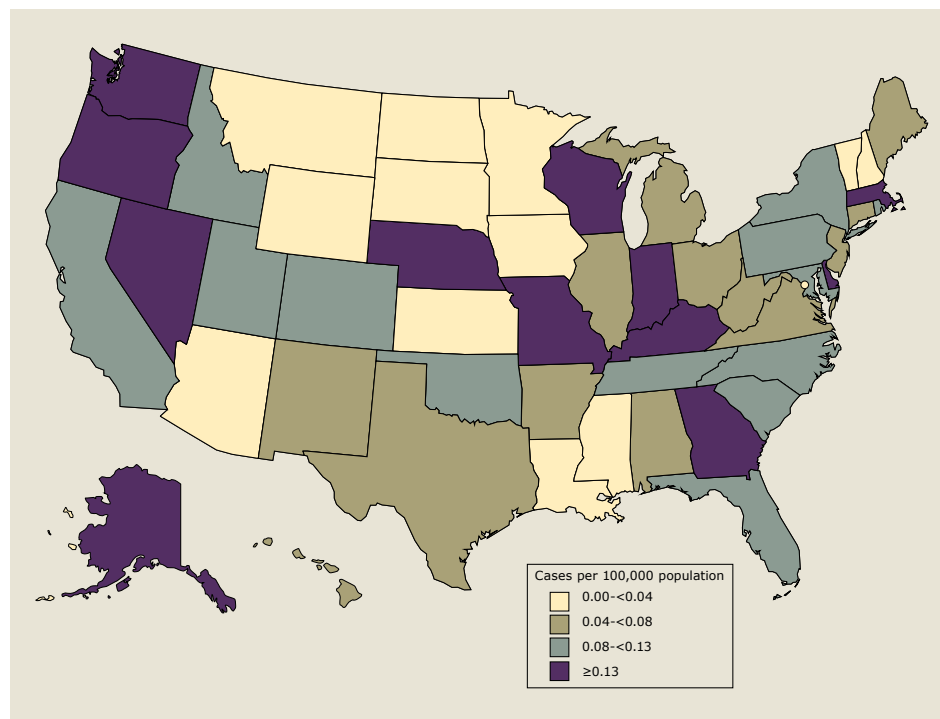


Enhanced Meningococcal Disease Surveillance Report, 2018*



Confirmed and Probable Cases Reported to the National Notifiable Diseases Surveillance System, 2018



As part of Enhanced Meningococcal Disease Surveillance (EMDS)**, additional data and isolates were collected from 45 state and 3 large jurisdiction health departments. In 2018, the population under surveillance was 320,863,137 or 98 % of the U.S. population. EMDS focuses on: (1) collecting isolates from all cases; and (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=324).

**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	21 (0.55)	6 (0.16)	2 (0.05)	1 (0.03)	2 (0.05)	0 (0.00)	32 (0.83)
1–4	12 (0.08)	10 (0.06)	1 (0.01)	4 (0.03)	1 (0.01)	1 (0.01)	29 (0.18)
5–10	2 (0.01)	4 (0.02)	0 (0.00)	1 (0.00)	2 (0.01)	0 (0.00)	9 (0.04)
11–15	6 (0.03)	1 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	7 (0.03)
16–23	21 (0.06)	3 (0.01)	0 (0.00)	0 (0.00)	8 (0.02)	2 (0.01)	34 (0.10)
24–44	16 (0.02)	21 (0.02)	3 (0.00)	9 (0.01)	6 (0.01)	10 (0.01)	65 (0.07)
45–64	25 (0.03)	22 (0.03)	7 (0.01)	14 (0.02)	3 (0.00)	8 (0.01)	79 (0.09)
≥65	16 (0.03)	23 (0.04)	4 (0.01)	19 (0.04)	5 (0.01)	7 (0.01)	74 (0.14)
Total	119 (0.04)	90 (0.03)	17 (0.01)	48 (0.01)	27 (0.01)	28 (0.01)	329 (0.10)

Includes all confirmed and probable cases reported from all jurisdictions. [†]Cases per 100,000 population. [‡]Includes 1 serogroup E case.



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

Case Fatality

Serogroup	No. deaths	CFR [†]
B	9	7.6
C	13	14.8
W	4	23.5
Y	7	14.6
NG	2	7.4
Unknown	4	16.7
Overall	39	12.0

Age (years)	No. deaths	CFR [†]
<1	4	12.9
1–4	0	0.0
5–10	0	0.0
11–15	0	0.0
16–23	0	0.0
24–44	7	10.9
45–64	11	14.1
≥65	17	23.3
Overall	39	12.0

Includes all confirmed and probable cases reported from all jurisdictions

[†] Case fatality ratio (CFR): deaths per 100 cases with known outcome; 4 (1%) cases with unknown outcome.

Laboratory Confirmation Method

89.7% (287/320) of confirmed cases were confirmed by culture; of those 250 (87.1%) had isolates submitted to CDC.

6.3% (20/320) of confirmed cases were confirmed by PCR.

3.1% (10/320) of confirmed cases had unknown laboratory confirmation method.

Outbreaks

97.2% (315/324) of cases had information on association with an outbreak; of those, 18 (5.7%) were part of an outbreak.

Complement inhibitor use

77.8% (252/324) of cases had information on use of a complement component inhibitor; of those, 4 (1.2%) were taking eculizumab.

Homelessness

95.1% (308/324) of cases had information on homelessness; of those, 16 (5.2%) were identified as homeless.

History of sex with men among cases in men

Among male cases aged ≥16 years, 73.0% (84/115) had information on history of sex with men; of those, 5 (6.0%) were identified as men who had sex with men (MSM).

College attendance among cases in people aged 18-24 years

Among cases in patients aged 18-24 years, 100% (34/34) had information on college attendance; 18 (52.9%) were attending college.

Symptoms

69.1% (224/324) of cases had symptom information available; of those 5 (2.2%) had gastrointestinal symptoms (nausea, vomiting, or diarrhea) in the absence of typical meningococcal symptoms (headache, fever, neck stiffness, rash).

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 [‡]	11 (0.10)	0 (0.00)	0 (0.00)	0 (0.00)	6 (0.05)	18 (0.16)
Not attending college [‡]	9 (0.05)	5 (0.03)	0 (0.00)	0 (0.00)	1 (0.01)	16 (0.08)

* Among cases in people aged 18-24 years. **Includes 1 case with unknown serogroup and 1 serogroup E case. [†] Cases per 100,000 population. [‡] Assumes 38.3% of 18–24 year olds attending college¹

Vaccination Status among cases 18-24 years

MenACWY (meningococcal conjugate vaccine) receipt:

College students: 100% (18/18) had information on MenACWY receipt; of those 94.4% received ≥1 dose of MenACWY.

Persons not attending college: 50.0% (8/16) had information on MenACWY receipt; of those 75% received ≥1 dose of MenACWY.

MenB (serogroup B meningococcal vaccine) receipt:

College students: 77.8% (14/18) had information on MenB receipt; of those 14.3% received ≥1 dose of MenB.

Persons not attending college: 50.0% (8/16) had information on MenB receipt; of those 0.0% received ≥1 dose of 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

55.9% (181/324) of cases had information on HIV status; of those, 5 (2.8%) 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