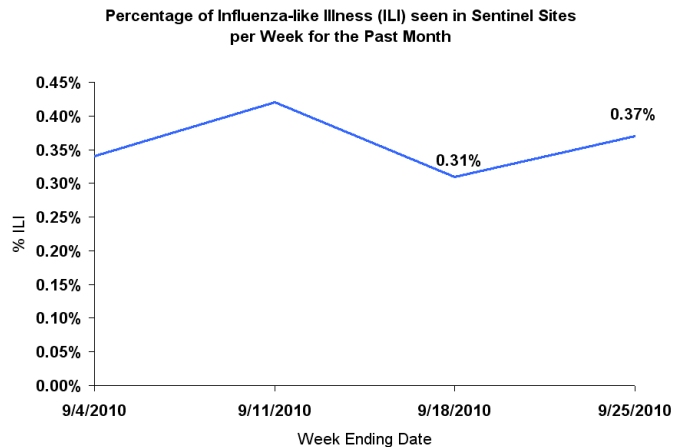


NORTH CAROLINA BI-WEEKLY INFLUENZA SURVEILLANCE SUMMARY #9
SUMMER 2010 SURVEILLANCE
(SEPTEMBER 30, 2010)

Statewide Updates:

- The proportion of outpatient visits attributed to influenza-like illness (ILI) has remained approximately the same during this past reporting period (from 0.31% to 0.37%) according to the 32 sentinel sites reporting.
- SLPH has not identified any positive influenza samples submitted for week ending 9/25/10 among the 5 samples submitted to SLPH for viral testing.
- No flu-associated deaths were reported for the week ending 9/25/10.
- The proportion of ED visits for ILI has remained the same for the past few reporting weeks after increasing slightly for five consecutive weeks.



Regional Updates:

- The percent of ILI reported through ILINet for region 4 (Southeastern US) was 0.9% for week 37 and 1.2% for week 38 (ending 9/25/10), both of which are below the regional baseline of 2.0%.
- All 10 regions reported ILI below region-specific baseline levels for week 38 (ending 9/25/10).

National Updates:

- Compared to the prior reporting week, the proportion of outpatient visits attributed to ILI slightly decreased nationally (from 0.95% to 0.88% for week ending 9/18/10) and was below the national baseline of 2.3%.

WHO Updates:

- 10 August 2010 -- WHO Director-General, Dr Margaret Chan announced that the H1N1 influenza virus has moved into the post-pandemic period. However, localized outbreaks of various magnitudes are likely to continue.

Points to Note:

- CDC recommends 2010-11 flu vaccination for everyone ≥ 6 months as soon as it is locally available. The 2010-11 flu vaccine will protect against 2009 H1N1, and two other influenza viruses (an H3N2 virus and an influenza B virus). RT-PCR testing for H3 requires *nasal or NP swabs*; contact the Communicable Disease Branch to request.
- **All of the data contained in the 2010-11 influenza surveillance summaries will begin with week ending October 9, 2010. Historical data will be available at www.flu.nc.gov by clicking on "Flu in NC: The Numbers". Weekly distribution of the 2010-11 influenza surveillance summaries will begin Thursday, October 14, 2010.**

Guidance Documents

North Carolina
<http://www.epi.state.nc.us/epi/gcdc/flupro.html>

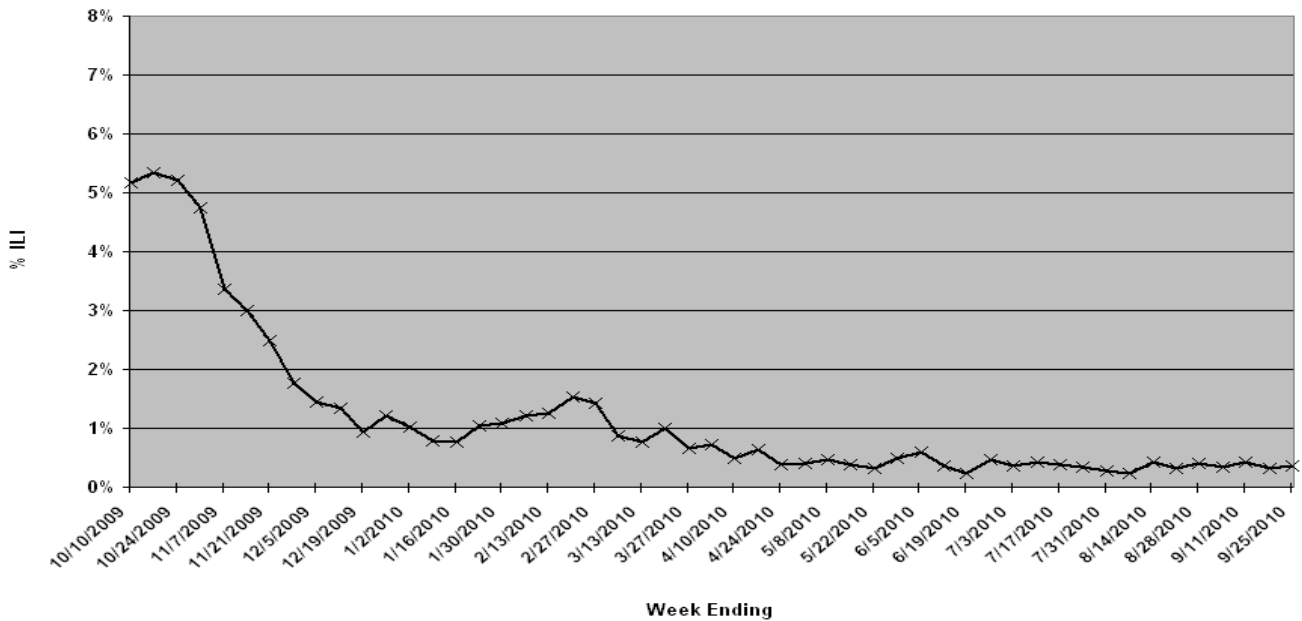
CDC
<http://www.cdc.gov/flu/professionals/>

