

# QUICK TAKE

## MENINGOCOCCAL DISEASE IS A GROWING HEALTH THREAT

**IN JUNE, THE CENTERS FOR DISEASE CONTROL AND PREVENTION (CDC)** announced that they were working with Florida public health authorities on a large and growing outbreak of invasive meningococcal disease (IMD) concentrated among gay and bisexual

men and other men who have sex with men (MSM). While IMD cases have decreased in the United States since the 1990s, outbreaks have increasingly popped up among these men and other populations across the U.S.

IMD is a serious health threat with a case fatality rate as high as 25%. Around the same time that the IMD outbreak in Florida was reported, a new variant of MPV (e.g., monkeypox virus that causes monkeypox disease, MPX) was identified in Europe, with the first case reported in the U.S. in May of this year. It has subsequently grown into a major global outbreak overwhelmingly concentrated among MSM and over 28,000 diagnosed cases in the U.S. as of October 2022.

In many cases, IMD and MPX are transmitted sexually. CDC also estimates that there were 2.5 million cases of gonorrhea, chlamydia, and syphilis in the United States in 2021, with a 25% increase in gonorrhea and 68% increase in syphilis since 2017. In the face of these growing health threats, substantial new resources and heightened attention to sexually transmitted infections (STIs) and sexual health is needed at the federal, state, and community levels. However, the component of public health equipped to respond to STIs has been under-resourced for decades, leaving the very systems needed to respond to outbreaks ill-equipped. In many places, sexual health clinics provide essential services and have the expertise and community trust to comprehensively address sexual health needs. In addition to STI testing and treatment, sexual health clinics, such as Magnet in San Francisco, provide health navigation services for HIV treatment and prevention, pre-exposure prophylaxis (PrEP), and routine vaccination. Despite increasing need for these services, STI clinics in the U.S. have experienced a 40% reduction in funding since 2003, when adjusting for inflation. This has led to significant reductions in the availability of clinical services, such as testing and treatment, as well as non-clinical services like community engagement and education.

### INVASIVE MENINGOCOCCAL DISEASE (IMD)

IMD is a bacterial infection that can be life-threatening. Most cases lead to meningitis, which is a very painful infection of the lining of the brain and spinal cord (meninges). It is spread by respiratory droplets (aerosol) and/or saliva and is most often spread through kissing or lengthy close contact, especially among people who live together. Vaccines for IMD are safe, effective, and widely available, but uptake is low. For people with IMD, rapid start of antibiotic treatment is essential. This

### IMD OUTBREAKS AMONG MSM

**FLORIDA 2022:** Meningococcal disease rates had been declining over the past 25 years in Florida, with an average of 21 cases per year over the past 5 years. So far in 2022, however, there have been 50 cases in 17 counties and 12 deaths. This means that one in four people with IMD have died. Of these cases, 84% were in people who were not vaccinated. The majority of cases have been in MSM.

There also have been numerous reported outbreaks in urban areas across the United States in recent years.

**LOS ANGELES AND SOUTHERN CALIFORNIA 2016:** 25 outbreak-associated cases of IMD, including two deaths were reported.

**CHICAGO 2015-2016:** 10 cases were recorded, including one death.

**New York City 2010-2013:** In 2012, 22 cases and 7 deaths were identified. Two-thirds were in MSM.

**LIMITED DATA MAY OBSCURE REALITY:** A January 2012–June 2015 case review by CDC found that 527 IMD cases among males aged 18–64 years old were reported. Because sexuality/sexual behavior is not routinely collected as part of national IMD case reporting, outbreaks among these populations may be underreported. The researchers reported only 74 cases of the 527 that could be attributed to MSM.

(CDC) Kamiya H et al. Notes from the field: meningococcal disease among men who have sex with men—United States, January 2012–June 2015. *MMWR Morb Mortal Wkly Rep.* 2015;64:1256-7.

is challenged by the fact that its symptoms could be caused by several factors, leading people and providers to wait to see how their symptoms develop which can delay treatment. In some cases, individuals can progress from symptoms to death in 24 hours, highlighting the need for population-level vaccination and rapid access to health care and treatment.

### AD HOC RESPONSES ARE INSUFFICIENT

IMD outbreaks have disproportionately affected MSM, as well as people with HIV. People experiencing homelessness

and people who are incarcerated are also disproportionately affected. Outbreaks of a different strain of IMD have occurred among college age students, but vaccination is routine during adolescence, limiting its impact among this age group. CDC recommends vaccination for MSM in and traveling to Florida, but some experts have called for broader population-level vaccination recommendations for all MSM.

