

Invasive Meningococcal Disease Report, March 2014

Background:

During December 2013–February 2014, 11 cases of invasive meningococcal disease were reported to the North Carolina Division of Public Health (NC DPH). In response to these reports, NC DPH staff used statewide surveillance data to characterize and evaluate epidemiologic trends of reported meningococcal disease. A summary of this evaluation may be found in the text and figures below.

Key Points:

- The number of meningococcal disease cases reported in North Carolina so far during the winter of 2013–2014 is higher than the number of cases that have typically been reported over the past five years. However, similar numbers of meningococcal disease cases had been reported in the state prior to 2009.
 - North Carolina has had an average of 20 reported cases of meningococcal disease per year since 2005, the first year for which reported cases are entered in North Carolina’s Electronic Disease Surveillance System.
 - Most cases of meningococcal disease occur in the winter months (Figure 1).
 - The total number of reported cases of meningococcal disease in North Carolina decreased during 2005–2013 (Figure 2). This decrease may be related to the 2005 recommendation by the Advisory Committee on Immunization Practices (ACIP) for the routine use of a meningococcal conjugate vaccine in adolescents.¹
 - During 2005–2013, the incidence of meningococcal disease among 0–4 year-olds decreased from 1.37 cases per 100,000 persons per year to 0.16 cases per 100,000 persons per year, making it more similar to the incidence in other age groups (Figure 3). The incidence among 5–14 year-olds and 20+ year-olds remained relatively steady over this time period. The incidence of meningococcal disease among 15–19 year-olds has been variable, with no cases from this age group reported in 2008 and 0.91 cases per 100,000 persons per year reported in 2009. However, the number of meningococcal disease cases in each age group is small, making age-specific incidences rates unstable.
- No links have been identified among the recently reported cases through epidemiologic investigation or laboratory testing.
 - The recent cases have included infections with four distinct meningococcal serogroups (B, C, Y and W-135) and have been geographically distributed throughout the state (Figures 4, 5).
 - The recent cases have occurred in persons ranging from 3–76 years of age; no common risk factors have been identified.

Figure 1. Reported Cases of Invasive Meningococcal Disease by Date of Symptom Onset, North Carolina, January 2005–February 2014