Additional Resources: www.flu.nc.gov

INFLUENZA-LIKE ILLNESSES REPORTED BY SENTINEL SITES, 2009-10

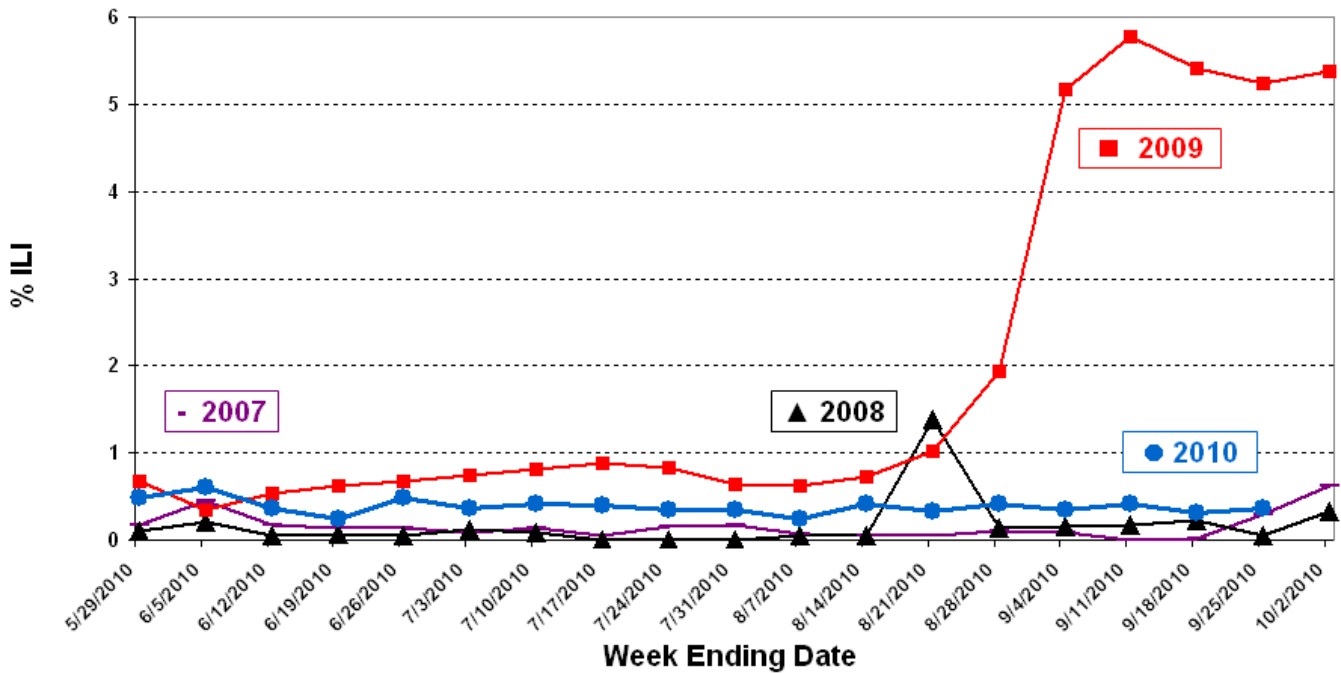
<u>Week # - Ending</u>	<u>(Sentinels Reporting)</u>	<u># ILI</u>	<u># Patients</u>	<u>% ILI</u>
#40 - 10/10/09 [2009-2010]	(79)	1,465	28,334	5.17%
#41 - 10/17/09	(80)	1,441	26,961	5.34%
#42 - 10/24/09	(82)	1,477	28,270	5.22%
#43 - 10/31/09	(81)	1,313	27,605	4.75%
#44 - 11/07/09	(81)	995	29,597	3.36%
#45 - 11/14/09	(86)	855	28,526	2.99%
#46 - 11/21/09	(88)	809	32,462	2.49%
#47 - 11/28/09	(89)	376	21,220	1.77%
#48 - 12/05/09	(86)	476	32,916	1.44%
#49 - 12/12/09	(84)	419	31,038	1.34%
#50 - 12/19/09	(82)	253	26,771	0.94%
#51 - 12/26/09	(75)	164	13,517	1.21%
#52 - 01/02/10	(74)	170	16,484	1.03%
#01 - 01/09/10	(78)	184	23,122	0.79%
#02 - 01/16/10	(80)	218	28,436	0.76%
#03 - 01/23/10	(79)	271	26,023	1.04%
#04 - 01/30/10	(82)	308	28,047	1.09%
#05 - 02/06/10	(84)	290	23,665	1.22%
#06 - 02/13/10	(84)	346	27,365	1.26%
#07 - 02/20/10	(84)	446	28,971	1.53%
#08 - 02/27/10	(85)	450	31,625	1.42%
#09 - 03/06/10	(84)	237	26,635	0.88%
#10 - 03/13/10	(84)	191	24,666	0.77%
#11 - 03/20/10	(82)	258	25,772	1.00%
#12 - 03/27/10	(80)	179	26,743	0.66%
#13 - 04/03/10	(78)	170	23,256	0.73%
#14 - 04/10/10	(79)	121	23,806	0.50%
#15 - 04/17/10	(73)	149	23,324	0.63%
#16 - 04/24/10	(74)	87	22,310	0.38%
#17 - 05/01/10	(69)	85	20,886	0.40%
#18 - 05/08/10	(69)	92	19,681	0.46%
#19 - 05/15/10	(64)	66	16,830	0.39%
#20 - 05/22/10	(62)	53	16,711	0.31%
#21 - 05/29/10	(57)	70	14,532	0.48%
#22 - 06/05/10	(54)	67	11,133	0.60%
#23 - 06/12/10	(53)	49	13,326	0.36%
#24 - 06/19/10	(49)	29	12,164	0.23%
#25 - 06/26/10	(46)	54	11,342	0.47%
#26 - 07/03/10	(42)	32	8,786	0.36%
#27 - 07/10/10	(46)	36	8,514	0.42%
#28 - 07/17/10	(44)	42	10,740	0.39%
#29 - 07/24/10	(42)	41	11,625	0.35%
#30 - 07/31/10	(42)	32	11,814	0.27%
#31 - 08/07/10	(40)	26	10,486	0.24%
#32 - 08/14/10	(36)	43	10,203	0.42%
#33 - 08/21/10	(39)	38	11,583	0.32%
#34 - 08/28/10	(36)	53	12,917	0.41%
#35 - 09/04/10	(34)	44	12,599	0.34%
#36 - 09/11/10	(36)	52	12,333	0.42%
#37 - 09/18/10	(32)	42	13,348	0.31%
#38 - 09/25/10	(32)	47	12,688	0.37%

