



North Carolina Influenza Surveillance Summary: 2021-2022 Season

Key Findings

Statewide Updates	<p>Influenza-like illness (ILI) remained low in the 2021-2022 influenza season. The proportion of visits due to ILI in North Carolina was below the regional and national baseline most of the season.</p> <p>There were 17 influenza associated deaths during the 2021-2022 influenza season, all adults. 4,639 specimens submitted to the State Laboratory of Public Health (SLPH) and from PHE sentinel sites were positive during the 2021-22 season. A(H3N2) represented most influenza viruses subtyped during this season.</p> <p>The primary respiratory virus circulating during the 2021-2022 influenza season was SARS-CoV-2, the virus that causes COVID-19.</p>
Regional Updates	<p>The proportion of visits due to ILI in Region 4 was low most of the season with 2 notable increases: from mid-December to mid-January and an unseasonal increase in late spring. The regional baseline for ILI is 3.1%.</p>
National Updates	<p>The proportion of visits due to ILI nationwide was low most of the season except from mid-December to mid-January. The national baseline for ILI is 2.5%.</p>
International Updates	<p>In worldwide influenza laboratories, seasonal influenza A viruses accounted for a majority of detections followed by influenza B viruses. More country specific details can be found here.</p>

Introduction

The North Carolina Department of Health and Human Services (NCDHHS) uses multiple surveillance systems to monitor influenza activity across the state. These surveillance systems include information related to outpatient visits, emergency department visits, laboratory data, as well as hospital data from epidemiologists at seven of the state's largest healthcare systems. Data sources used to gather the information presented here are described below.

NC DETECT

The [North Carolina Disease Event Tracking and Epidemiologic Collection Tool](#) (NC DETECT) is North Carolina's statewide, electronic, real-time public health surveillance system. NC DETECT was created to provide early event detection and timely public health surveillance using a variety of secondary data sources, including data from the NC Emergency Departments (EDs). Each ED visit is grouped into syndromes based on keywords in several different fields and/or diagnosis codes. The syndrome used to track influenza-like illness (ILI) is presented in this report. ILI is defined as fever (temperature of 100°F [37.8°C] or greater) and a cough and/or a sore throat.

ILI data track the number and percent of emergency department visits that are for illnesses compatible with influenza. This includes visits that do not have positive test results.

NC DETECT was created by the North Carolina Division of Public Health (NCDPH) in collaboration with the [Carolina Center for Health Informatics](#) (CCHI) in the [UNC Department of Emergency Medicine](#).

