



## Department of Food-borne and Water-borne diseases

### EPIDEMIOLOGICAL DATA FOR CAMPYLOBACTERIOSIS

IN GREECE, 2022

### MANDATORY NOTIFICATION SYSTEM

#### Main points

- Based on the data for the period April-December 2022:
  - The notification rate of the disease was higher among children in the age group of 0-4 years old.
  - The notification reached a peak in May.
  - 6.2% of the cases reported one or more persons with similar symptoms among their contacts.
  - *Campylobacter jejuni* and *Campylobacter coli* were the most frequently reported species.

*Campylobacter spp.* is one of the etiological agents of foodborne infections, as well as the second-following *Salmonella spp.*- bacterial cause of foodborne disease outbreaks, in Europe [1,2]. In Greece campylobacteriosis was introduced in Mandatory Notification System in April 2022.

#### Number of reported case-Notification rate

During April-December 2022, 302 campylobacteriosis cases were reported in Greece. The notification rate was 2.8 cases per 100,000 population.

#### Age and gender distribution

For the period April-December 2022, the disease was more frequently reported among children in the 0-4 years age group (**Graph 1**). In this age group, the mean annual

notification rate was 11.5/100,000 population, whereas it was less than 5/100,000 in the rest of the population.

The notification rate among males and females was 3.1 and 2.5 cases per 100,000 population, respectively.

### Seasonality

The monthly notification rate for the period of interest reached a peak in May and gradually decreased in the following months (**Graph 2**).

### Geographical distribution

The geographical area of Attica had the highest notification rate (5.6/100,000 population) and Northern Aegean the lowest (0.0/100,000 population).

### Laboratory data

The most frequently identified species -out of the total number of identified species-, for the period of interest, was *Campylobacter jejuni* (88.2%) and *Campylobacter coli* (11.8%).

It should be noted that the presented data here regard the cases reported via the Mandatory Notification System. For some of them, the respective information from Central Public Health Laboratory, which is the National Campylobacter Reference Centre, is available while for others it is not.

### Risk/Protective factors

During April-December 2022, 6.2% of the notified cases reported the presence of at least one person with similar symptoms among their contacts, whereas 17 (6.3%) reported they had travelled abroad within the incubation period.

### Conclusion

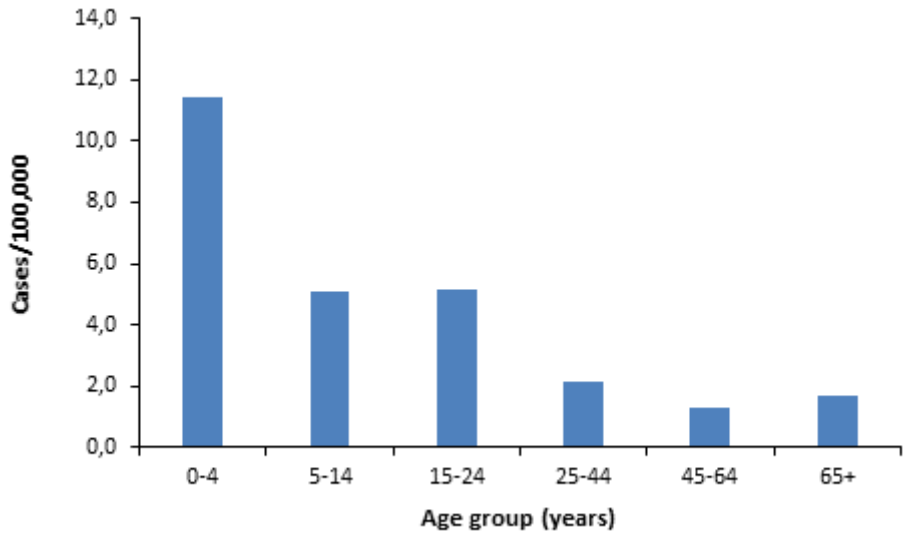
The notification rate of campylobacteriosis in Greece was 2.8 cases per 100,000 population in the period April-December 2022. It was the second most frequently mandatorily reported foodborne disease following non-typhoid/paratyphoid salmonellosis. The mean notification rate in the EU and EEA/EFTA countries was 44.5

cases per 100,000 population for the year 2021 [3]. When interpreting this difference, the surveillance systems' under-reporting should be considered [4].