Outside of the United States, IMD primarily affects sub-Saharan Africa along what is known as the “meningitis belt.” While the United Kingdom and Canada have reported IMD this year, routine vaccination reduces the risk of outbreaks.

Ensuring disproportionately affected populations are protected from IMD and other infectious diseases may require rethinking clinical recommendations that are often limited to those applicable to the general U.S. population. Further, our nation must move away from its reliance on ad hoc outbreak responses and develop and implement syndemic models and interdisciplinary efforts that address sexual health and infectious diseases holistically. Our best way to respond to IMD and other outbreaks also means simultaneously responding to persistent public health issues; policy and funding responses should bolster ongoing efforts to treat and prevent HIV and STIs as they are central to and enhance our response to other infectious diseases outbreaks.

## MENINGOCOCCAL DISEASE AND PEOPLE WITH HIV

In studies from the United States, United Kingdom, and South Africa, persons with HIV have an increased risk for IMD.<sup>(1)</sup> Among persons with HIV, low CD4 count or high viral load are associated with greater risk.

**CDC recommends that all people with HIV receive a meningococcal conjugate vaccine on HIV diagnosis. Despite this recommendation, vaccination rates among people with HIV are low.** In a nationwide cohort study, only 16.3% of retrospectively identified people with a new diagnosis of HIV were estimated to have received the MenACWY (the specific vaccine recommended for IMD in adults) vaccine during the 24 months after their diagnosis.<sup>(2)</sup> Other analyses suggest that vaccinating people with HIV may be higher during outbreaks.<sup>(3)</sup> There are limited data, however, on vaccination rates among people with HIV. Moreover, HIV status and sexuality/sexual-behavior are critical indicators for IMD, yet are not reported by many states and jurisdictions.

1. Mbaeyi SA, et al. Meningococcal Vaccination: Recommendations of the Advisory Committee on Immunization Practices, United States, 2020. *MMWR Recomm Rep* 2020;69(No. RR-9):1-41; 2. Ghaswalla PK et al. Meningococcal Vaccination Rates Among People With a New Diagnosis of HIV Infection in the US. *JAMA network open*. 2022 Apr 1;5(4):e228573-; Holloway IW et al. Quadrivalent meningococcal vaccine uptake among men who have sex with men during a meningococcal outbreak in Los Angeles county, California, 2016-2017. *Public Health Rep*. 2018;133(5):559-569.

## BOLSTERING CAPACITY TO RESPOND TO INFECTIOUS DISEASES

The U.S. has critical resources to draw upon to strengthen our timely responses to infectious disease threats, including IMD, but these services need more resources, including reliable funding.

### SEXUAL HEALTH CLINICS AND HEALTH DEPARTMENTS

Public health has come a long way in how it responds to STIs and can lead to a healthier public by promoting sexual health across the lifespan. This requires rebuilding state and local capacity to monitor sexual health and disease outbreaks and expanded funding to better support and multiply community-based sexual health clinics.

### RYAN WHITE HIV/AIDS PROGRAM

The Ryan White HIV/AIDS Program provides at least one health care service or financial assistance to roughly half of all people with HIV. The program produces HIV viral suppression rates far higher than other people in the U.S. who do not access the program's services, and funded clinics are generally at the leading edge of adopting standards of care to address other health threats such as IMD.

### PRE-EXPOSURE PROPHYLAXIS (PrEP)

While the need for PrEP far exceeds its uptake among the most impacted populations, evidence demonstrates STI incidence among those taking PrEP is significantly lower than comparable populations at risk for HIV not taking PrEP. This exemplifies how prevention services can respond to multiple infectious diseases.

### COMMUNITY-BASED ORGANIZATIONS (CBOs)

CBOs and community leadership have been critical to the MPX response, leading awareness and vaccination campaigns. MSM have also adopted behavior changes that are proving to be a critical contributor to containing the current MPX outbreak, highlighting their role in responding to emerging health threats.

## TO LEARN MORE

See preliminary reports from the Centers for Disease Control and Prevention on STI surveillance <https://www.cdc.gov/std/statistics/2021/default.htm>

See National Coalition of STD Directors for STI funding information <https://www.ncsddc.org/as-std-funding-stagnates-rates-rise-to-all-time-highs/>

For an example of effective community-based partnerships developed in response to the MPX outbreak, see <https://www.mpxresponse.org/>