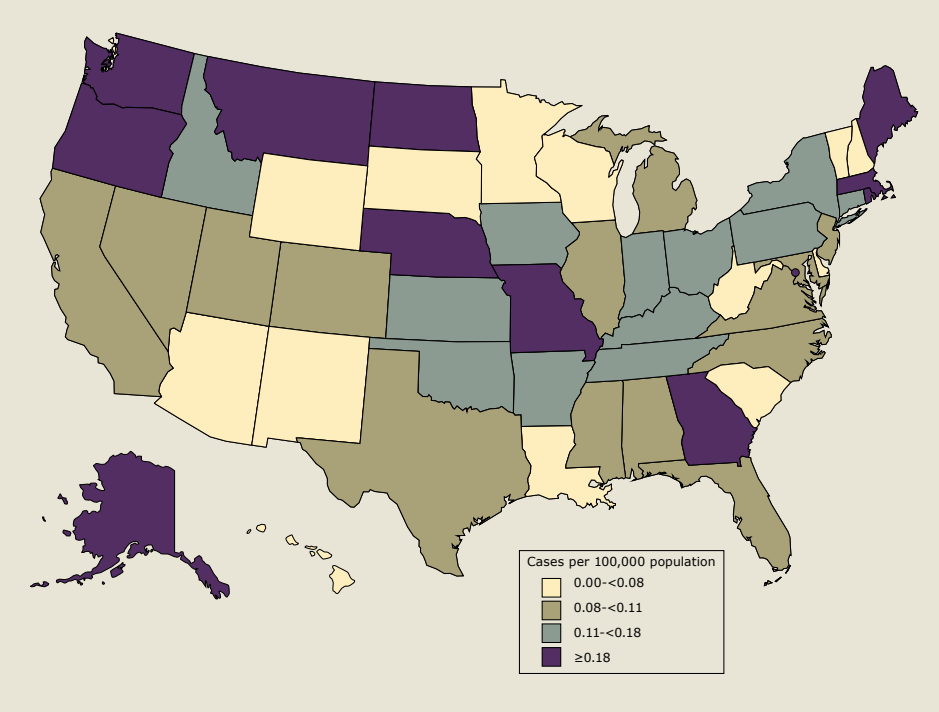
Enhanced Meningococcal Disease Surveillance Report, 2019

Confirmed and Probable Cases Reported to the National Notifiable Diseases Surveillance System, 2019



As part of Enhanced Meningococcal Disease Surveillance (EMDS)*, additional data and isolates were collected from 50 state and 3 large jurisdiction health departments. In 2019, the population under surveillance was 328,239,523. EMDS focuses on: (1) collecting isolates from all cases; and (2) collecting complete case information, with an emphasis on college attendance for cases in people aged 15–24 years; history of sex with men for cases in males aged ≥16 years; and information on homelessness for all cases.

CSTE case definition: A confirmed case was defined as isolation of *Neisseria meningitidis* or detection of *N. meningitidis* by PCR from a normally sterile body site.

A probable case was defined as detection of *N. meningitidis* antigen by latex agglutination or immunohistochemistry.

* Funding for EMDS is provided by CDC through the Epidemiology and Laboratory Capacity for Infectious Diseases (ELC) Cooperative Agreement.

Meningococcal Disease Cases and Incidence by Serogroup and Age

Age (years)	B No. (Incidence†)	C No. (Incidence†)	W No. (Incidence†)	Y No. (Incidence†)	Nongroupable No. (Incidence†)	Other‡/ Unknown No. (Incidence†)	Total No. (Incidence†)
<1	16 (0.42)	4 (0.11)	0 (0.00)	4 (0.11)	3 (0.08)	4 (0.11)	31 (0.82)
1–4	12 (0.08)	10 (0.06)	2 (0.01)	1 (0.01)	1 (0.01)	4 (0.03)	30 (0.19)
5–10	0 (0.00)	5 (0.02)	0 (0.00)	1 (0.00)	0 (0.00)	1 (0.00)	7 (0.03)
11–15	2 (0.01)	4 (0.02)	0 (0.00)	0 (0.00)	1 (0.00)	2 (0.01)	9 (0.04)
16–23	21 (0.06)	1 (0.00)	1 (0.00)	3 (0.01)	11 (0.03)	6 (0.02)	43 (0.13)
24–44	21 (0.02)	13 (0.01)	8 (0.01)	19 (0.02)	9 (0.01)	10 (0.01)	80 (0.09)
45–64	12 (0.01)	28 (0.03)	11 (0.01)	20 (0.02)	5 (0.01)	11 (0.01)	87 (0.10)
≥65	15 (0.03)	20 (0.04)	18 (0.03)	20 (0.04)	7 (0.01)	8 (0.01)	88 (0.16)
Total	**99 (0.03)**	**85 (0.03)**	**40 (0.01)**	**68 (0.02)**	**37 (0.01)**	**46 (0.01)**	**375 (0.11)**

Includes all confirmed and probable cases reported from all jurisdictions. †Cases per 100,000 population. ‡Includes 3 serogroup E cases.