INFLUENZA SURVEILLANCE NC 2009-2010
 Influenza-Like Illness (ILI) in Sentinel Site Patients
 -- As of 30 September, 2010 --



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)".

INFLUENZA SURVEILLANCE, NC, Summer 2007, 08, 09, 10
 Influenza-Like Illness in Sentinel Site Patients
 (Shown for Comparison)

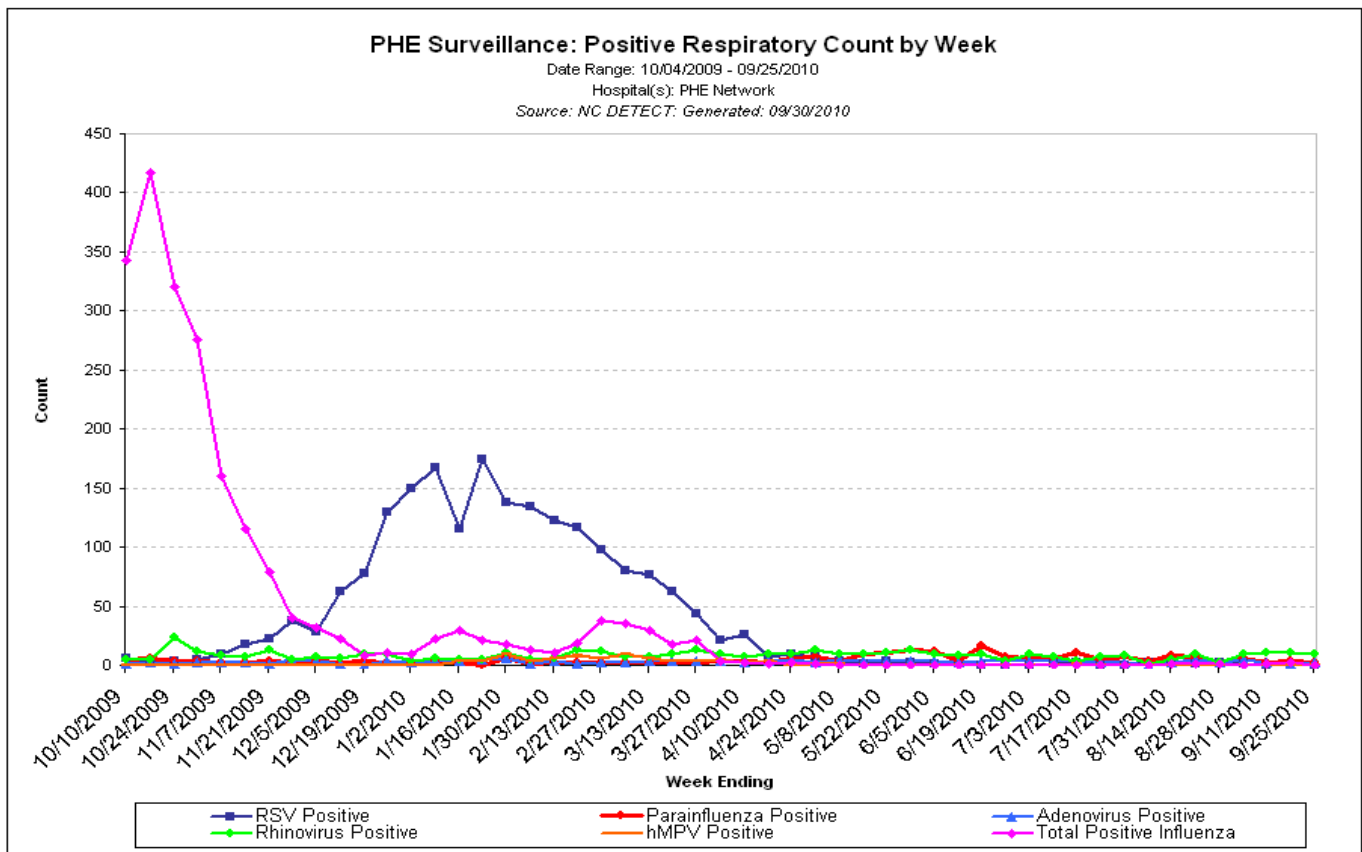


Note: Week ending displayed is for Summer 2010. Summer seasons for previous years may have different week ending and week beginning dates, but these dates only vary by a few days.

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 eleven 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 beginning with the week ending 10/10/2009.