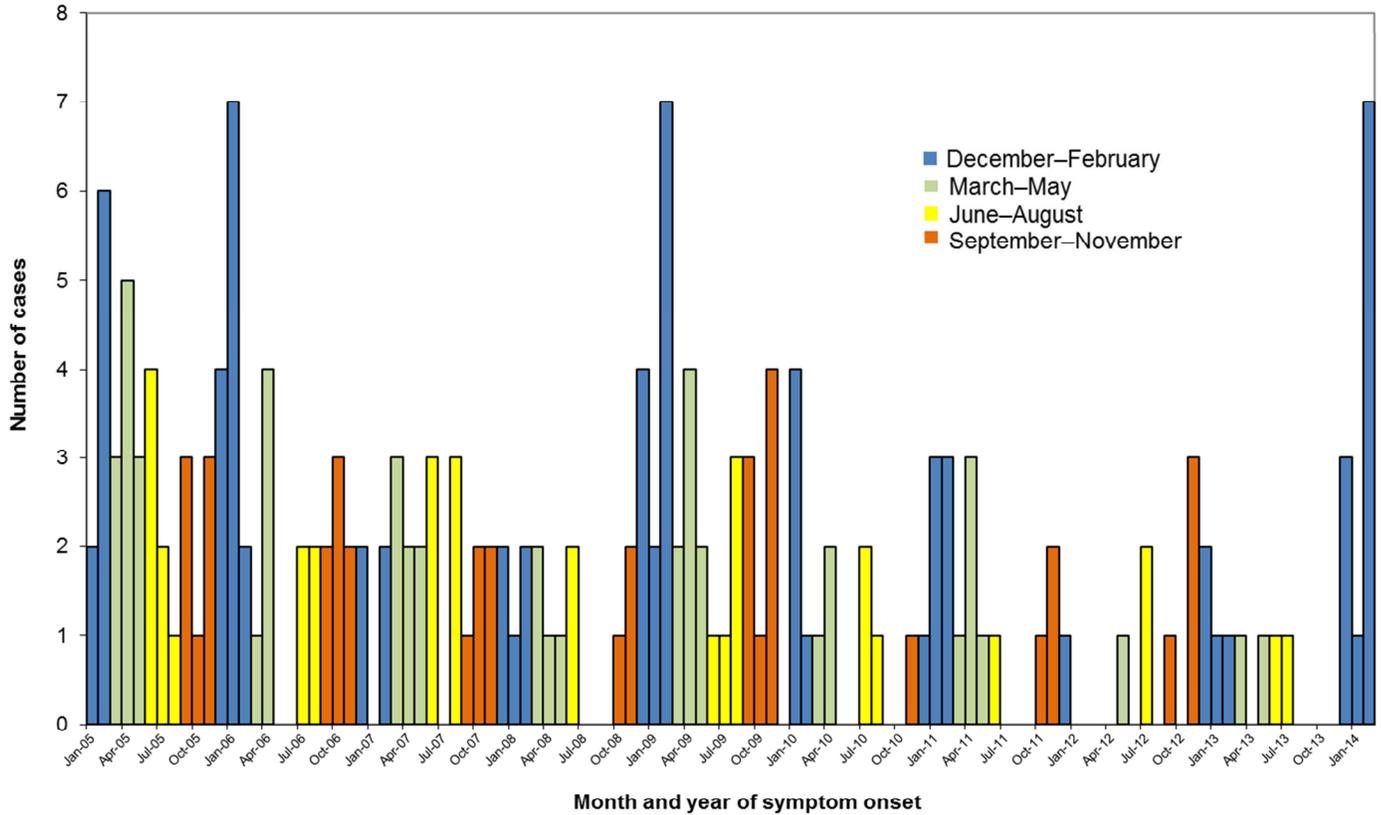


Figure 2. Reported Cases of Invasive Meningococcal Disease, North Carolina, 2005–2013

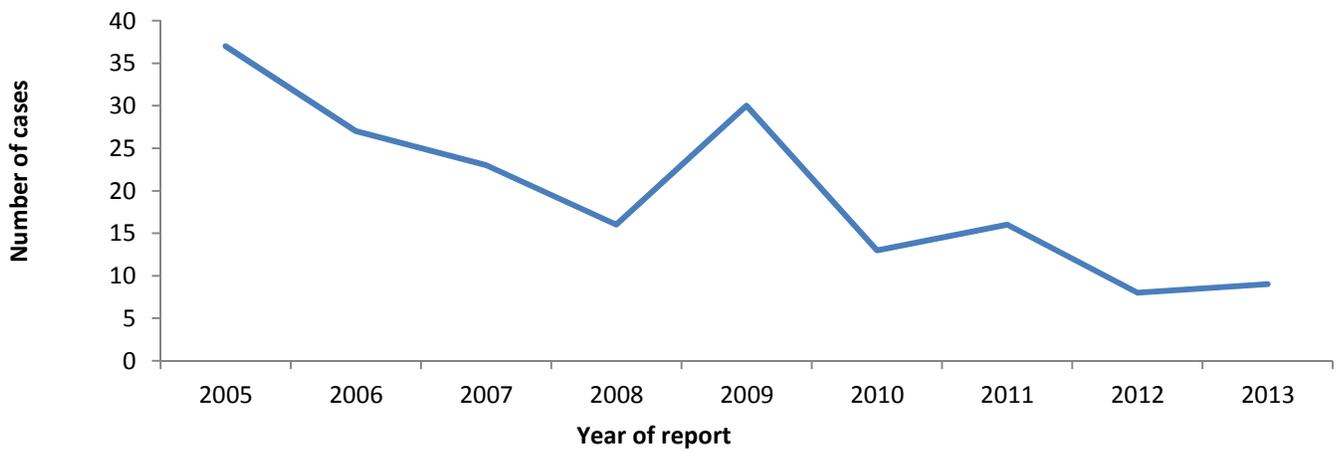


Figure 3. Incidence of Invasive Meningococcal Disease by Age Group, North Carolina, 2005 - 2013