U.S. Department of Health and Human Services
Centers for Disease Control and Prevention

CS 283195-C 05/11/2023

Case Fatality

Serogroup	No. deaths	CFR†
B	6	6.1
C	8	9.6
W	3	7.7
Y	8	11.8
NG	5	13.5
Unknown	5	13.9
Overall	**35**	**9.6**

Age (years)	No. deaths	CFR†
<1	4	12.9
1–4	1	3.3
5–10	1	16.7
11–15	0	0.0
16–23	4	9.5
24–44	4	5.2
45–64	12	14.1
≥65	9	10.5
Overall	**35**	**9.6**

Includes all confirmed and probable cases reported from all jurisdictions

† Case fatality ratio (CFR): deaths per 100 cases with known outcome; 9 (2%) cases with unknown outcome.

Laboratory Confirmation Method

83.9% (313/373) of confirmed cases were confirmed by culture; of those 266 (85.0%) had isolates submitted to CDC.
10.7% (40/373) of confirmed cases were confirmed by PCR.
4.3% (16/373) of confirmed cases had unknown laboratory confirmation method.

Outbreaks

94.4% (354/375) of cases had information on association with an outbreak; of those, 15 (4.2%) were part of an outbreak.

Complement inhibitor use

75.2% (282/375) of cases had information on use of a complement component inhibitor; of those, 5 (1.8%) were taking a complement inhibitor.

Homelessness

94.1% (353/375) of cases had information on homelessness; of those, 9 (2.6%) were experiencing homelessness.

History of sex with men among cases in men

Among cases in men aged ≥16 years, 66.9% (101/151) had information on history of sex with men; of those, 10 (9.9%) were identified as men who had sex with men (MSM).

College attendance among cases in people aged 18-24 years

Among cases in people aged 18-24 years, 95.4% (41/43) had information on college attendance; 21 (51.2%) were attending college.

Symptoms

77.6% (291/375) of cases had symptom information available; of those 4 (1.4%) had gastrointestinal symptoms (nausea, vomiting, or diarrhea) in the absence of typical meningococcal symptoms (headache, fever, neck stiffness, rash).

Antibiotic-resistant serogroup Y

68 NmY cases were reported. 57 (83.8%) had isolates available for characterization at CDC; of those, 8 (14.0%) were found to be ciprofloxacin- and penicillin-resistant, and 5 (8.8%) were found to be penicillin-resistant only.

Meningococcal Disease Cases and Incidence by Serogroup and College Attendance*

	B No. (Incidence†)	C No. (Incidence†)	W No. (Incidence†)	Y No. (Incidence†)	Nongroupable No. (Incidence†)	Total** No. (Incidence†)
Attending college‡	12 (0.10)	0 (0.00)	0 (0.00)	0 (0.00)	7 (0.06)	**21 (0.18)**
Not attending college‡	6 (0.03)	1 (0.01)	2 (0.01)	3 (0.02)	5 (0.03)	**20 (0.11)**

*Among cases in people aged 18-24 years. ** Includes 4 cases with unknown serogroup and 1 serogroup E case. † Cases per 100,000 population.
‡ Assumes 38.3% of 18–24 year olds attending college[1]

Vaccination Status among cases 18-24 years

MenACWY (meningococcal conjugate vaccine) receipt:

College students: 100% (21/21) had information on MenACWY receipt; of those 95.2% received ≥1 dose of MenACWY.
Persons not attending college: 80.0% (16/20) had information on MenACWY receipt; of those 75.0% received ≥1 dose of MenACWY.

MenB (serogroup B meningococcal vaccine) receipt:

College students: 76.2% (16/21) had information on MenB receipt; of those 56.3% received ≥ 1 dose of MenB.

Persons not attending college: 55.0% (11/20) had information on MenB receipt; of those 0 received MenB.

HIV Infection among Meningococcal Disease Cases

Data collected on HIV status will allow CDC to assess the impact of the recent Advisory Committee on Immunization Practices recommendation for use of MenACWY vaccination in people with HIV (PWH)[2]

54.7% (205/375) of cases had information on HIV status; of those, 6 (2.9%) were identified as PWH.

[1] U.S. Department of Education. Institute of Education Sciences NCES. Integrated Postsecondary Education Data System Fall Enrollment Survey. https://nces.ed.gov/ipeds/Home/UseTheData, 2015.

[2] MacNeil JR, Rubin LG, Patton M, Ortega-Sanchez IR, Martin SW. Recommendations for Use of Meningococcal Conjugate Vaccines in HIV-Infected Persons — Advisory Committee on Immunization Practices, 2016. *MMWR Morb Mortal Wkly Rep* 2016;65:1189–1194. DOI: http://dx.doi.org/10.15585/mmwr.mm6543a3.

www.cdc.gov/meningococcal

CS 283195-A 05/11/2023