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, so the proportion testing positive cannot be calculated. Also, testing protocols and practices differ among the hospitals. Finally, these numbers reflect test results from participating hospitals only and might not be reflective of the entire state.



Temporal Patterns Observed from PHE Respiratory Viral Pathogen Surveillance:

- Beginning in December, the number of tests positive for RSV surpassed the number of tests positive for influenza.
- The number tests positive for RSV peaked during December–April.
- The number of tests positive for human metapneumovirus (hMPV) increased during January–April, while the number of tests positive for parainfluenza increased during April–August.
- While there were no positive influenza results reported from hospital-based Public Health Epidemiologists (PHEs) for week ending 9/25/10, positive rhinovirus results were reported more than all of the other viral pathogens listed above for the past four weeks.

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
2009-2010 SEASON***

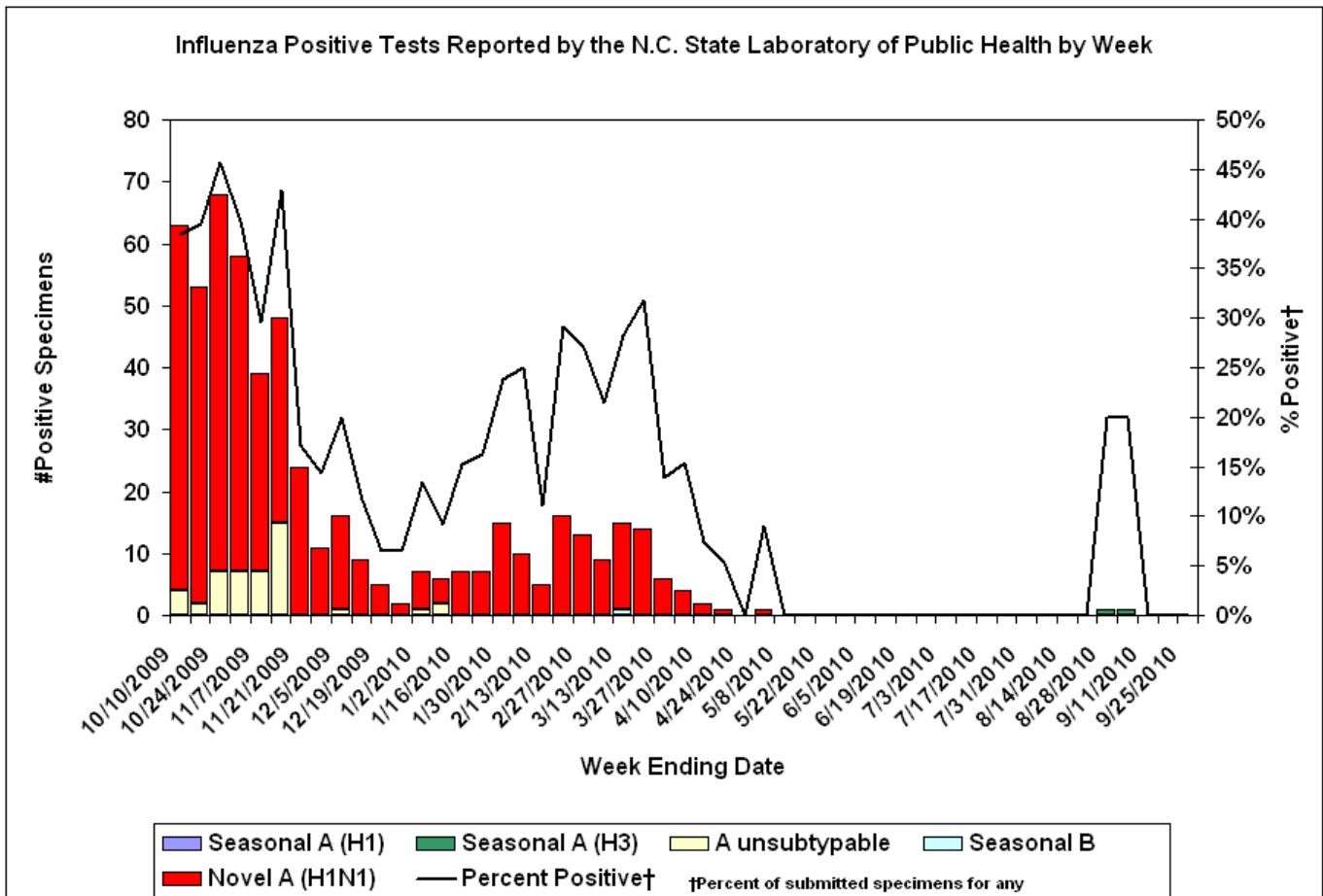
Virus Type	# New Positive Results (9/19/10 - 9/25/10)	# Cumulative Positive Results (10/10/09 - 9/25/10)
A	0	46
A/H1	0	0
A(H1N1) Pandemic	0	487
A/H3	0	2**
B	0	1
Total	0	536

* 2009-2010 Season began October 4, 2009

** Represents new positive results from week ending 8/28/10 and 9/4/10

NOTE: This table only includes isolates tested as of 09/10/10.

This table does not include influenza isolates identified by other laboratories.

