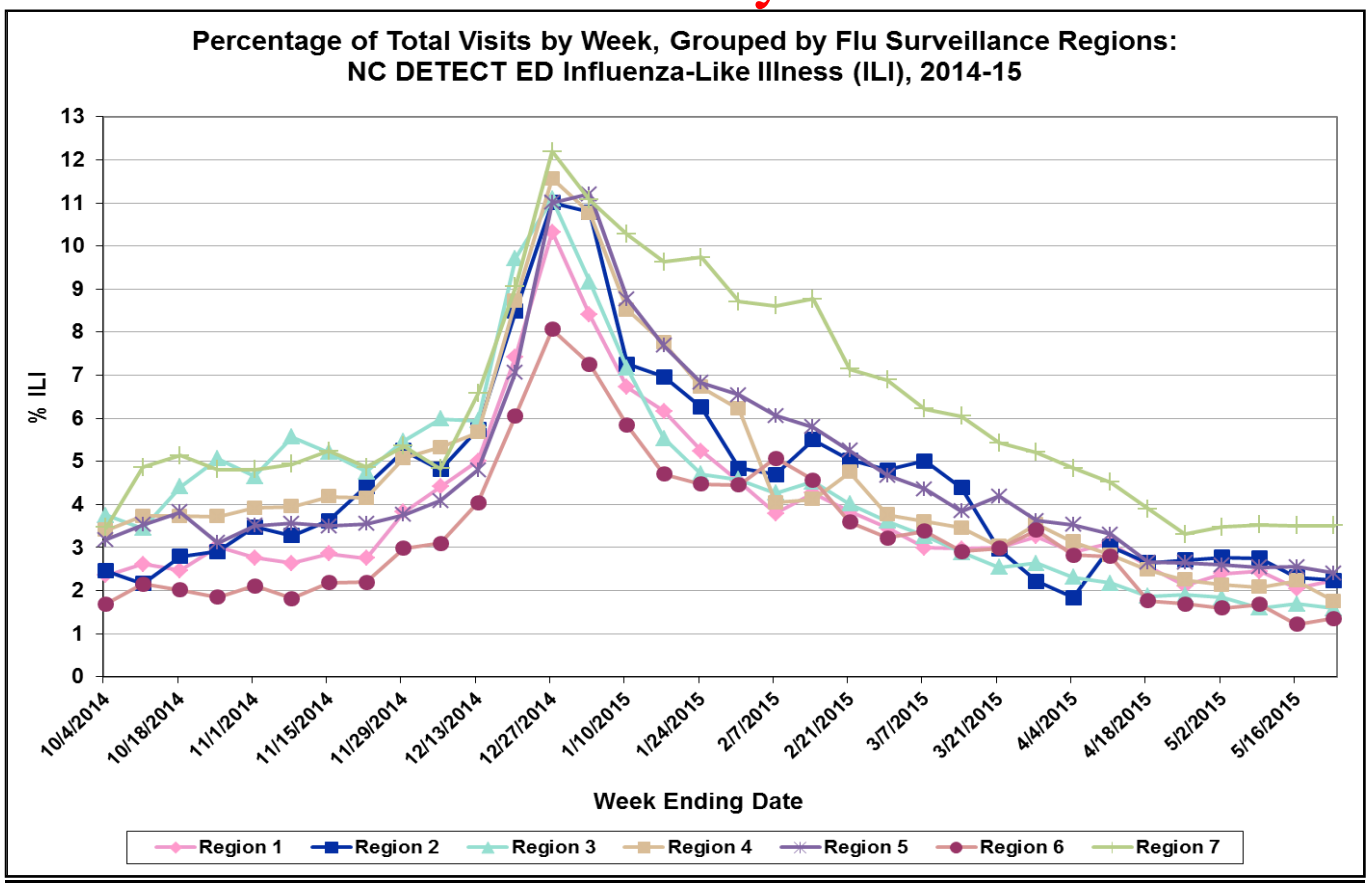