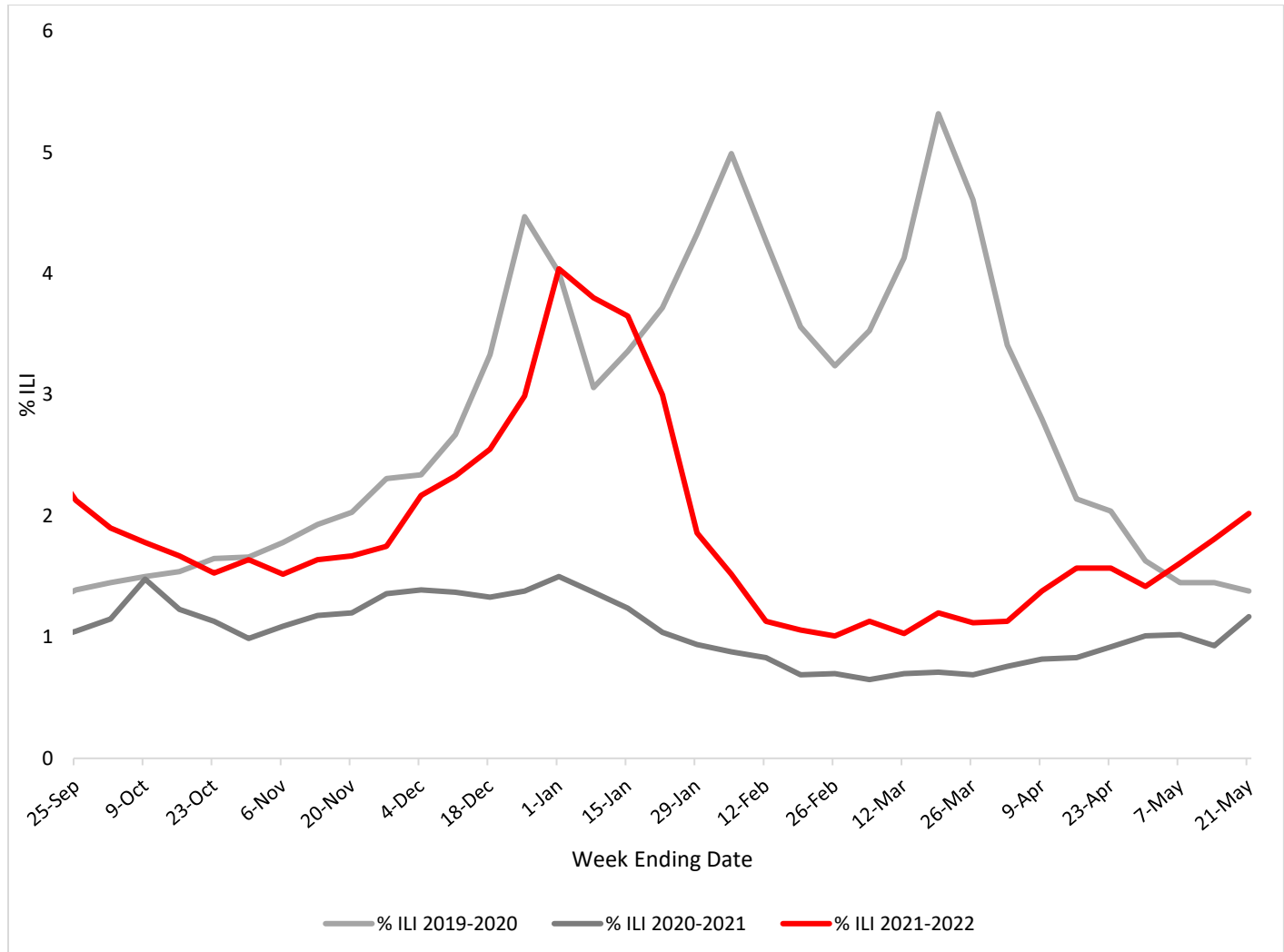
Public Health Epidemiologists Program

In 2003, NCDPH created a hospital-based Public Health Epidemiologist (PHE) program to strengthen coordination and communication between hospitals, health departments and the state. The PHE program covers approximately 38 percent of general/acute care beds and 40 percent of ED visits in the state. PHEs play a critical role in assuring routine and urgent communicable disease control, hospital reporting of communicable diseases, outbreak management and case finding during community wide outbreaks.

