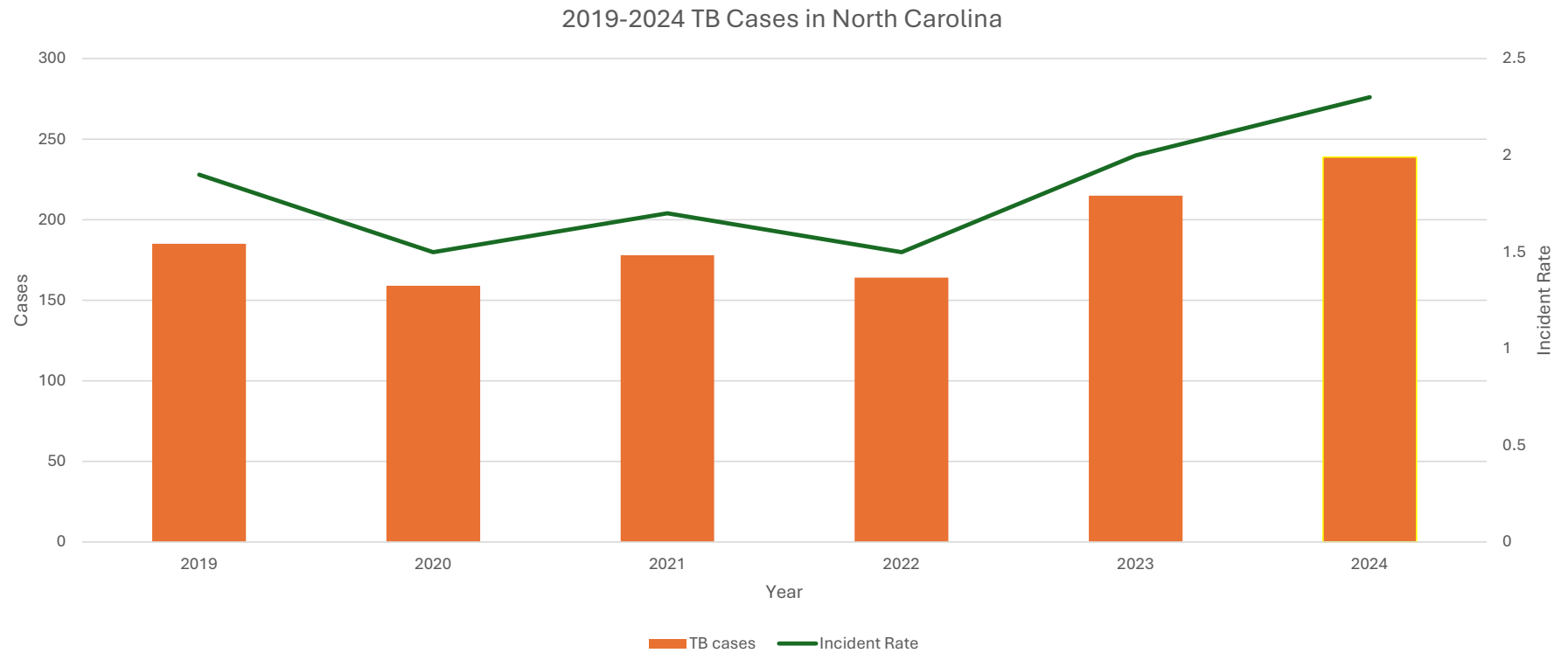


PHIT Force

Megan Davies

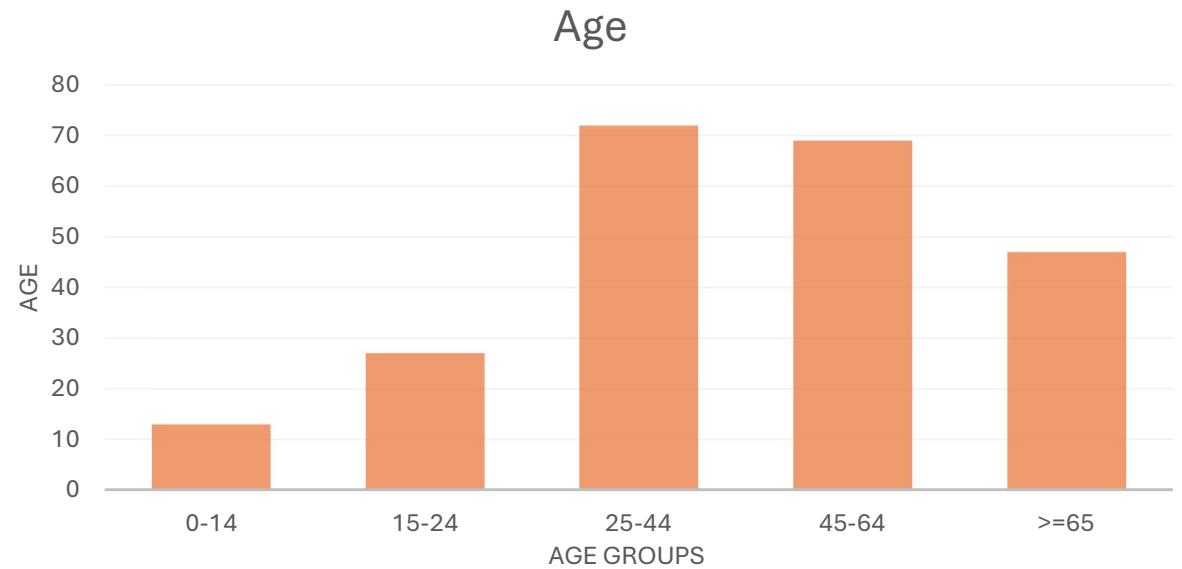
December 5, 2025

North Carolina TB Cases



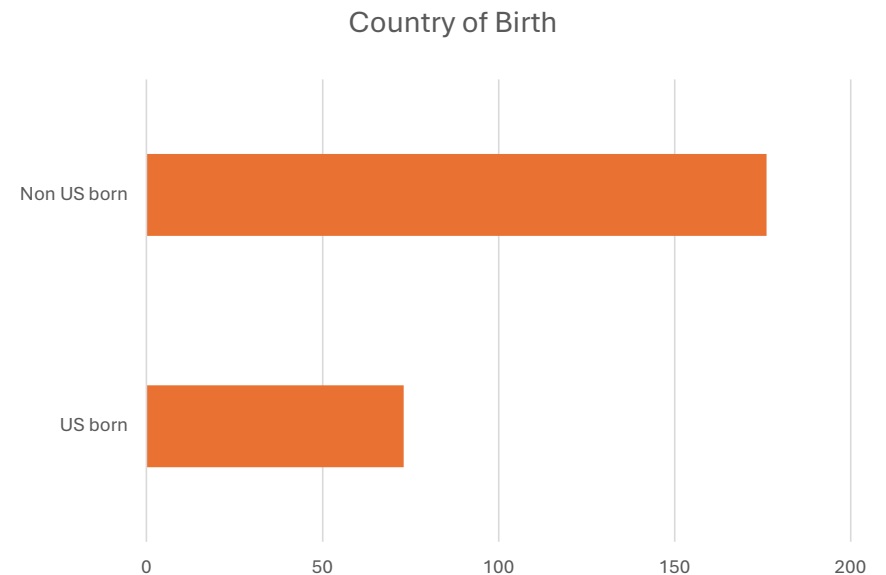
Demographics and Risk Factors for 2024

- TB in children under 5 yr is generally attributed to an adult with undiagnosed TB
- TB can be attributed to weakening immune system (age, medications, co-morbidities)



Demographics and Risk Factors for 2024

- TB in non-US born patients has increased in NC
- The national average is 70/30 of US versus non-US born persons
- NC has been close to 50/50
 - Several clusters of NC specific strains of TB
- TB in non-US born persons is commonly seen either within a few years of coming to US or after 10-20 years in US