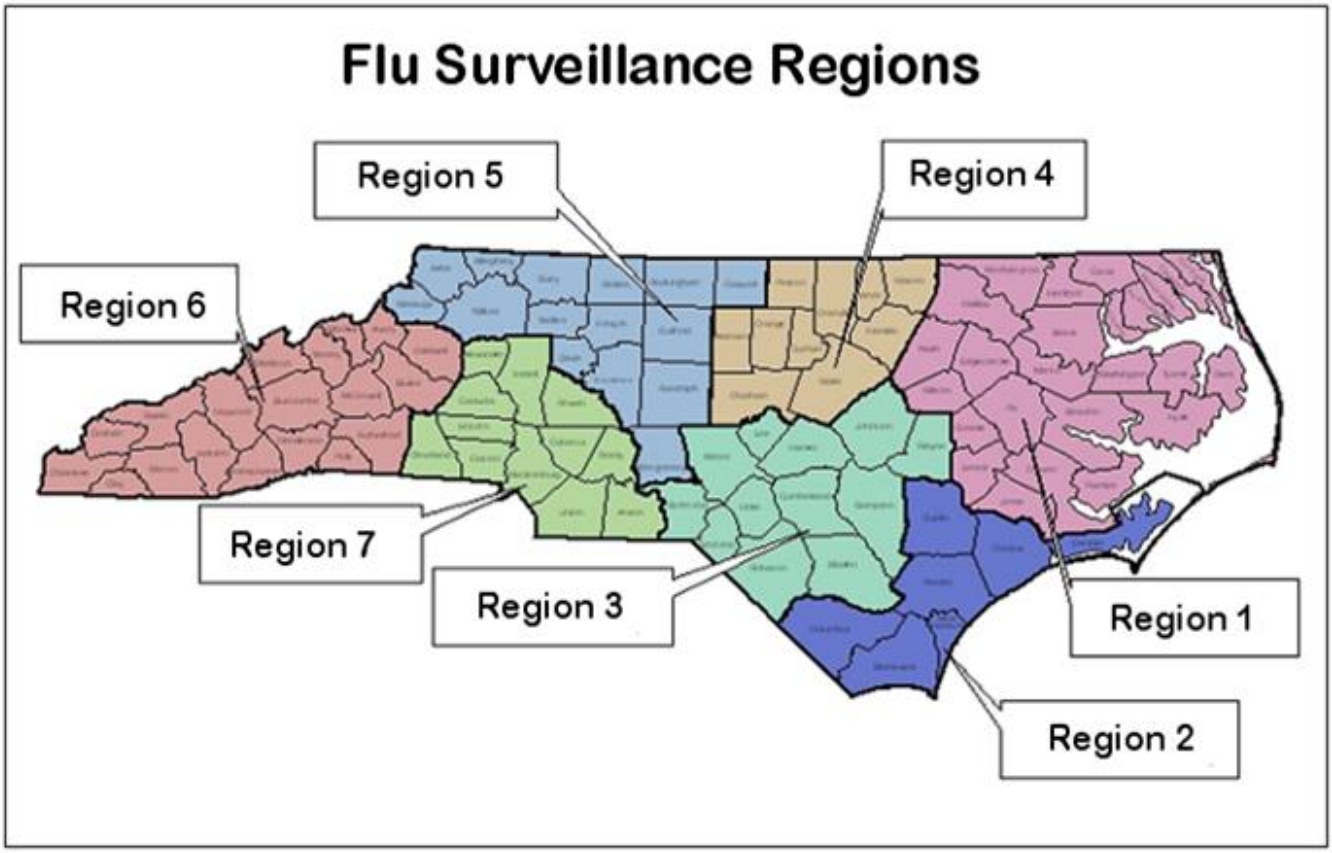