Influenza-like Illness Network

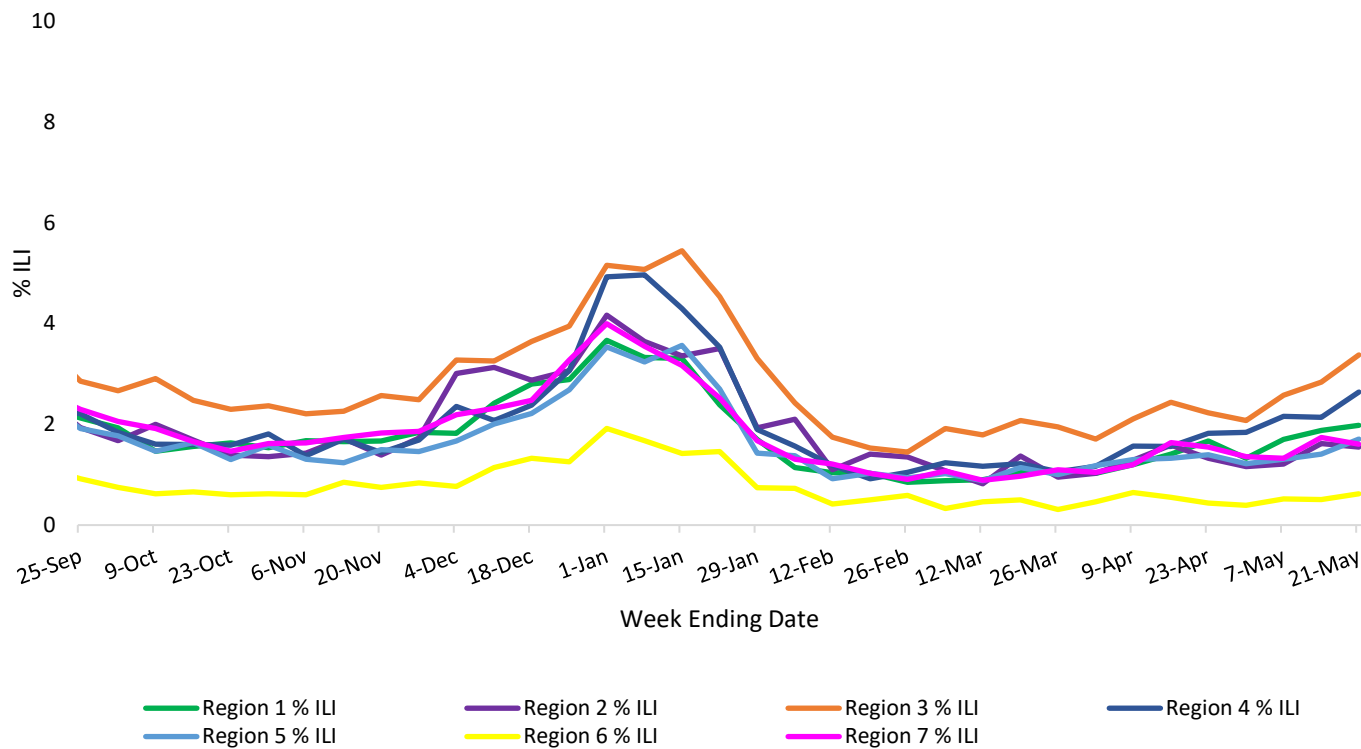
The U.S. Outpatient Influenza-like Illness Surveillance Network ([ILINet](#)), is a collaboration with providers, state health departments, and CDC to conduct surveillance for influenza-like illness. ILINet providers in primary care clinics and hospitals across the state send samples collected from patients with influenza-like illness to the North Carolina State Laboratory of Public Health for testing. With the current COVID-19 pandemic, ILINet has been expanded to include testing for SARS-CoV-2. Providers are asked to submit up to 10 samples from symptomatic patients each week. For ILINet surveillance purposes symptomatic is defined as fever (>100°F) and cough or sore throat. More information about ILINet can be found at flu.nc.gov.

What percent of ED visits this season are for influenza-like illness compared to previous seasons?

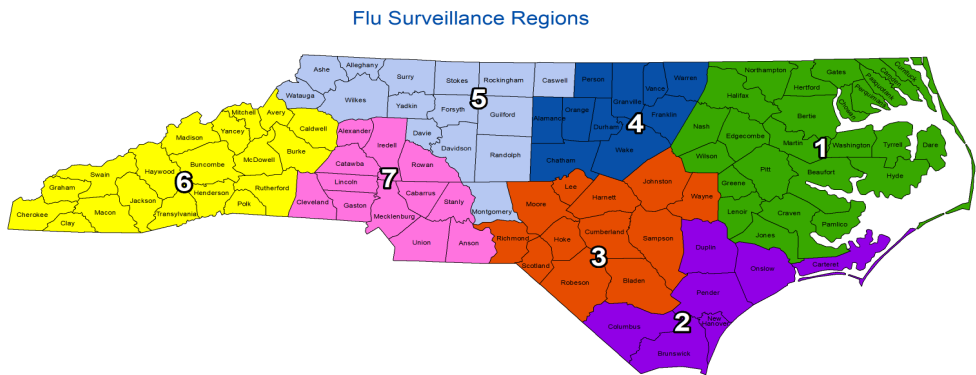


The above graph shows how the percentage of ED visits for influenza-like illness (ILI) this season compares to previous seasons. ILI includes key words including fever, cough, and sore throat. Many respiratory diseases share similar symptoms. ILI surveillance may capture other respiratory diseases.