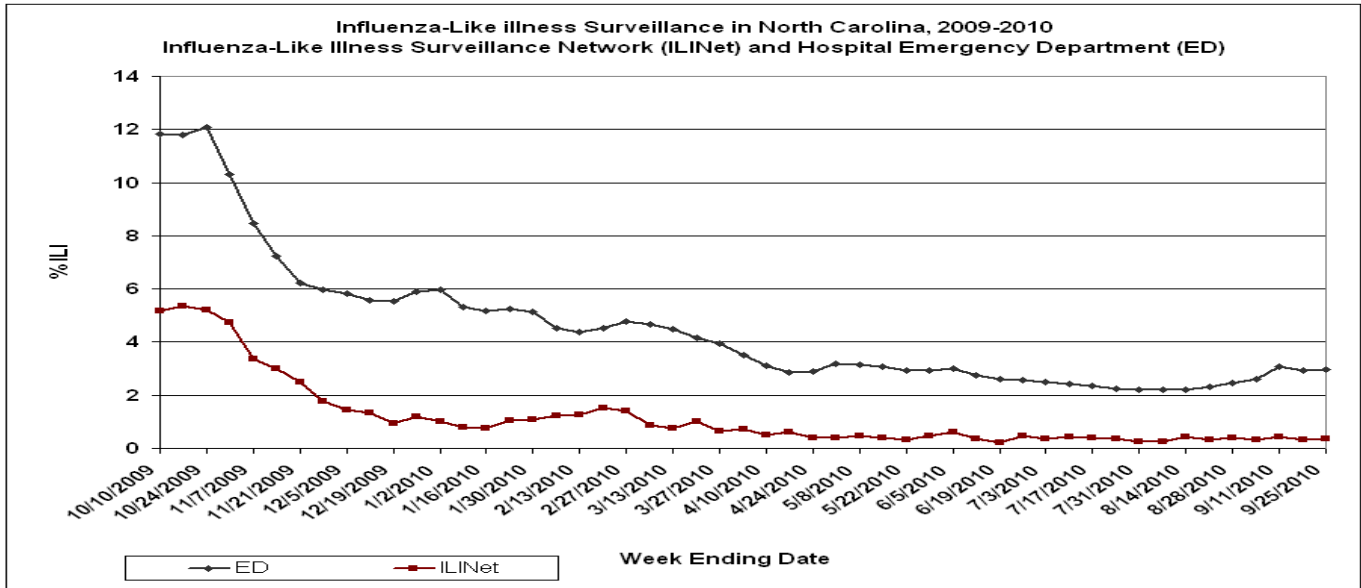


North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT)

ILI Surveillance

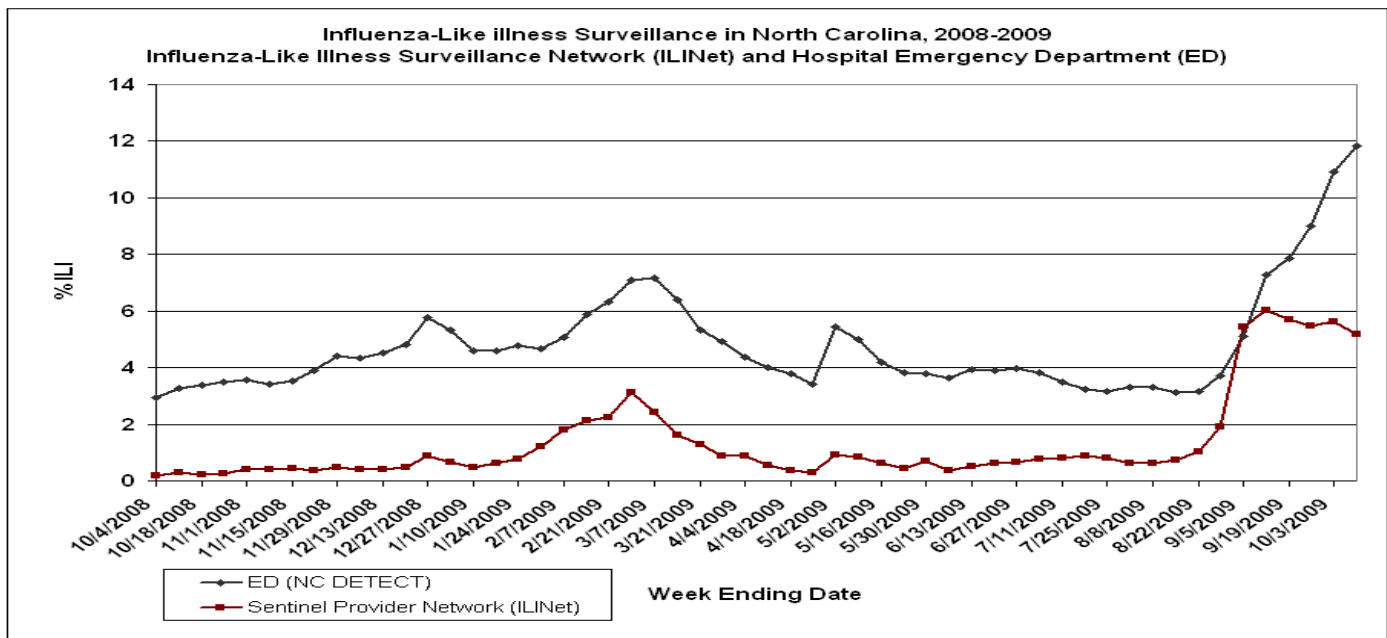
Real-time syndromic surveillance for ILI is conducted through the North Carolina Disease Event Tracking and Epidemiologic Collection Tool (NC DETECT). This system uses a variety of data sources including emergency departments (EDs). NC DETECT is currently receiving data daily from 111 of the 112 24/7 EDs in North Carolina. For the purposes of biosurveillance, ED visits are grouped into syndromes based on analyses of the chief complaint, initial ED temperature, and history of the present illness (when available). 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. Because these data are submitted and updated twice a day, they are particularly useful for real-time monitoring and for early detection of outbreaks.

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 the SPN reflects differences in the case definitions and patient populations rather than a difference in the sensitivity of these surveillance systems.