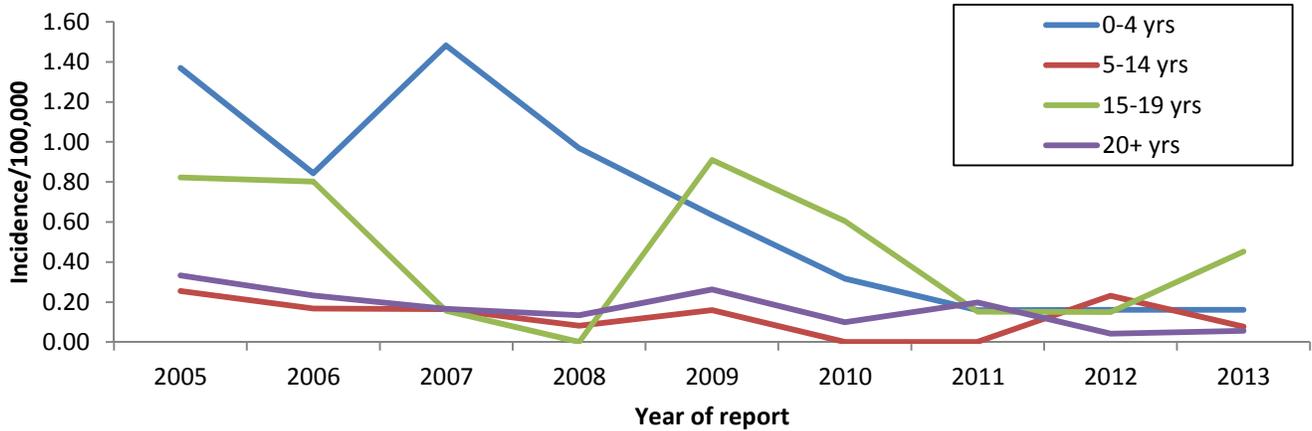


Figure 4. Reported Cases* of Invasive Meningococcal Disease by Date of Symptom Onset, North Carolina†, January 2013–February 2014 (n=17)