How does the percentage of ED visits for influenza-like illness compare between regions of the state?



Diseases, including influenza, do not spread across the state evenly. The above graph shows the differences between regions in the percentage of ED visits for influenza-like illness. The colors of the lines correspond to the colors on the region map below.

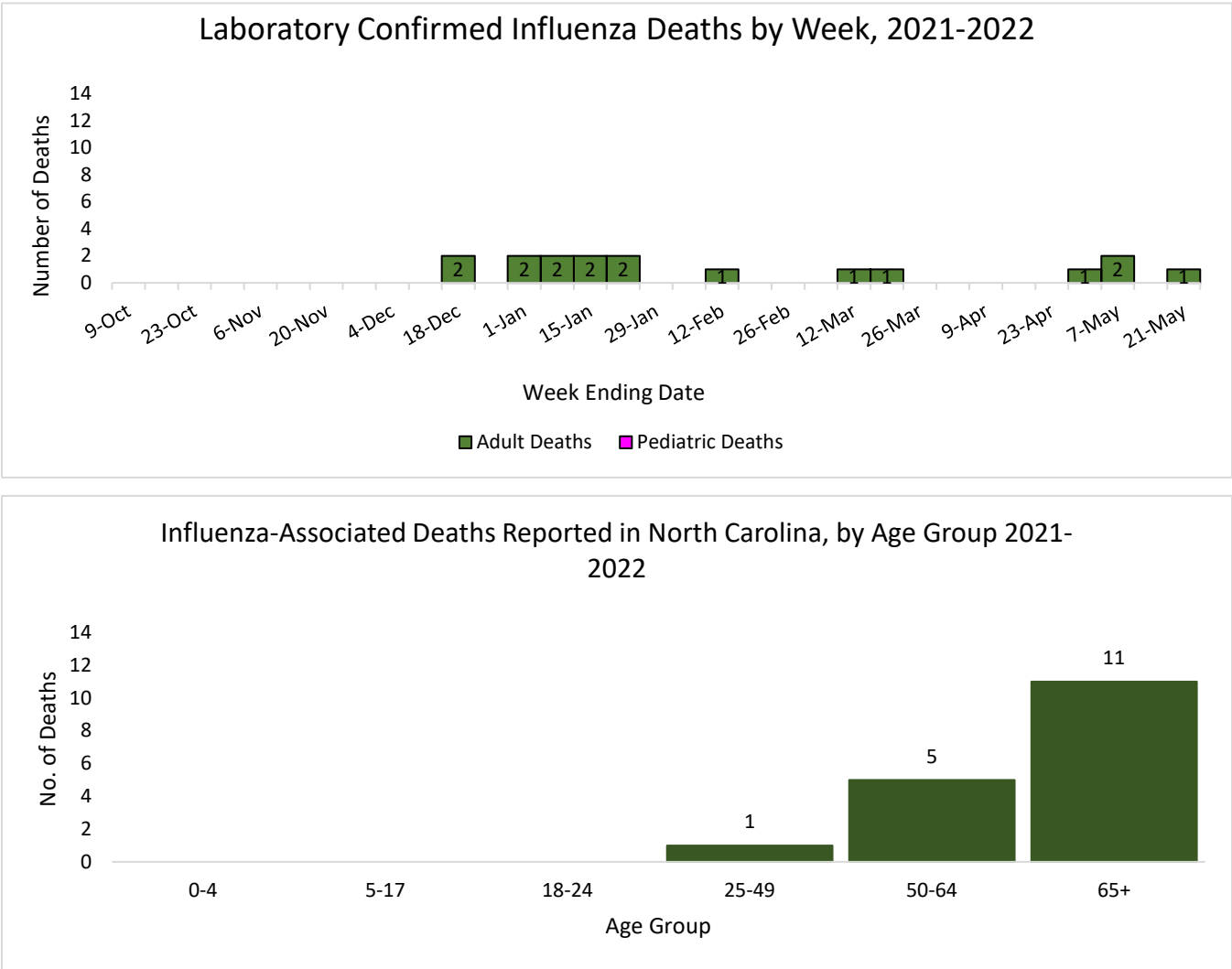


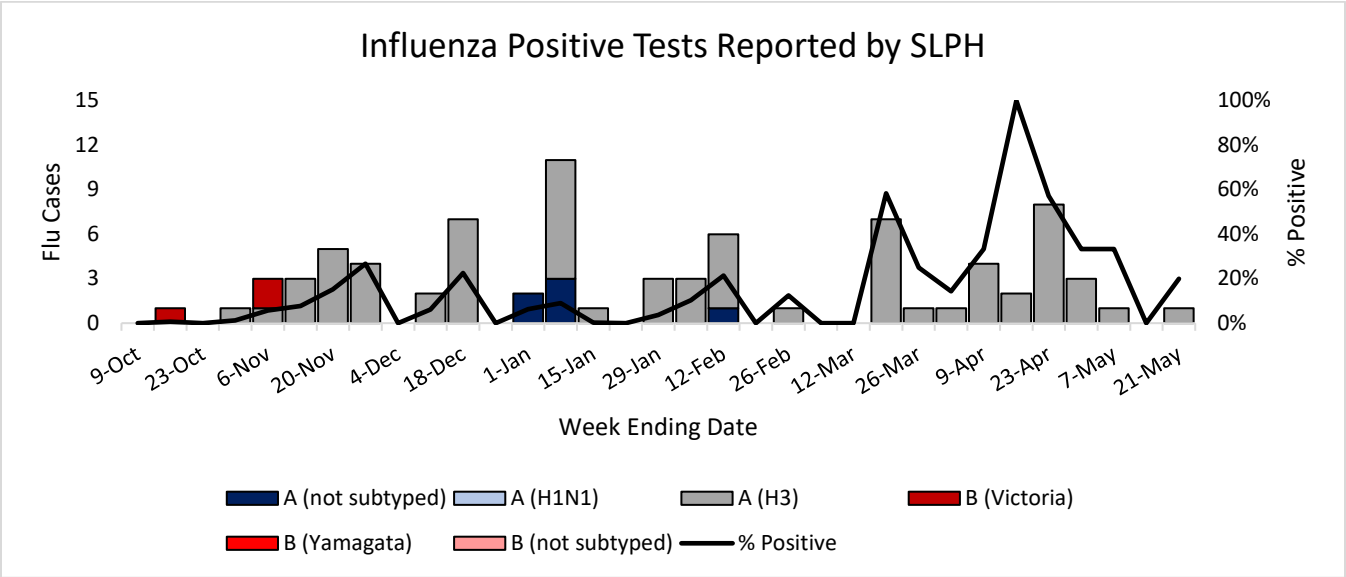
How many patients had an influenza-associated death this flu season?

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.

Influenza-Associated Deaths Reported in North Carolina (5/1/21-5/21/22)