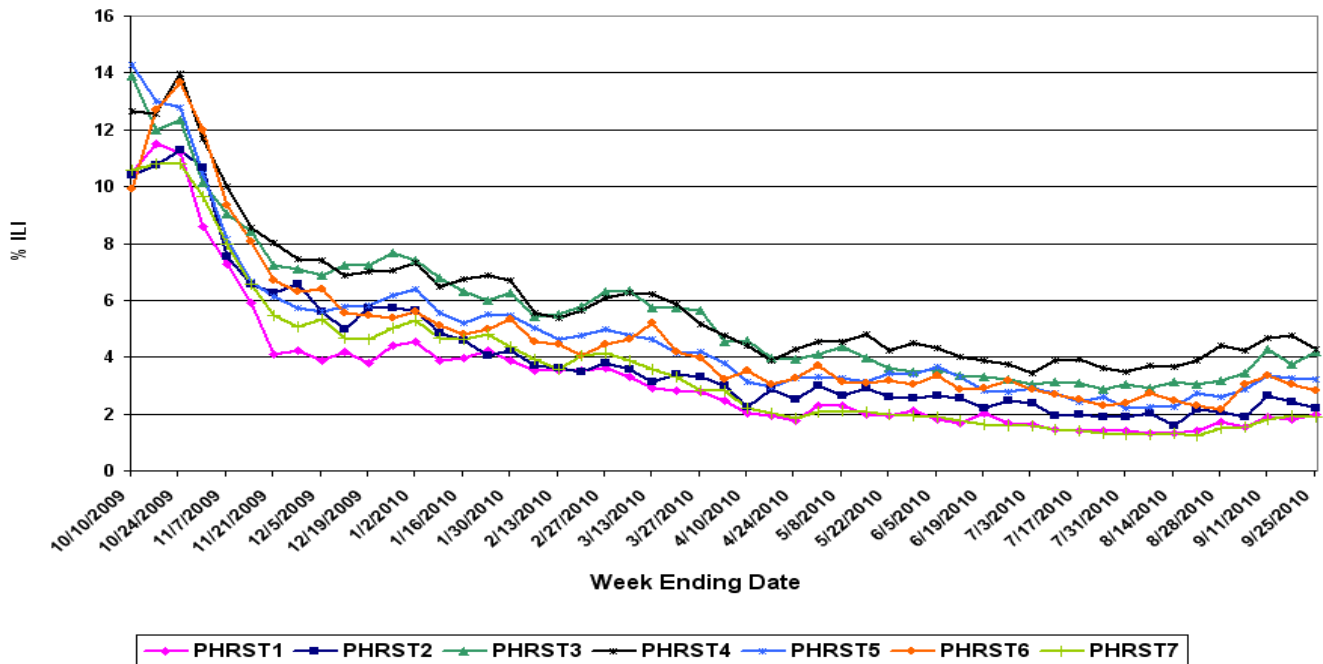


NOTE: This graph begins with data for the week ending October 10, 2009 – the first week of the 2009-10 influenza season.

2008-2009 Influenza Season: Shown For Comparison

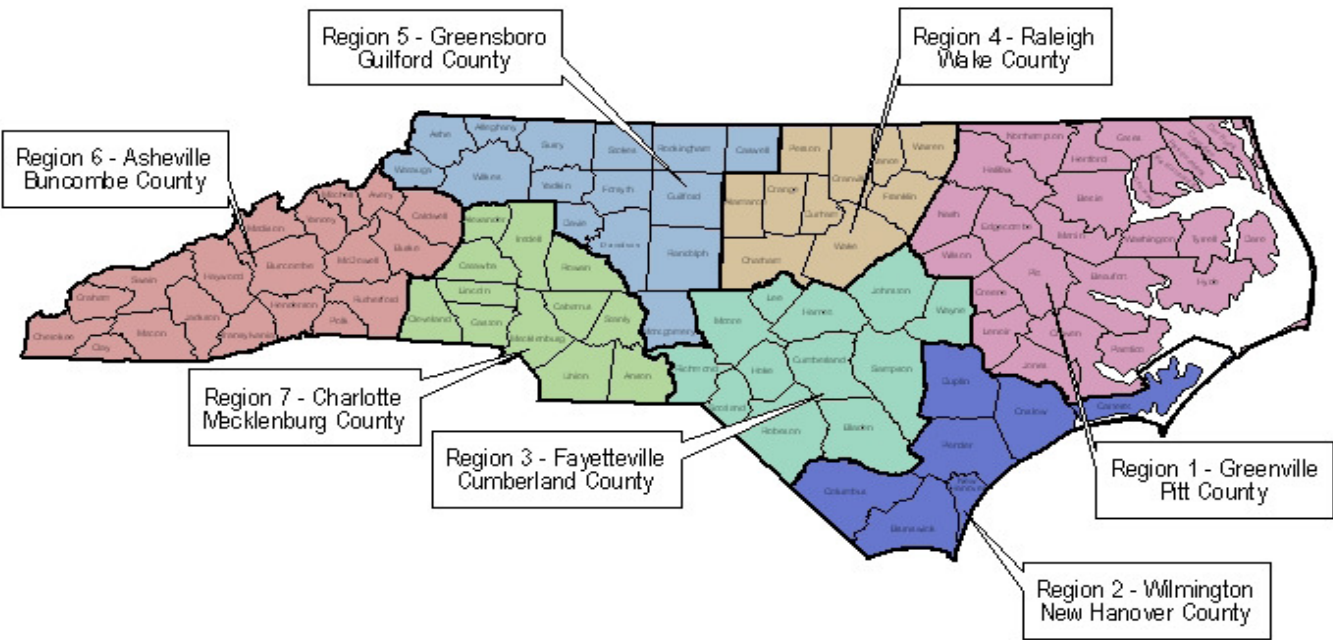


ED ILI Cases As A Percentage Of All Visits Grouped By the PHRSTs Region 2009-2010 Flu Season



NOTE: This graph begins with data for the week ending October 10, 2009 – the first week of the 2009-2010 influenza season.

