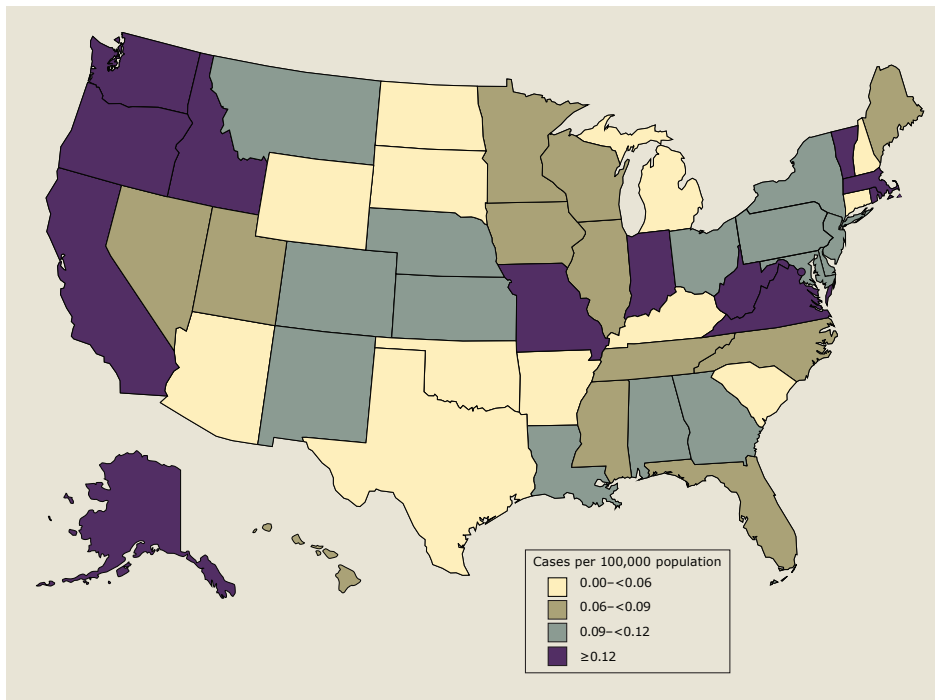


Enhanced Meningococcal Disease Surveillance Report, 2017*



Confirmed and Probable Cases Reported to the National Notifiable Diseases Surveillance System, 2017



As part of Enhanced Meningococcal Disease Surveillance (EMDS)**, additional data and isolates were collected from 45 state and 3 large jurisdiction health departments. In 2017, the population under surveillance was 319,469,805 or 98% of the U.S. population. EMDS focuses on: (1) collecting isolates from all cases; (2) collecting complete case information, with an emphasis on college attendance for cases 15–24 years; history of sex with men for male cases ≥16 years; and HIV infection status 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.

*Delaware, Hawaii, Idaho, South Dakota, Wyoming, and the District of Columbia did not participate in EMDS; cases reported from these jurisdictions are only included in the map, incidence, and CFR tables (n=5). All other information is for cases from participating EMDS jurisdictions only (n=345).

**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	15 (0.38)	0 (0.00)	2 (0.05)	2 (0.05)	2 (0.05)	4 (0.10)	25 (0.63)
1–4	9 (0.06)	5 (0.03)	0 (0.00)	0 (0.00)	2 (0.01)	4 (0.03)	20 (0.13)
5–10	8 (0.03)	5 (0.02)	0 (0.00)	0 (0.00)	2 (0.01)	2 (0.01)	17 (0.07)
11–15	4 (0.02)	1 (0.00)	1 (0.00)	0 (0.00)	1 (0.00)	1 (0.00)	8 (0.04)
16–23	48 (0.14)	2 (0.01)	2 (0.01)	3 (0.01)	9 (0.03)	5 (0.01)	69 (0.20)
24–44	15 (0.02)	27 (0.03)	6 (0.01)	6 (0.01)	7 (0.01)	6 (0.01)	67 (0.07)
45–64	14 (0.02)	30 (0.04)	7 (0.01)	5 (0.01)	3 (0.00)	10 (0.01)	69 (0.08)
≥65	21 (0.04)	16 (0.03)	8 (0.02)	15 (0.03)	9 (0.02)	6 (0.01)	75 (0.15)
Total	134 (0.04)	86 (0.03)	26 (0.01)	31 (0.01)	35 (0.01)	38 (0.01)	350 (0.11)

Includes all confirmed and probable cases reported from all jurisdictions; [†]Cases per 100,000 population; and [‡]includes 2 serogroup E cases.

Case Fatality

Serogroup	No. deaths	(CFR [†])
B	16	(12.0)
C	18	(21.2)
W	3	(12.0)
Y	2	(6.5)
NG	4	(11.4)
Unknown	2	(6.1)
Overall	45	(13.1)

Age (years)	No. deaths	(CFR [†])
<1	3	(12.0)
1–4	6	(30.0)
5–10	0	(0.0)
11–15	2	(25.0)
16–23	3	(4.5)
24–44	9	(13.6)
45–64	9	(13.2)
≥65	13	(17.6)
Overall	45	(13.1)

Includes all confirmed and probable cases reported from all jurisdictions; [†]Case fatality ratio (CFR): deaths per 100 cases with known outcome; 5 (1%) cases with unknown outcome.

Laboratory Confirmation Method

84.57% (288/341) of confirmed cases were confirmed by culture; of those 245 (85.1%) had isolates submitted to CDC.
13.8% (47/341) of confirmed cases were confirmed by PCR.
1.8% (6/341) of confirmed cases had unknown laboratory confirmation method.

Outbreaks

98.0% (338/345) of cases had information on association with an outbreak; of those, 7.7% were part of an outbreak.

Eculizumab use

76.2% (263/345) of cases had information on use of the complement component inhibitor eculizumab; of those, 0 were taking eculizumab.

Homelessness

95.1% (328/345) of cases had information on homelessness; of those, 2.4% were identified as homeless.

History of sex with men among male cases

Among male cases aged ≥16 years, 67.4% (95/141) had information on history of sex with men; of those, 18.9% were identified as men who had sex with men (MSM).

College attendance among cases 18–24 years

Among cases 18–24 years, 100% (60/60) had information on college attendance; 65.0% were attending college.

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 [‡]	31 (0.27)	1 (0.01)	1 (0.01)	2 (0.02)	4 (0.03)	39 (0.34)
Not attending college [‡]	8 (0.04)	1 (0.01)	1 (0.01)	2 (0.01)	5 (0.03)	21 (0.11)

*Among cases 18–24 years. **Includes 4 cases with unknown serogroup. [†]Cases per 100,000 population; and [‡]assumes 38.3% of 18–24 year olds attending college¹

Vaccination Status among cases 18–24 years

MenACWY** vaccine receipt:

College students: 69.2% (27/39) had information on MenACWY receipt; of those 100% received MenACWY.

Persons not attending college: 66.7% (14/21) had information on MenACWY receipt; of those 57.1% received MenACWY.

MenB** vaccine receipt:

College students: 43.6% (17/39) had information on MenB receipt; of those 0 received MenB.

Persons not attending college: 33.3% (7/21) had information on MenB receipt; of those 0 received MenB.

**MenACWY = meningococcal conjugate vaccine, MenB = serogroup B meningococcal vaccine.

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 HIV-infected persons.²

44.1% (152/345) of cases had information on HIV status; of those, 9.9% were identified as HIV-infected.

*Complete information has not been received for all 2017 cases

www.cdc.gov/meningococcal



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

²MacNeil 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>.