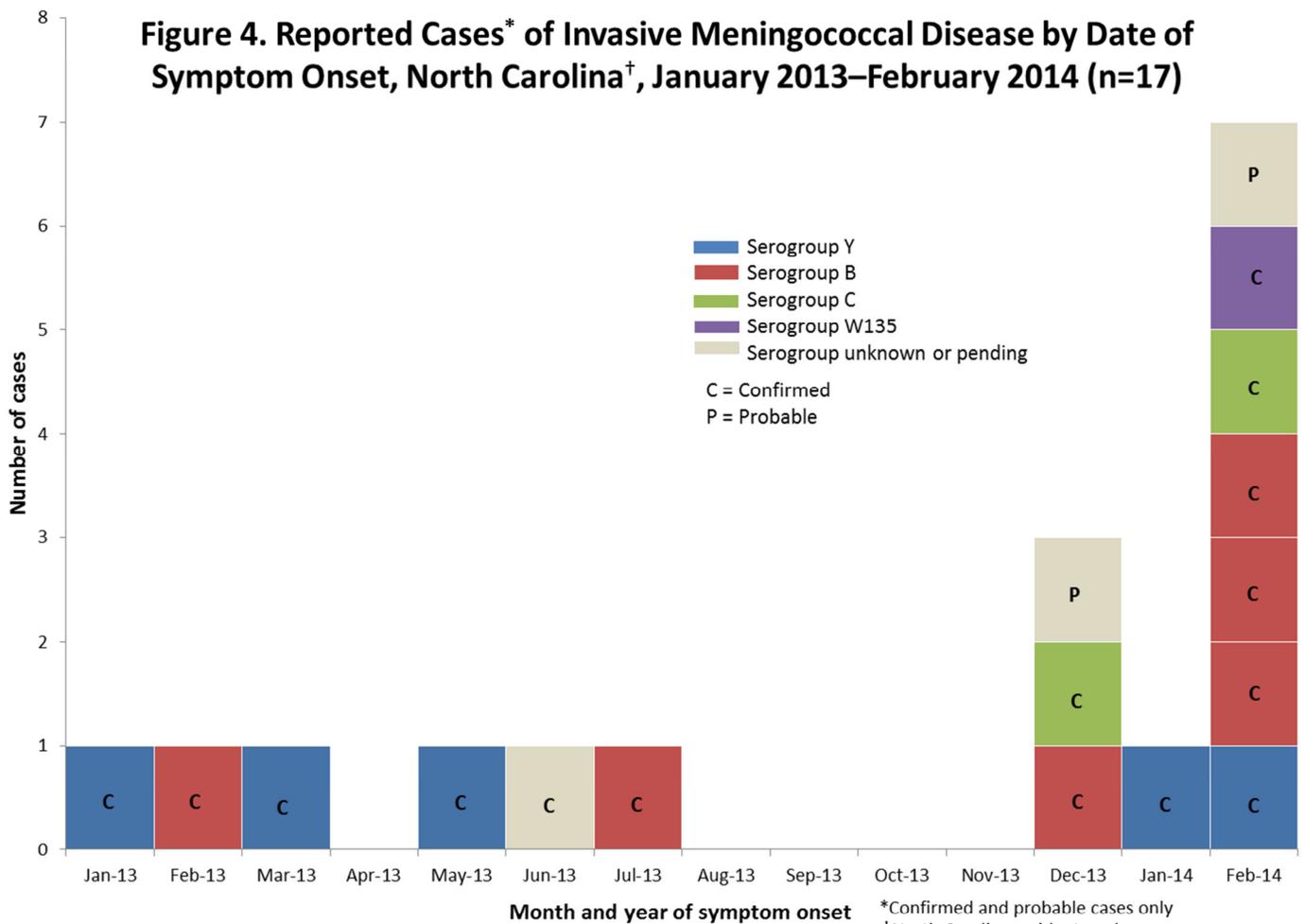
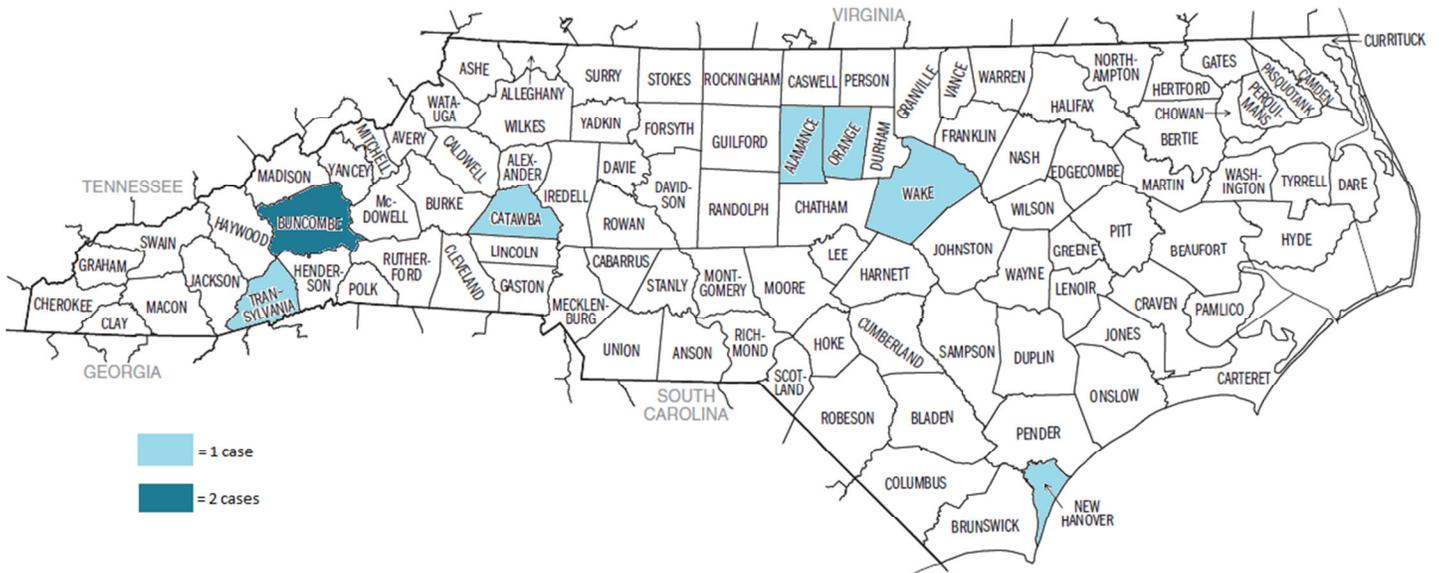


Figure 5. Distribution and number of reported meningococcal disease by case-patient's county of residence, North Carolina, January–February 2014



Reference

- Centers for Disease Control and Prevention. Prevention and Control of Meningococcal Disease: Recommendations of the Advisory Committee on Immunization Practices (ACIP). MMWR 2013; 62(RR02);1-22. Available from: <http://www.cdc.gov/mmwr/preview/mmwrhtml/rr6202a1.htm>.