Public Health Regional Surveillance Teams

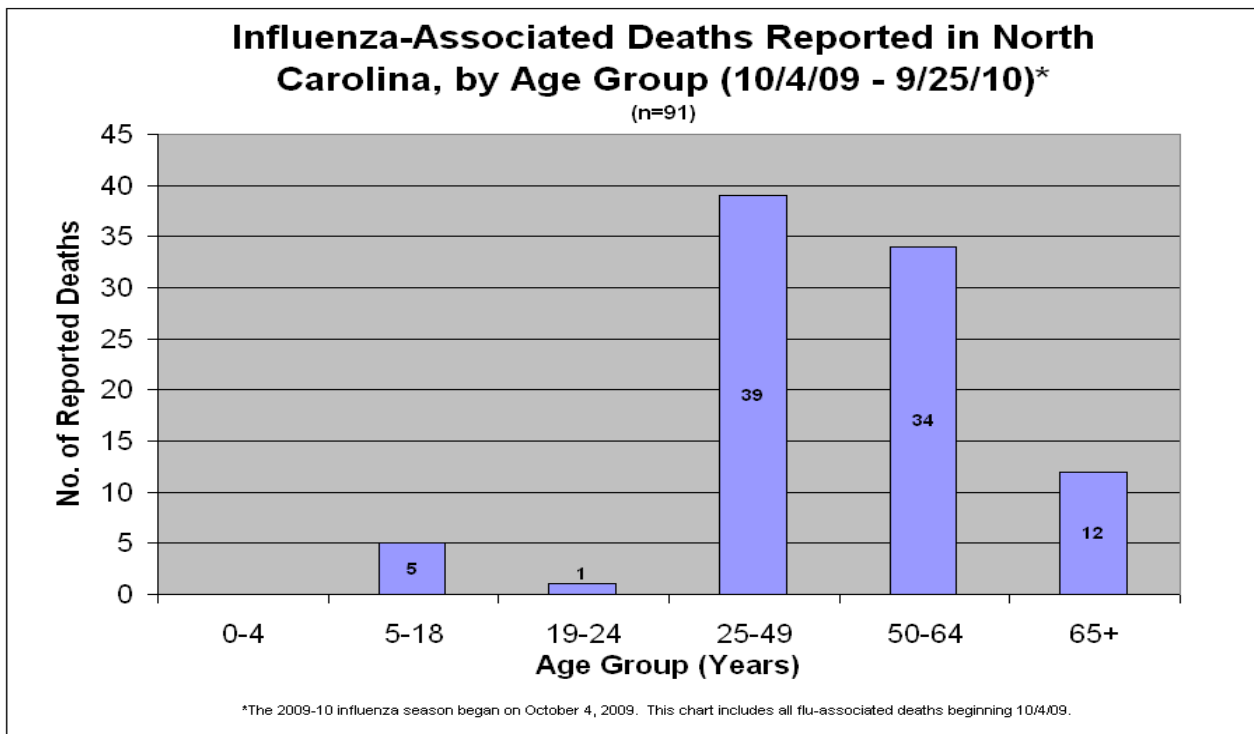
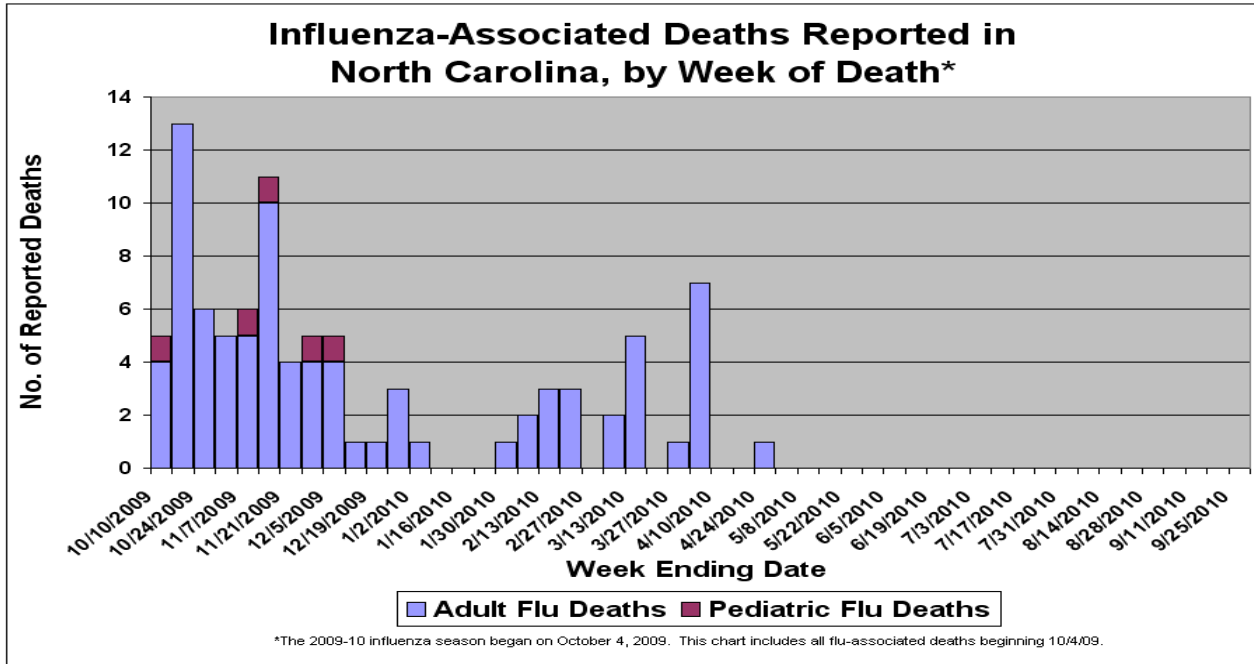


North Carolina Influenza-Associated Deaths

NC Flu-Associated Deaths*	
Influenza-associated Deaths 09/19/10-09/25/10	Influenza-associated Deaths Since Week 40 (ending 10/10/09)*
0	91

*Starting Sept. 27, 2009 North Carolina expanded reporting of flu deaths using the definition below.

