



Directorate of Epidemiological Surveillance and Interventions for Infectious Diseases
Department of Vaccine Preventable and Congenital Diseases

Meningococcal disease. Epidemiological data in Greece 2004-2022

MANDATORY NOTIFICATION SYSTEM

EPIDEMIOLOGICAL SURVEILLANCE OF MENINGITIS

In Greece, all meningitis cases are under epidemiological surveillance, including meningococcal disease cases (which are the main aim of the surveillance) and other bacterial and aseptic meningitis cases.

The Department of Vaccine Preventable and Congenital Diseases of the National Public Health Organization (N.P.H.O) collects data for all meningitis cases from all over the country through the mandatory notification system, by Directorates of Public Health and the National Reference Center for meningitis in the School of Public Health, University of West Attica. Additional information regarding the clinical signs and the laboratory findings of each case is taken by communicating with the hospital where each case is hospitalized. In order to take all the necessary preventive measures (chemoprophylaxis when needed and/or immunization) to avoid disease transmission to all the individuals who were in close contact with the case, it is essential to assign the case by the cause.

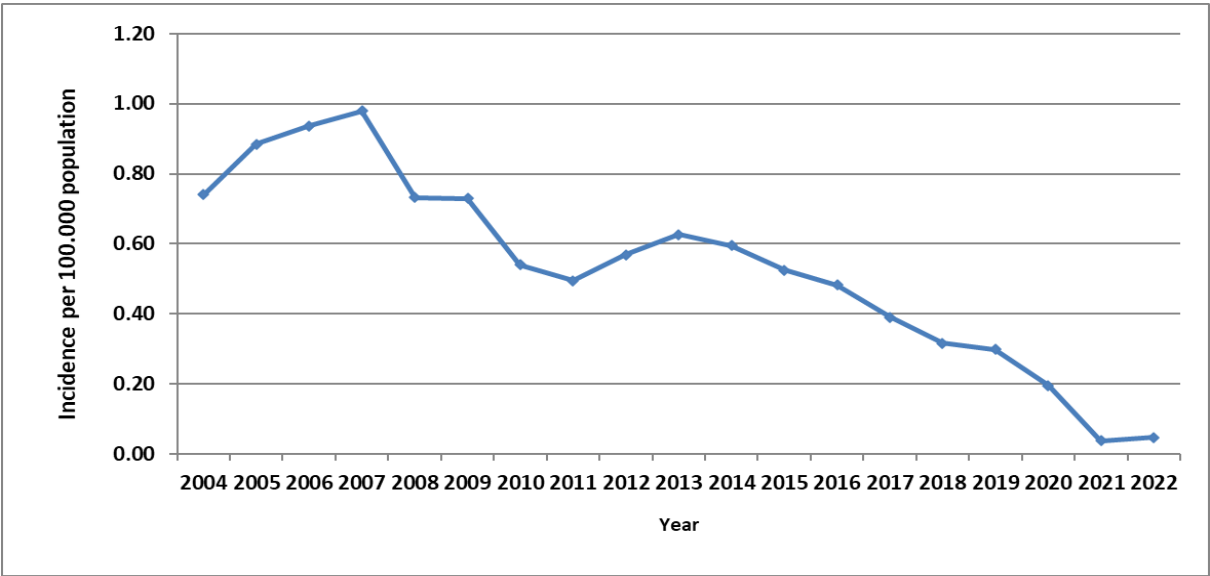
Data are recorded and analyzed by week, month, year, prefecture, causative agent, classification, age and gender, in order to detect outbreaks.

MENINGOCOCCAL DISEASE

Time trend

During the period 2004-2022, 1,110 cases of meningococcal disease were reported to NPHO, while cases ranged between 4 and 108 per year and the mean annual notification rate was 0.53 cases per 100,000 population. The notification rate of the disease showed a significant decrease since 2013 (Graph 1).