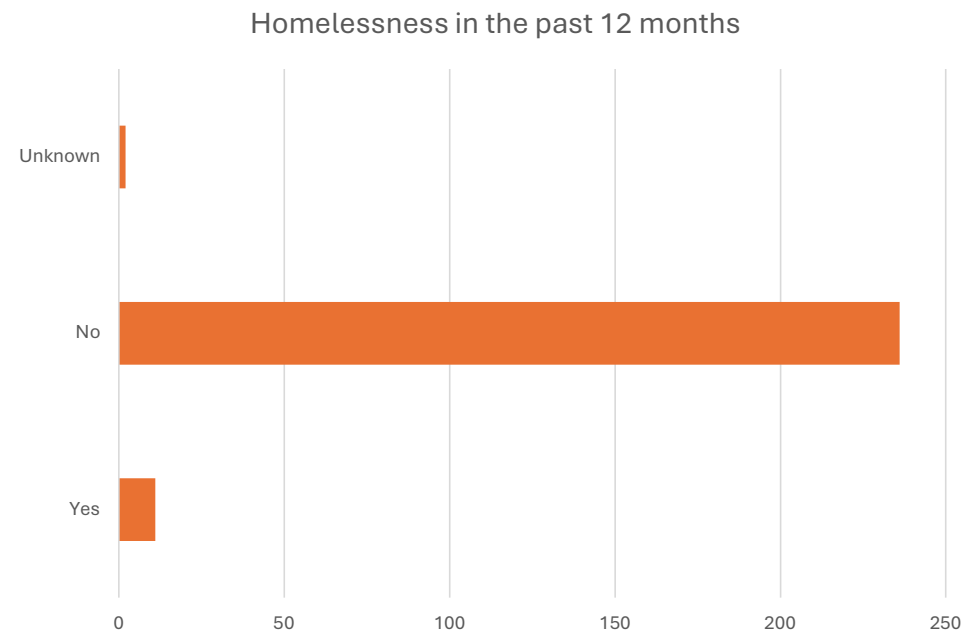


Demographics and Risk Factors for 2024

Patients who were homeless in the past 12 months
homeless ever –11 out of 249 cases

Homelessness is defined as

- no permanent address
- couch surfing
- sleeping in homeless shelters
- living in homeless encampments



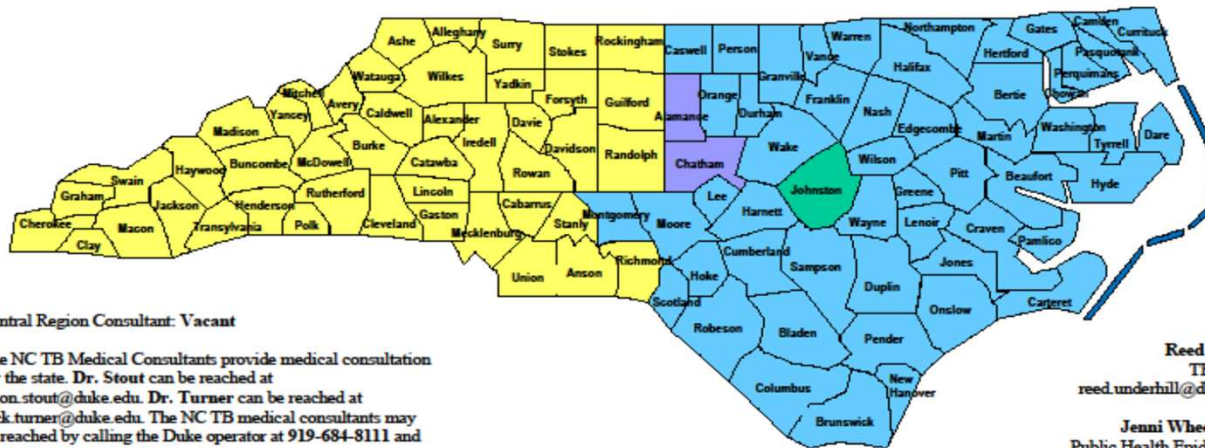
North Carolina TB Nurse Consultant Regions

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 (704) 337-6912 mobile
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Central Region Consultant: Vacant

The NC TB Medical Consultants provide medical consultation for the state. Dr. Stout can be reached at jason.stout@duke.edu. Dr. Turner can be reached at nick.turner@duke.edu. The NC TB medical consultants may be reached by calling the Duke operator at 919-684-8111 and asking that they page the physicians.

Dr. Ahmed
 Provides pediatric medical consultation for the state. Her email address is amina.ahmed@advocatehealth.org.

Reed Underhill
 TB Registrar
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 Public Health Epidemiologist
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Team Email: NCTBprogram@dhhs.nc.gov

