

Department of Epidemiological Surveillance and Intervention

EPIDEMIOLOGICAL DATA FOR MUMPS IN GREECE, 2004-2016

(MANDATORY NOTIFICATION SYSTEM)

Key points

- Mumps is a vaccine preventable disease, presenting a decreasing frequency during the last years ranging in low levels.
- Based on data for the period 2004-2016, mumps is present in all age groups (with the exception of the age group >65 years), with the age group of 15-24 year-olds most frequently affected.
- Cases are usually either unvaccinated or not fully vaccinated.

Mumps is a viral disease. It is caused by the mumps virus, which belongs to the paramyxoviridae family. The virus is spread through airborne transmission with droplets or by direct contact with infected droplet nuclei or saliva. Mumps is a vaccine preventable disease [1].

Time trend

The number of reported cases per year, for the period 2004-2016, is presented in Table 1. Mumps notification rate levels were low during the last years (Figure 1), with cases ranging from 0 to 48 per year. More specifically, notification rate was lower than 0.44/100,000 population. Mean annual notification rate for the period 2004-2016 in the country was 0.1/100,000 population (median number of reported cases per year: 4, total number of reported cases: 146).

Age and gender distribution

For the period 2004-2016, the number of cases with known age and gender was 115. The highest mean annual notification rate was noted in the age group of 15-24 year-olds (0.32/100,000 population). Among the other age groups, mean annual notification rate ranged from 0 in the age group >65 years old to 0.19/100,000 population in the age group of 0-4 years old (Figure 2). The overall male-to-female ratio for all notified cases was 2.0 (males: 0.11/100,000 population, females: 0.05/100,000 population).

Geographical distribution

The geographical areas of Northern Greece (0.19/100,000 population) and the Aegean islands/Crete (0.17/100,000 population) had the highest mean annual notification rates for 2004-2016, followed by the area of Central Greece (0.02/100,000 population) and Attica (0.03/100,000 population). In addition, 22 cases were of foreign origin (19 of them were UK citizens and 3 from other countries). More specifically, during April and May of 2009, a mumps outbreak was reported from a tourist area in Crete, concerning young British people, who were visiting the island as tourists or as circumstantial workers

during summertime. In the context of this outbreak, a total of 19 cases were reported, 10 of which could be characterized as “imported” cases.

Laboratory data

During the period 2004-2016, 12.3% of the notified cases were laboratory-confirmed.

Vaccination status

Among the 146 notified cases for the period 2004-2016, vaccination status was known for 100 (68.5%). Fifty one (51%) cases reported that they had been vaccinated with at least one dose of MMR. Among the 24 cases, for which the respective information was available, 15 (62.5%) reported that they had been vaccinated with a single dose of the vaccine in the past.

Conclusion

Mumps notification rates are low in Greece. Mean annual notification rate for the period 2004-2016 was lower than the mean notification rate for the EU and EEA/EFTA countries (2.5/100,000 population for the year 2014) [2]. The age group most frequently affected is 15-24 year-olds similar to that of the other EU and EEA/EFTA countries [2]. Regarding the outbreak concerning young UK citizens, during April and May of 2009, it is noted that vaccination with MMR was introduced in their national vaccination programme in 1988 (one dose), whereas a second dose of the vaccine was introduced in 1996. Thus, people born in the 80's had an increased probability of being inadequately vaccinated against mumps [3]. In addition, the possibility of infection after full vaccination with MMR is unknown. In Greece, during the period 2005-2009, there was only one such case, with laboratory confirmation, while similar cases have been reported in other countries as well [4].

References

1. Heymann DL. Control of Communicable Diseases Manual. Washington DC: American Public Health Association; 2008.
2. European Centre for Disease Prevention and Control: Annual Epidemiological Report on Communicable Diseases in Europe 2014. Stockholm, European Centre for Disease Prevention and Control, 2014. Available from: <https://ecdc.europa.eu/en/publications-data/mumps-annual-epidemiological-report-2016-2014-data>
3. Spanaki A, Hajioannou J, Varkarakis G, Antonakis T, Kyrmizakis DE. Mumps epidemic among young British citizens on the island of Crete. Infection 2007;35(2):104-6.
4. Karagiannis I, van Lier A, van Binendijk R, Ruijs H, Fanoy E, Conyn- van Spaendonck MAE, et al. Mumps in a community with low vaccination coverage in the Netherlands. Euro Surveill. 2008;13(24):pii=18901. Available from: <http://www.eurosurveillance.org/Viewarticle.aspx?ArticleId=18901>

Table 1. Number of notified cases of mumps per year, Greece, 2004-2016

Year	Number of cases
2004	2
2005	33
2006	48
2007	23
2008	5
2009	21
2010	2
2011	1
2012	2
2013	0
2014	1
2015	4
2016	4
Total	146

Figure 1. Time trend of mumps notification rate, Greece, 2004-2016

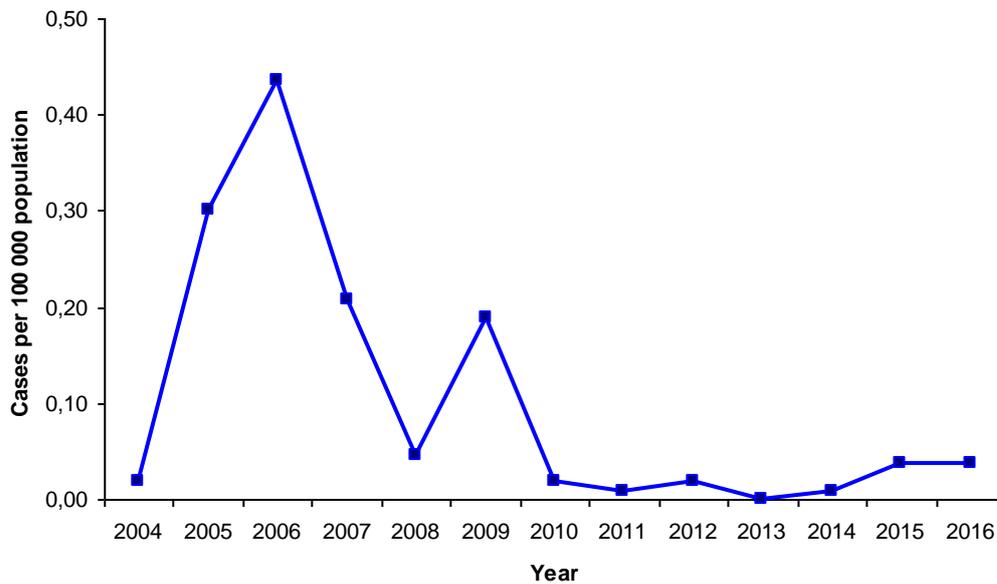


Figure 2. Mean annual notification rate (cases/100,000 population) of mumps by age group, Greece, 2004-2016