NOTE: This graph begins with data starting week ending October 4, 2014 for the 2014-15 influenza season.



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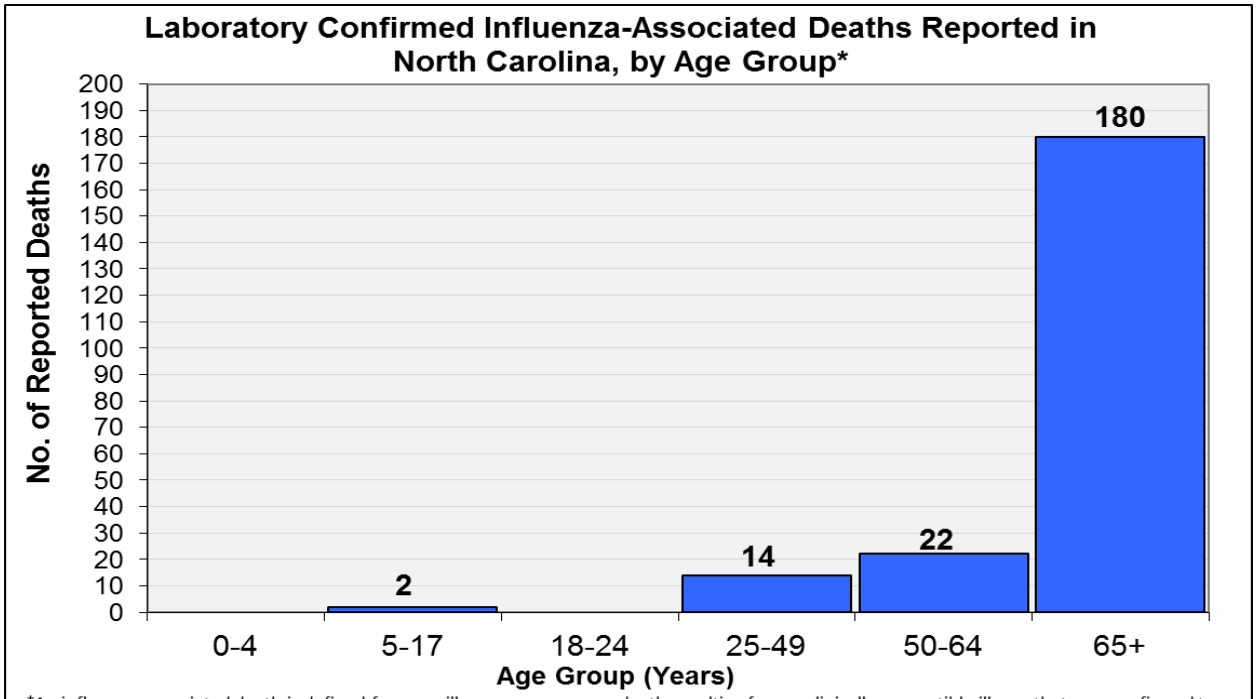
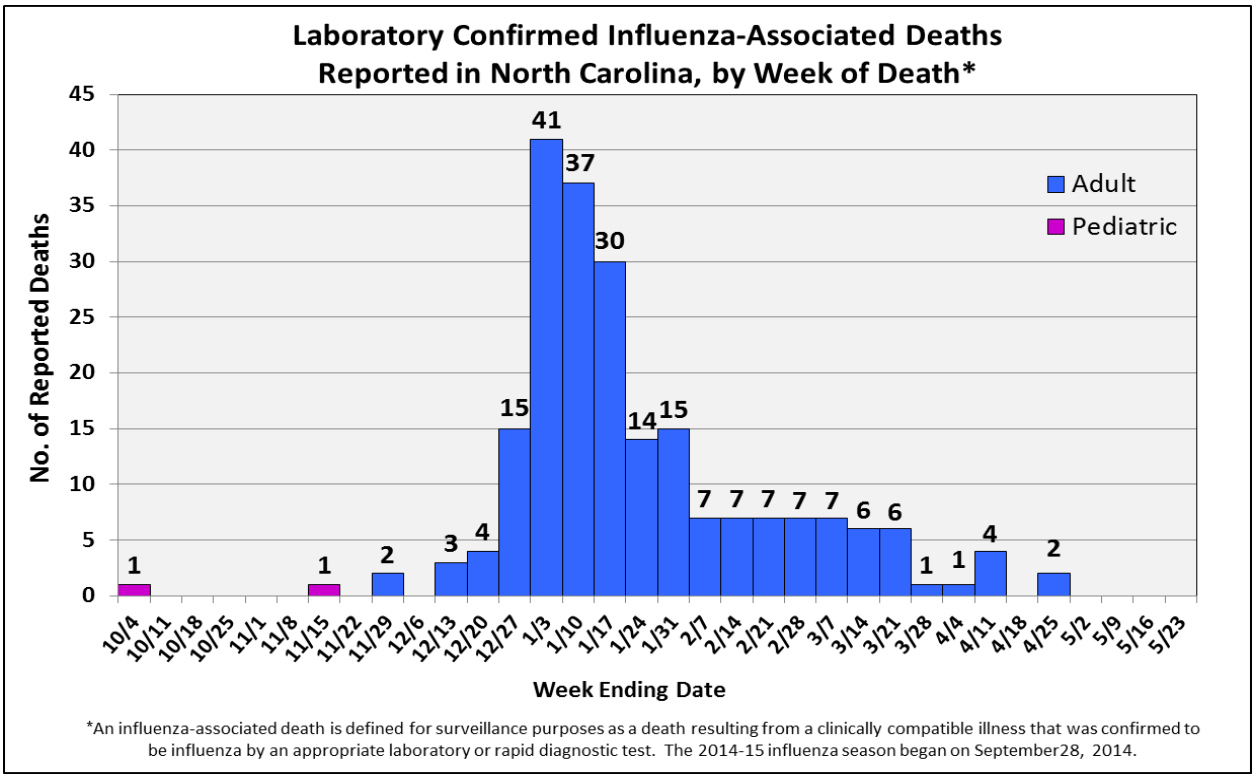
NC Influenza-Associated Deaths*	
Influenza-Associated Deaths 5/17/2015 – 5/23/2015	**Total Influenza-Associated Deaths Since Week 40 (ending 10/04/14)**
0	**218**