Effective as of October 21, 2025



Respiratory and Vaccine-Preventable Diseases

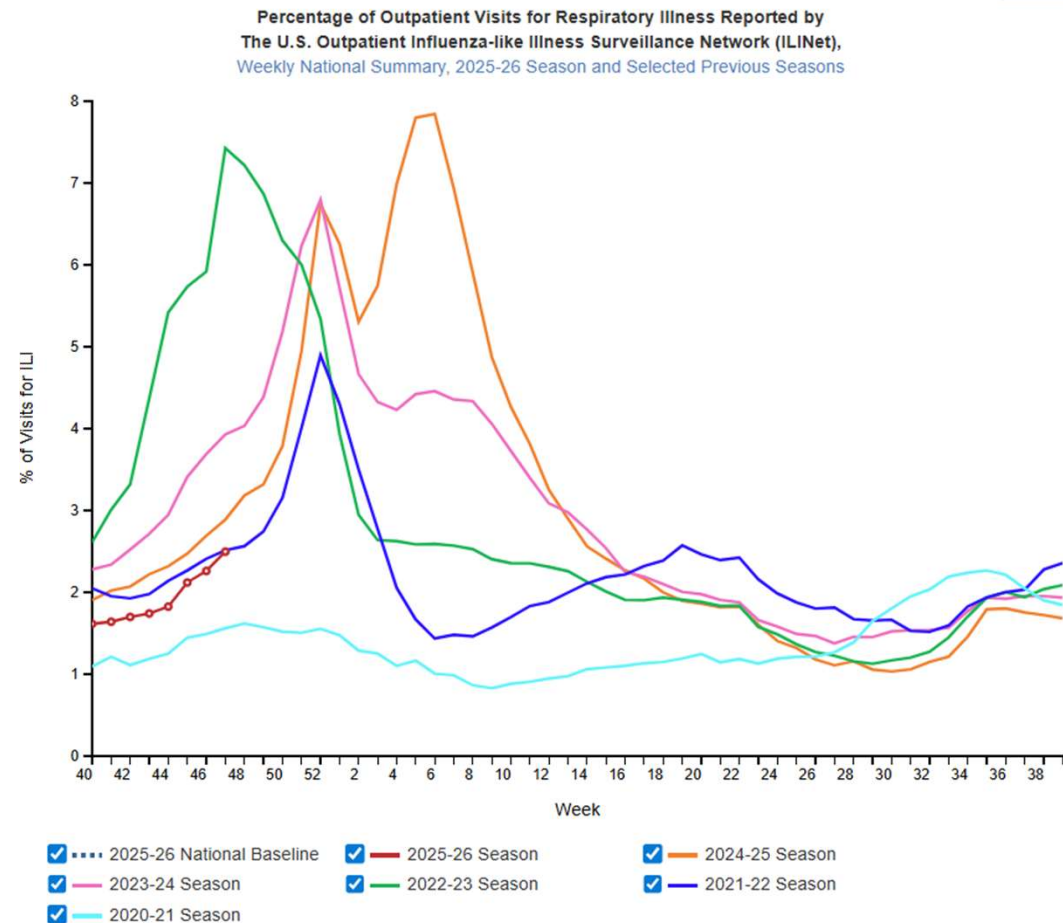
Viral Respiratory Surveillance in North Carolina

- **Emergency Department Surveillance with NC DETECT**
- **Hospital-based Surveillance with Public Health Epidemiologists (PHEs)**
- **Influenza-like Illness Network (ILINet)**
- **North Carolina State Laboratory of Public Health (SLPH)**
- **Respiratory Virus Hospitalization Surveillance Network (RESP-NET)**
- **Adult and Pediatric Influenza-associated Deaths and Novel Influenza Infections in Humans**
- **Wastewater Monitoring**