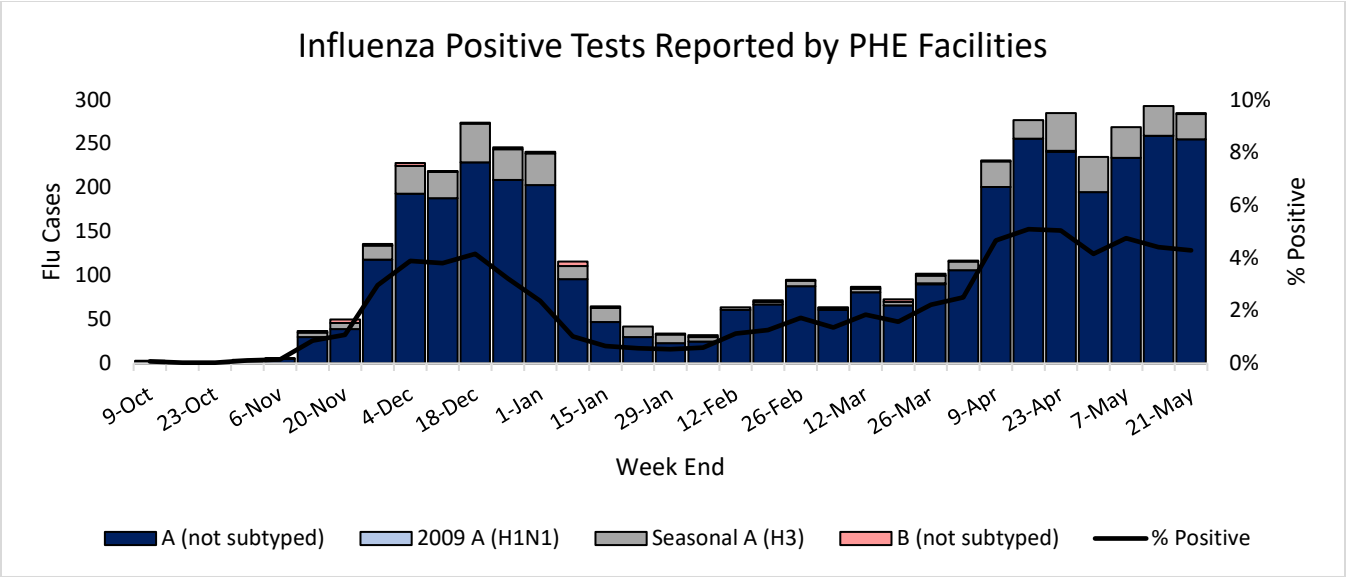
Total Flu Deaths
17



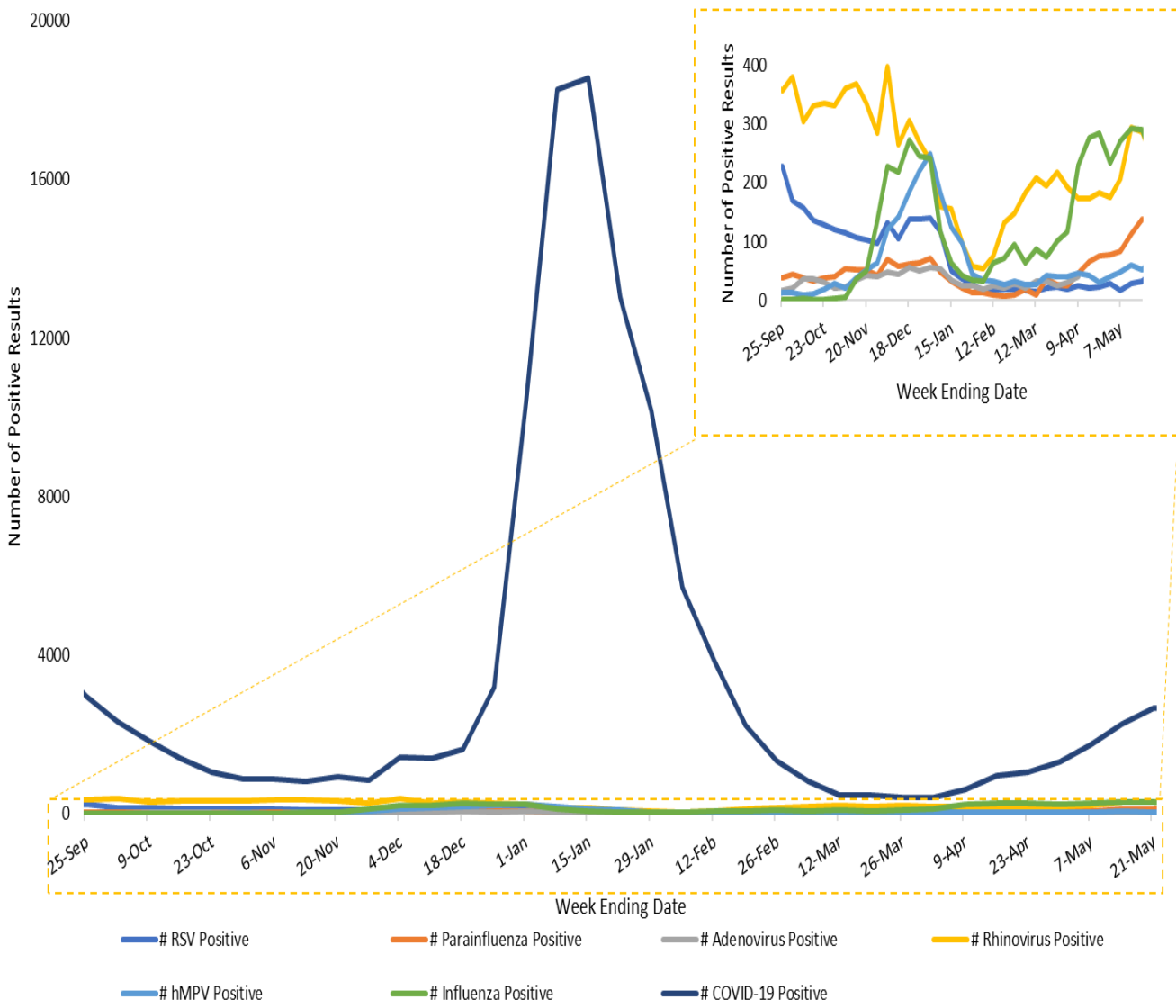


Influenza Virus Isolate Results for 2021–2022*		
Virus Type	Total Positive for SLPH (10/03/21-05/21/2022)	Total Positive for PHE (10/03/21-05/21/2022)
A (unknown)	6	1,492
2009 A(H1N1)	0	0
A(H3)	43	269
B (unknown)	0	31
B (Victoria)	3	N/A
B (Yamagata)	0	N/A
Total	52	1,792