***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 after 5/23/2015 will be included in subsequent surveillance summaries.



*An influenza-associated death is defined for surveillance purposes as a death resulting from a clinically compatible illness that was confirmed to be influenza by an appropriate laboratory or rapid diagnostic test. The 2014-15 influenza season began on September28, 2014.



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

LOCAL HEALTH DEPARTMENT/DISTRICT OFFICES [26]:

Alamance County Health Department (Burlington)
Cabarrus Health Alliance (Kannapolis)
Caldwell County Health Department (Lenoir)
Chatham County Health Department (Siler City)
Duplin County Health Department (Kenansville)
Franklin County Health Department (Louisburg)
Henderson County Health Department (Hendersonville)
Johnston County Health Department (Smithfield)
Jones County Health Department (Trenton)
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 [16]:

Appalachian State University Student Health Services (Boone; Watauga Co.)
Davidson College Student Health Center (Davidson; Mecklenburg Co.)
Duke University Student Health Services (Durham; Durham 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.)
Mount Olive College Milton M. Lownes Jr., MD Student Health Services (Mount Olive; Wayne 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 [25]:

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.)
Carolina East Medical Associates (Washington; Beaufort 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.)
Haywood Pediatric and Adolescent Medicine Group, PA (Clyde; Haywood Co.)
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.)
MinuteClinic Mooresville (Mooresville; Iredell Co.)
Murfreesboro Primary Care (Murfreesboro; Hertford 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.)
Steven C. Hill, MD, PC (Spruce Pine; Mitchell Co.)

HOSPITALS [4]:

Blue Ridge Regional Hospital (Spruce Pine; Mitchell Co.)
Cape Fear Valley Health System Primary Care Practices (Fayetteville; Cumberland Co.)
Durham VAMC (Durham; Durham Co.)
Seymour Johnson Air Force Base Medical Group (Goldsboro; Wayne Co.)

OTHER [1]:

PotashCorp (Aurora; Beaufort Co.)

TOTAL SENTINELS ENROLLED – 70

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