<https://epi.dph.ncdhhs.gov/cd/flu/figures/flu2324.pdf>

Current National Trends

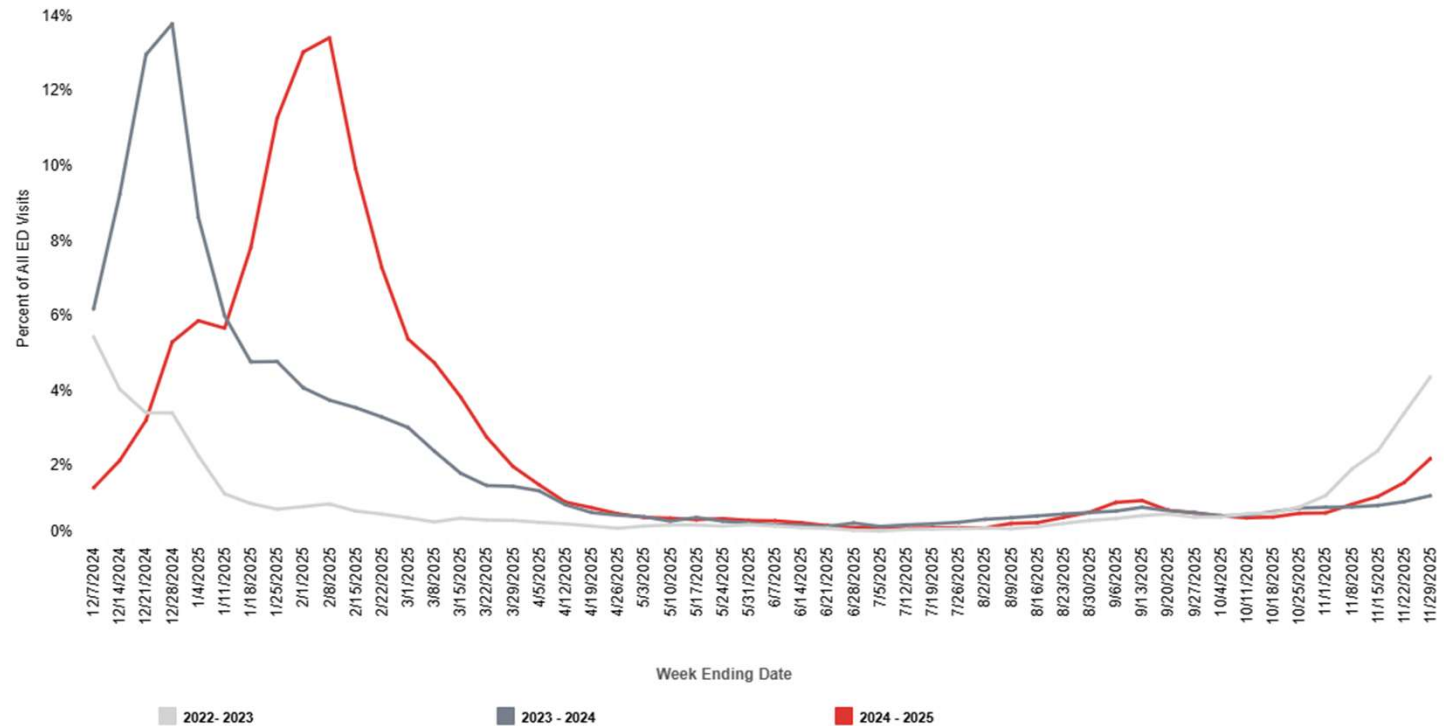
- **Seasonal influenza activity remains low nationally but is increasing, primarily among children and young adults**
 - % positivity and % of ED visits for influenza among pediatric age groups increased the week ending Nov 22nd
- **358 influenza viruses were reported by public health laboratories with 343 influenza A and 15 influenza B. Of the influenza A viruses subtyped 18% were influenza A(H1N1)pdm09 and 82% were A(H3N2)**



https://www.cdc.gov/fluview/surveillance/2025-week-45.html?utm_source=substack&utm_medium=email

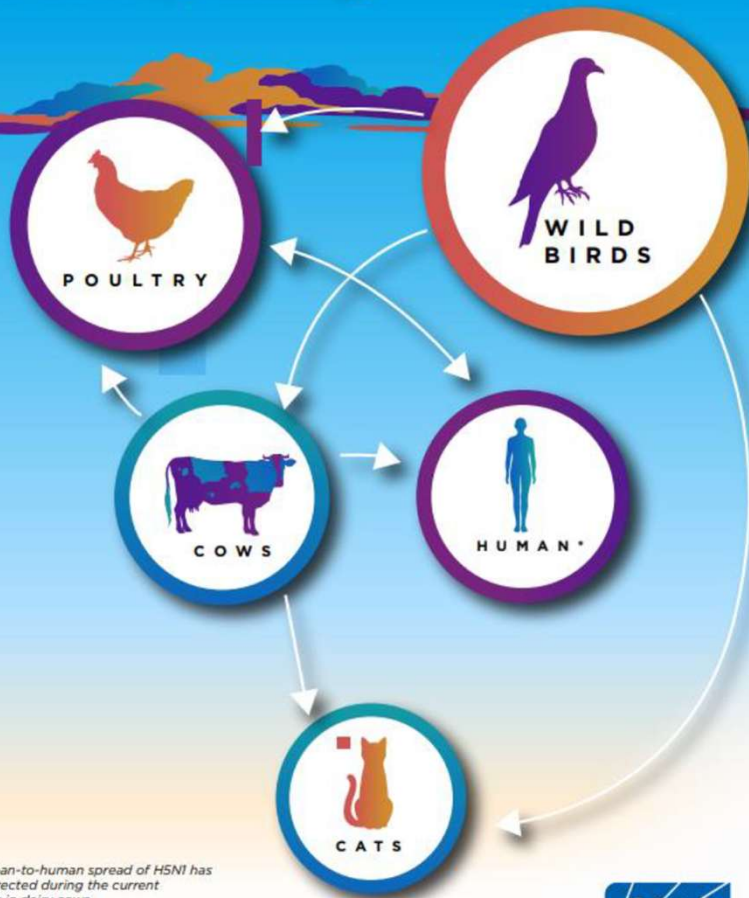
Current NC Trends

- Activity low, but increasing
- First flu death on October 2, 2025
- 6 adult influenza-associated deaths have been reported
- Still a good time to encourage vaccination



<https://covid19.ncdhhs.gov/dashboard/respiratory-virus-surveillance>

H5N1 Bird Flu How is it Spreading?