Influenza-associated Deaths - this number is based on reports submitted by clinicians and local health departments to the North Carolina Division of Public Health. These reports include persons who died from an illness that was identified as influenza (either seasonal or pandemic) by an appropriate laboratory or rapid diagnostic test.



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

LOCAL HEALTH DEPARTMENT/DISTRICT OFFICES [32]:

Alamance County Health Department (Burlington)
Buncombe County Health Department (Asheville)
Cabarrus County Health Department (Kannapolis)
Caldwell County Health Department (Lenoir)
Catawba County Health Department (Hickory)
Chatham County Health Department (Siler City)
Duplin County Health Department (Kenansville)
Franklin County Health Department (Louisburg)
Greene County Health Department (Snow Hill)
Henderson County Health Department (Hendersonville)
Johnston County Health Department (Smithfield)
Jones County Health Department (Trenton)
Lee County Health Department (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 Health Department (Greenville)
Richmond County Health Department (Rockingham)
Robeson County Health Department (Lumberton)
Rockingham County Health Department (Wentworth)
Rowan County Health Department (Salisbury)
Stanly County Health Department (Albemarle)
Stokes County Health Department (Danbury)
Surry County Health Department (Dobson)
Tyrrell County Office [Martin-Tyrrell-Washington County Health District] (Columbia)
Union County Health Department (Monroe)
Washington County [Martin-Tyrrell-Washington County Health District] (Plymouth)
Watauga County Office [Appalachian Health District] (Boone)
Wilkes County Health Department (Wilkesboro)
Wilson County Health Department (Wilson)
Yancey County Office [Toe River Health District] (Burnsville)

COLLEGES AND UNIVERSITIES STUDENT HEALTH PROGRAMS [18]:

Appalachian State University Student Health Services (Boone; Watauga Co.)
Davidson College Student Health Center (Davidson; Mecklenburg Co.)
Duke University Medical Center (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-Asheville Student Health Services (Asheville; Buncombe 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.)
Western Carolina University Student Health Services (Cullowhee; Jackson Co.)
Winston-Salem State University (Winston-Salem; Forsyth Co.)

PRIVATE PRACTITIONERS [38]:

Bakersville Community Medical Center (Bakersville; Mitchell Co.)
Beachcare Urgent Care (Morehead City; Carteret Co.)
Blue Cross and Blue Shield of N.C. (Durham; Durham Co.)
Blue Ridge Community Health Services (Hendersonville; Henderson Co.)
Bradford Clinic – Matthews (Matthews; Mecklenburg Co.)
Butner-Creedmoor Family Medicine (Creedmore; Granville Co.)
Cabarrus Urgent Care (Concord; Cabarrus Co.)
Carolina East Medical Associates (Washington; Beaufort Co.)
Cary Family HealthCare, PA (Cary; Wake Co.)
Catawba Pediatrics (Hickory; Catawba Co.)
Colerain Primary Care (Colerain; Bertie Co.)
ECU Brody School of Medicine – Department of Pediatrics (Greenville; Pitt Co.)
Family Care Center (Taylorsville; Alexander Co.)
First Charlotte Physicians – Epi Center (Charlotte; Mecklenburg Co.)
Gaston Family Health Services (Gastonia; Gaston Co.)
Haywood Pediatric and Adolescent Medicine Group, PA (Clyde; Haywood Co.)
Hot Springs Health Program (Marshall; Madison Co.)
Matthews Children’s Clinic (Matthews; Mecklenburg 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.)
Pitt Children’s Clinic (Greenville; Pitt Co.)
Presbyterian Urgent Care – Charlotte (Charlotte; Mecklenburg Co.)
Presbyterian Urgent Care – Matthews (Matthews; Mecklenburg 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, North Center (Weaverville; Buncombe Co.)
Sisters of Mercy Urgent Care, Airport (Arden; Buncombe 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.)
Wintergreen Medical Center (Winterville; Pitt Co.)

HOSPITALS [6]:

Blue Ridge Regional Hospital (Spruce Pine; Mitchell Co.)
Cape Fear Valley Health System Primary Care Practices (Fayetteville; Cumberland Co.)
Charles C. George VA Medical Center (Asheville; Buncombe Co.)
Duke Family Medicine (Durham; Durham 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 – 95

Counties covered (53): Alexander, Alamance (2), Beaufort (2), Bertie, Buncombe (7), Cabarrus (2), Caldwell, Carteret, Catawba (2), Chatham, Cumberland (2), Duplin, Durham (4), Forsyth (5), Franklin, Gaston, Granville (2), Greene, Guilford (2), Haywood, Henderson (2), Hertford (2), Jackson, Johnston, Jones, Lee, Madison, Martin, Mecklenburg (7), Mitchell (3), Montgomery, New Hanover (3), Northampton, Orange, Pasquotank, Pender, Pitt (5), Richmond, Robeson (2), Rockingham, Rowan, Stanly (2), Stokes, Surry, Tyrrell, Union, Wake (3), Washington, Watauga (2), Wayne (2), Wilkes, Wilson, Yancey