* 2020-2021 influenza season began October 2, 2021

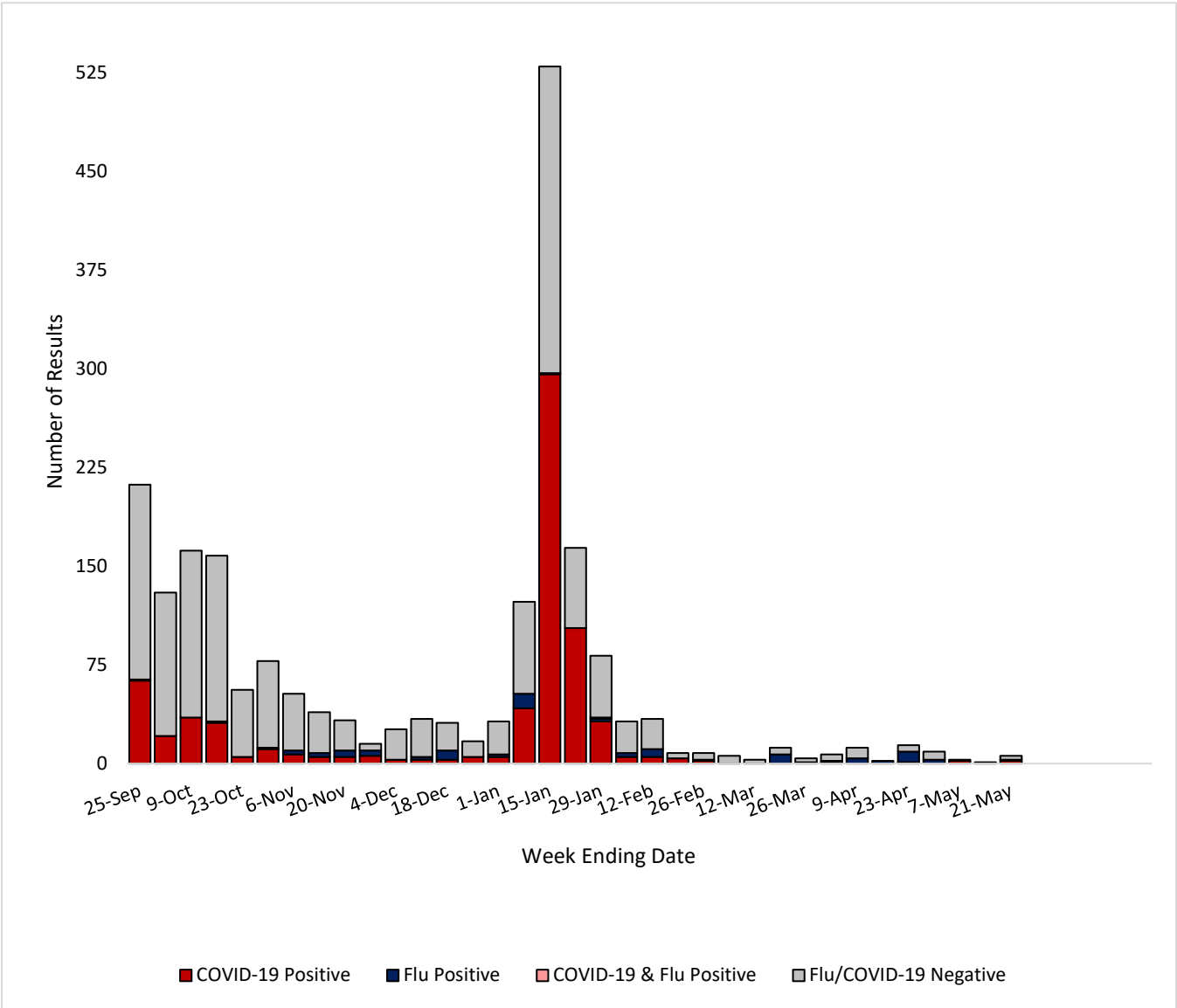


What respiratory viruses are being found in patients tested at hospitals in the PHE network?



Many viruses can cause respiratory illness. The graph above shows all tests for the listed respiratory viruses done at hospital laboratories in the PHE network. Tracking test results for patients in this network of health systems can help us to understand what other viruses are making people sick. It is important to remember that the number of positive tests depends on how many tests are done, so will change based on access to testing and testing priorities.

What respiratory viruses are being found in symptomatic patients tested at the State Laboratory of Public Health?



The State Laboratory of Public Health (SLPH) tests specimens submitted from symptomatic patients for influenza and COVID-19 using a multiplex assay. The graph shows the results from all tests for the respiratory viruses listed above and performed at SLPH on specimens from symptomatic patients. Tracking test results for patients at SLPH can help us to understand the distribution of COVID-19 and influenza as well as potential co-infections. Because testing at SLPH focuses on prioritized populations at increased risk for COVID-19 and all results in the graph came from specimens collected from symptomatic patients, the percentage of positive tests for COVID-19 is likely to be higher than the state average.

Who are the non-hospital participants in North Carolina's Influenza sentinel surveillance program reporting data and/or samples?

Local Health Departments	Other Practices	Colleges and Universities Student Health Programs
<p>Alamance County Health Department</p> <p>Henderson County Department of Public Health</p> <p>Franklin County Health Department</p> <p>Pender County Health Department</p> <p>Stokes Family Health Center</p> <p>Craven County Health Department</p> <p>Johnston County Health Department</p> <p>Cabarrus Health Alliance</p> <p>Wilkes County Health Department</p> <p>Rockingham County Division of Public Health</p> <p>Stanly County Health Department</p> <p>Montgomery County Health Department</p> <p>Pitt County Public Health Center</p> <p>Union County Health Department</p> <p>Surry County Health and Nutrition Center</p> <p>Duplin County Health Department</p> <p>Rowan County Health Department</p> <p>Carteret County Health Department</p>	<p>Wake County Human Services Children's Clinic</p> <p>Duke Primary Care Butner-Creedmoor</p> <p>CommWell Health of Tar heel</p> <p>SAS Institute Health Care Center</p> <p>Roanoke Chowan/Ahoskie Comprehensive Care</p> <p>Albemarle Community Care Clinic</p> <p>Blue Ridge Community Health Services</p> <p>Creswell Primary Care</p>	<p>NCSU Student Health Services</p> <p>NC A&T State University Student Health Center</p> <p>Wake Forest University</p> <p>ASU Health Services</p> <p>UNC-Charlotte Student Health Center</p> <p>UNC Chapel Hill</p> <p>ECU Student Health Services</p> <p>Davidson College Student Health Center</p> <p>UNC-Greensboro Student Health Services</p> <p>UNC-Pembroke Student Health Services</p> <p>WSSU Student Health Service</p>