**No human-to-human spread of H5N1 has been detected during the current outbreak in dairy cows.*

NEIRDW1, CC | 05-20-2024



HPAI/H5N1

- **Significant decline during spring and summer of 2025, but steady increase in recent weeks**
- **CDC estimates that the current risk to the general public is low**
- **Risk factors that can increase risk include:**
 - **Occupational and recreational exposure to infected animals or animal products**
 - **Close contact with infected person**

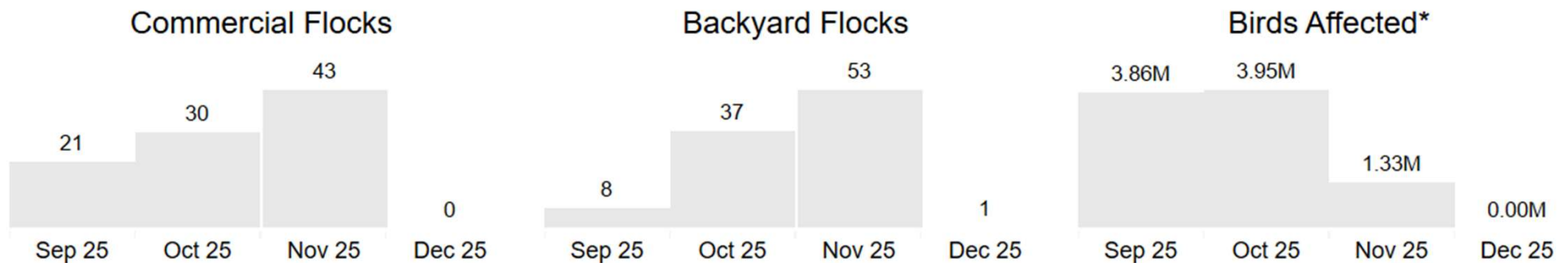
<https://www.cdc.gov/bird-flu/hcp/case-definition/index.html>
<https://flu.ncdhhs.gov/HPAI/index.htm>

HPAI/H5N1

- **Detections in five commercial poultry operations and three backyard flocks in North Carolina since the end of September. These are the first detections in the state since February 2025**
- **97 confirmed flocks nationally in the last 30 days affecting 1.33 million birds**

Detections by Month

Bars reflect most recent 4 months.

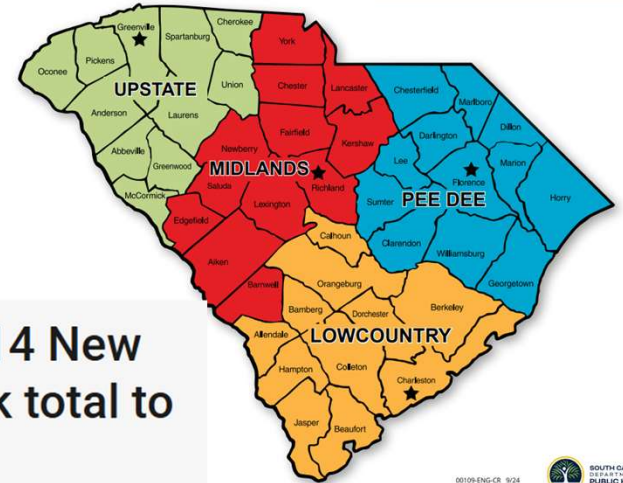


<https://www.ncagr.gov/divisions/veterinary/AvianInfluenza>

<https://www.aphis.usda.gov/livestock-poultry-disease/avian/avian-influenza/hpai-detections/commercial-backyard-flocks>

NCDHHS, Division of Public Health | Vaccine-Preventable Disease Update | 2025

South Carolina Measles Outbreak



00109-ENG-CR 9/24 SOUTH CAROLINA DEPARTMENT OF PUBLIC HEALTH

DPH Confirms Measles Outbreak in Upstate Region

FOR IMMEDIATE RELEASE:

Oct. 2, 2025

COLUMBIA, S.C. – The South Carolina Department of Public Health (DPH) is reporting 14 new cases of measles in the Upstate region. As of Oct. 2, 2025, five out of the 14 cases are part of a newly identified outbreak of measles in the Upstate region.