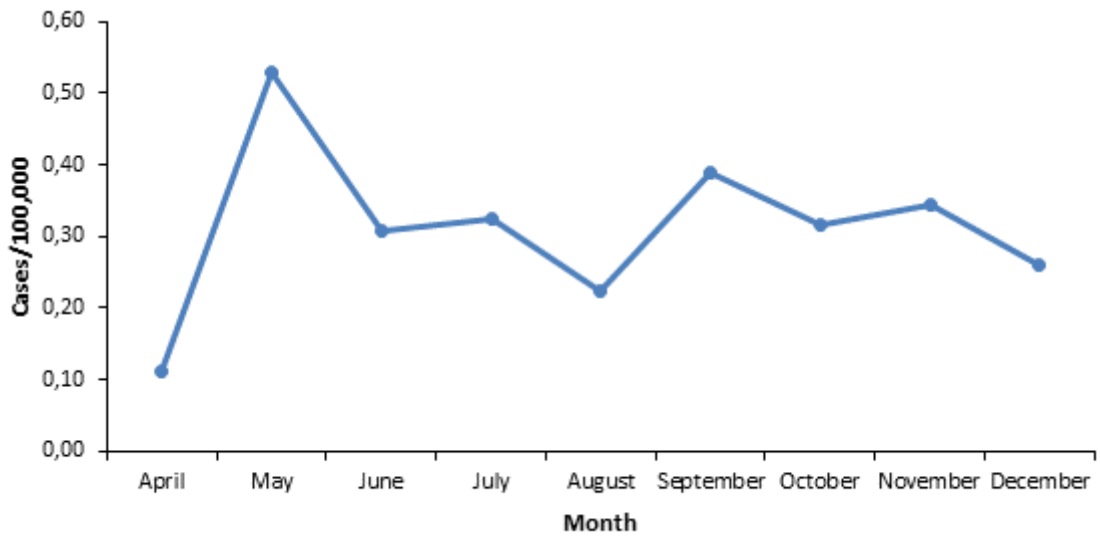
The low percentage of notified cases with epidemiological link is in line with the fact that *Campylobacter spp.* sporadic cases are much more than the outbreaks-related cases [5]. The highest notification rate reported in the 0-4 years age group and the gender distribution of cases were also consistent with the findings from other European countries [3].

## References

1. Heymann D, MD. Control of Communicable Diseases Manual. 20th Edition, 2015, American Public Health Association.
2. EFSA and ECDC (European Food Safety Authority and European Centre for Disease Prevention and Control), 2022. The European Union One Health 2021 Zoonoses Report. EFSA Journal 2022;20(12):7666, 273 pp. <https://doi.org/10.2903/j.efsa.2022.7666>
3. European Centre for Disease Prevention and Control. Surveillance Atlas of Infectious Diseases. Campylobacteriosis - Data by Country and Year. Current time period: 2021. Available at: <http://atlas.ecdc.europa.eu/public/index.aspx>
4. National Public Health Organization. Evaluation of underreporting in the Mandatory Notification System of laboratory confirmed salmonellosis, shigellosis, listeriosis, Hepatitis A Virus infection, campylobacteriosis, typhoid/paratyphoid fever cases by Public General Hospitals in Greece, 2022. Available at: [https://eody.gov.gr/wp-content/uploads/2019/01/Ektimisi\\_bathmou\\_dilosis\\_trofimogeni\\_2022.pdf](https://eody.gov.gr/wp-content/uploads/2019/01/Ektimisi_bathmou_dilosis_trofimogeni_2022.pdf)
5. Sher AA, Ashraf MA, Mustafa BE, Raza MM. Epidemiological trends of foodborne Campylobacter outbreaks in the United States of America, 1998-2016. Food Microbiol. 2021 Aug;97:103751. doi: 10.1016/j.fm.2021.103751. Epub 2021 Jan 29. PMID: 33653524.



**Graph 1.** Notification rate (cases/100,000 population) of campylobacteriosis by age group, Mandatory Notification System, Greece, April-December 2022.



**Graph 2.** Notification rate (cases/100,000 population) of campylobacteriosis by month, Mandatory Notification System, Greece, April-December 2022.

*Last updated: July 2023*