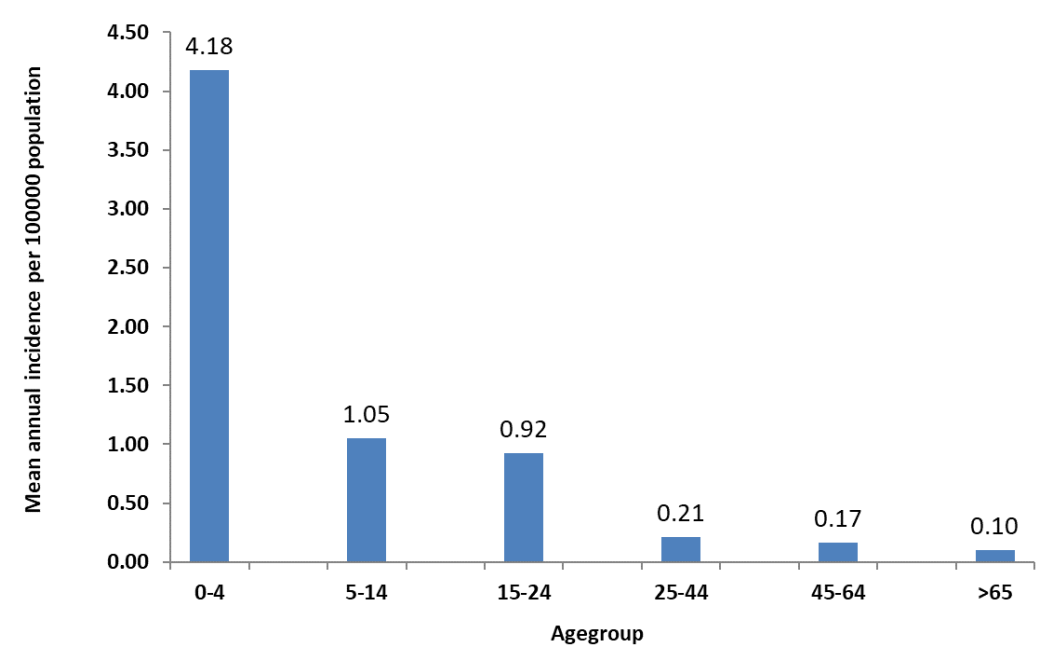
Graph 1. Annual notification rate time trend of meningococcal disease, Greece, 2004-2022



Age distribution

During the period 2004-2022, the number of meningococcal disease cases, with known date of birth, was 1,109 (in one case the date of birth was unknown). The disease appeared to be more frequent among children in the 0-4 age group with a mean annual notification rate of 4.18 cases per 100,000 population. The mean annual notification rate has progressively decreased in the 5-14 and 15-24 age groups (1.05 cases and 0.92 cases per 100,000 population respectively). In age groups over 25 years, the mean annual notification rate did not exceed 0.21 cases per 100,000 population (Graph 2).

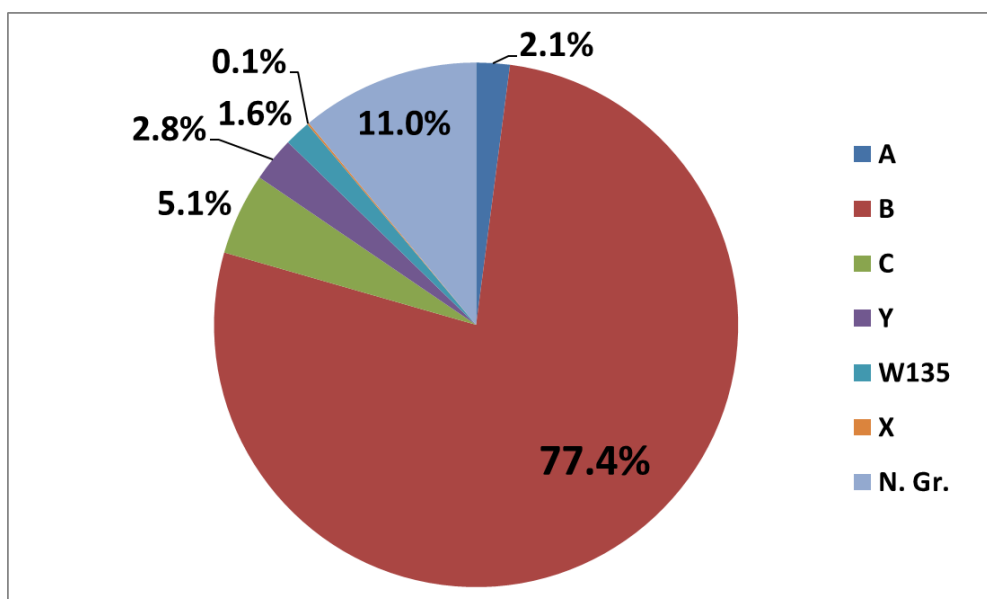
Graph 2. Mean annual notification rate of meningococcal disease (cases/100,000 population) per age group in Greece, 2004-2022



Laboratory data

During 2004-2022, 93.6% (1,039/1,110) of the meningococcal disease cases were laboratory confirmed. In the same period, 78.5 % (871/1,110) of meningococcal disease cases were serotyped and 774 out of 871 (88,9%) were identified to belong to one of 5 serogroups (A, B, C, W135 and Y), which are mainly responsible for the majority of invasive meningococcal infections worldwide. One (1) case was identified to belong to serogroup X. In Greece, 77.4% (674/871) of meningococcal disease cases are caused by serogroup B followed by serogroup C (Graph 3).

Graph 3. Distribution of meningococcal disease by serogroup in Greece, 2004-2022



Fatality and Mortality rates

During 2004-2022, 67 deaths due to meningococcal disease were recorded, indicating a case fatality rate of 6%. The highest fatality rate was observed in the year 2018 (11.8%) and the lowest fatality rate in the years 2020-2022(0%). The mean annual mortality rate for the period 2004-2022 was 0.032 deaths per 100,000 population.

Dr Georgakopoulou Theano,
Pediatrician – Infectious diseases specialist