TUESDAY MEASLES UPDATE: DPH Reports 14 New Measles Cases in Upstate, Bringing Outbreak total to 76, Additional School Exposures

Correction: A previous version of this release had incorrect counts about where exposures occurred. Those numbers have been updated below. In addition, there was a typo in the name of a school, and the correction has been made below.

FOR IMMEDIATE RELEASE:

Dec. 2, 2025

COLUMBIA, S.C. — The South Carolina Department of Public Health (DPH) is reporting [14 new cases of measles](#) in the state since Friday, bringing the total number of cases in South Carolina related to the Upstate outbreak to 76 and the total number reported to DPH this year to 79.

<https://dph.sc.gov/news/dph-confirms-measles-outbreak-upstate-region>



919-733-3419

Measles
is immediately reportable

Includes any **suspicion of
measles**, not just laboratory
confirmed cases

NC DHHS Measles Resources

- **CD manual resources:** <https://epi.dph.ncdhhs.gov/cd/lhds/manuals/cd/measles.html>
- **Measles website resources:** <https://www.dph.ncdhhs.gov/programs/epidemiology/communicable-disease/measles/providers>
- **New to the measles website:**
 - [Check Your Measles Immunity Tool](#)
 - [Measles Vaccination Dashboard](#)

2025 Pertussis in North Carolina Update

- **Pertussis continues to spread throughout the state**
- **As of December 1, 2025, there were over 850 cases reported**
 - 41 hospitalizations
 - 46% of hospitalization have been infants
 - Zero deaths
- **Infant incidence continue to be 2.2x higher than children ages 1 to 4 (66.0 vs 30.2 per 100,000).**
- **So far, 15 pertussis outbreaks have been reported**

Vaccination Coverage in 2025 Cases

- **Only half of cases are known to be vaccinated and up-to-date**
 - 27% (N=221) Never vaccinated
 - 8% (N=68) Vaccinated but not up to date
 - 5% (N=38) Vaccinated but unknown if up to date
 - 51% (N=411) Vaccinated and up to date
 - 8% (N=68) Unknown

- **Among infants, only 41% of mothers are known to have received maternal Tdap during pregnancy.**

Mpox

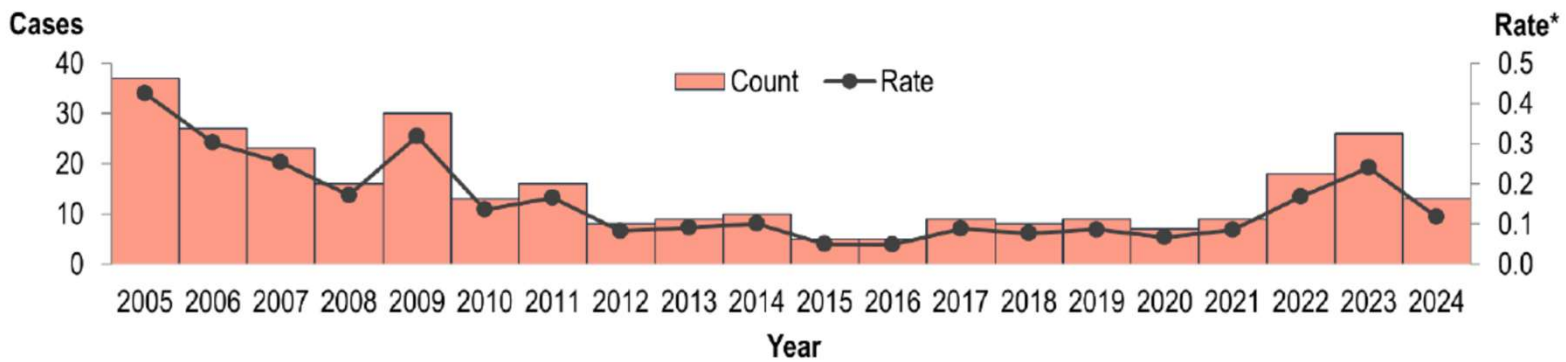
- **Keep mpox on your differential when seeing patients with symptoms consistent with mpox.**
- **Offer vaccine to at risk individuals. Vaccination remains an important strategy against both clades of mpox.**
- **Ask patients with suspected mpox infection about:**
 - Travel to Central or Eastern Africa
 - Close contact with someone with such recent travel
- **Contact the Communicable Disease Branch epidemiologist on call at 919-733-3419 to coordinate clade-specific testing for patients with these risk factors**

Meningococcal Resistance Memo

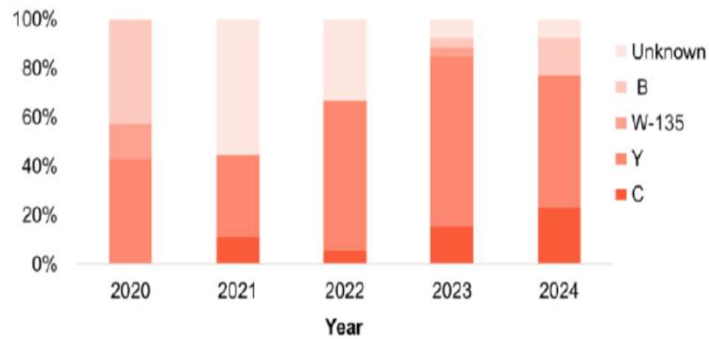
- **An additional ciprofloxacin- and penicillin-resistant case of invasive meningococcal disease caused by *Neisseria meningitidis* serogroup Y (NmY) was identified in the Charlotte Metropolitan region.**
- **NC DHHS recommends that providers in the Charlotte Metropolitan region including Cabarrus, Gaston, Iredell, Lincoln, Mecklenburg, Rowan, and Union Counties avoid the use of ciprofloxacin for prophylaxis of close contacts of invasive meningococcal disease cases and prescribe rifampin, ceftriaxone, or azithromycin instead.**
- **Providers treating residents from Chester, Lancaster, or York counties in South Carolina were also recommended to follow this guidance for patients being treated in North Carolina medical facilities.**
- **Providers should continue to follow these recommendations through April 2027 unless additional cases with resistance are identified in the catchment area and the timeline is extended.**

<https://www.dph.ncdhhs.gov/epidemiology/communicable-disease/meningococcalprophylaxismemofinalpdf/open>

Meningococcal cases decreased in 2024 after a stepwise increase the last few years.
 NC 2005-2024 meningococcal case count and rate by year



NC 2020-2024 meningococcal cases by serogroup



Foodborne

- **Infant botulism from ByHeart Whole Nutrition infant formula**
 - 23 cases from 13 states
 - Onset dates (n=22): 8/9/2025 –11/11/2025
 - 2 NC suspect cases
 - Both have clinical specimens at CDC
 - Both have opened leftover formula cans
 - Recall includes all ByHeart Whole Nutrition infant formula products since November 11

Vectorborne Diseases

- **Scrub typhus not identified in North Carolina**
https://wwwnc.cdc.gov/eid/article/31/11/25-0763_article
- **WNV responses in Columbus (2024) and Durham (2025) Counties**

Durham County West Nile Virus (WNV) Response

Alerted to likely neuroinvasive WNV case by university partner, 2 additional cases later identified

Coordinated call with Durham County CD and EH teams

Issued state and local press releases

Public health entomologists worked with Durham County EH, NCSU, and UNC to conduct mosquito surveillance

Initial mosquito surveillance indicated ongoing risk of transmission to community

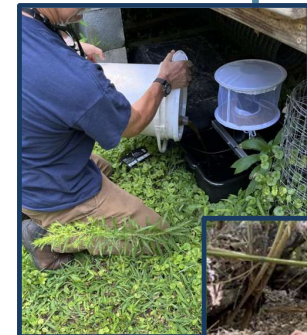
Sampling location	Number of mosquito pools tested	Number of WNV-positive mosquito pools	Percent positivity
Case residence	28	6	21.4%
Ellerbee Creek Trail	16	3	18.8%
Local church	8	2	25.0%
Local pond	13	2	15.4%
Total	65	13	20.0%

No additional WNV-positive mosquitoes identified post-spraying

Key outcomes

- Durham EH discussing initiation of local mosquito surveillance program
- CDB supporting development of mosquito surveillance & control capacity in additional counties

Barrier and ultra-low volume (ULV) spraying conducted by private pest control operators through contracts with Durham EH



Healthcare Associated Infections

- **Multistate cluster of NDM and OXA-23 carbapenemase-producing organisms (CPOs) among patients with burns and complex wounds**
- **CDC investigating potential product contamination due to widespread outbreak and closely related organisms**
- **NC isolates sent to the ARLN for whole-genome sequencing have not matched cluster strain**