



Weekly Epidemiological Report for West Nile Virus infection, Greece, 2019 - 27 June 2019 -

This weekly epidemiological report aims to present an overview of the epidemiological data on West Nile Virus (WNV) human infection, the reported cases (if any) and the public health response to WNV in Greece for transmission period 2019, including zero reporting of cases.

As every year, data presented in this report will be derived from the notifications of laboratory diagnosed human cases of WNV infection sent to the National Public Health Organization (NPHO) by the treating physicians and from the daily communication with diagnostic laboratories: i) the National Reference Centre for Arboviruses, Aristotelian University of Thessaloniki, ii) the Department of Microbiology, School of Medicine, University of Athens, iii) the Hellenic Pasteur Institute, iv. Laboratory of Clinical Virology, School of Medicine, University of Crete.

Since 2010, whenever cases are reported to NPHO, the Department of Epidemiological Surveillance and Intervention of the NPHO undertakes a verification procedure through communication with the treating physicians and the patients, as necessary.

From the beginning of the 2019 period, up to 27/06/2019, no West Nile Virus infection cases have been reported in Greece.

Table 1. Number of reported cases of WNV disease, Greece, period 2019, up to 27/06/2019

| | Number of cases with central nervous system (CNS) manifestations | Number of cases without CNS manifestations | Total number of cases | Number of deaths |
|--------------------------------|---|---|------------------------------|-------------------------|
| Number of WNV cases and deaths | 0 | 0 | 0 | 0 |

PUBLIC HEALTH MEASURES SUPPORTED BY THE NPHO, 2019

In every mosquito circulation season, the National Public Health Organization -in collaboration with other involved stakeholders- implements a series of preventive and response public health measures for the management of West Nile Virus infection, which include:

- I. **Enhanced surveillance for WNV disease in humans:**
 - **Awareness raising of physicians** about the WNV infection: Testing for West Nile virus infection in suspected cases (such as cases with encephalitis, aseptic meningitis, acute flaccid paralysis, fever of undetermined etiology) is recommended. The NPHO provides guidelines for the recognition and diagnosis of WNV disease and the recommended laboratory investigation (mailings and website www.eody.gov.gr). For the 2019 period, an informative letter was sent to all Health Units and Medical Associations of the country for vigilance regarding West Nile Virus, in mid May 2019. In addition, following the recording of cases in an area, local Health Units are urgently informed.
 - **Daily communication and information exchange with laboratories** conducting diagnostic testing for WNV.
 - **Enhancing laboratory diagnosis** of suspected cases, by supporting specialised diagnostic laboratories.
 - **Case investigation** within 24 hours after diagnosis, in order to determine the likely place of exposure, the risk factors and the severity of the disease.
 - **Immediate update of stakeholders** on the diagnosed cases (Ministry of Health, Ministry of Rural Development and Food, National Centre for Blood Donations, Regions/ Directorate of Public Health and Social Welfare, Municipalities).
- II. **Communication and health promotion activities for the public:** Educational material for the public regarding West Nile Virus infection and the recommended protective measures against mosquito bites is available in the NPHOs website. In 2019, NPHO:
 - Published two Press Releases (in mid May 2019 regarding the recommended prevention measures, and on 19th June 2019 clarifying -among others- that no human cases have been recorded in Greece in 2019).
 - Updated the information leaflet “Protect yourselves from mosquitoes” (in Greek and English).
 - Produced informative leaflet “West Nile Virus: Learn and protect” (in Greek).
 - Distributed electronically the TV spot “Protect yourselves from mosquitoes” in national and local channels since April 2019.
 - Sent via email the new informative material (leaflets and TV spot) to local authorities, in mid May 2019.
- III. **Coordination of an intersectional Working Group (WG) on the definition of affected areas by vector borne diseases.** This WG, under the MoH Committee for the Prevention and Management of Tropical Diseases, will consider all available entomological and epidemiological data and will decide on the characterization of affected areas assisting the implementation of blood safety measures, in case of human WNV case recording. The list of affected areas will be published on NPHOs website and updated regularly. These will be used by the National Centre for Blood Donation to issue guidance on blood safety. In addition, the Coordinating Haemovigilance Centre of NPHO issue guidance for the haemovigilance competent authorities.
- IV. Collaboration and exchange of information with the **Ministry of Rural Development and Food** regarding the West Nile virus infection in equids.

V. Vector surveillance and control activities:

- **Raising awareness and guidance to Regional Authorities:** NPHO communicates regularly (workshops, meetings, letters) with all Regional Authorities in Greece recommending the timely planning, organization and implementation of integrated vector control programmes. In 2019, NPHO sent relevant awareness letters in January 2019 (with a brief guide to the key steps to achieve timely implementation of the vector control program) and will urgently inform local authorities of the affected areas regarding the recommended preventive and response measures (intensified mosquito control and raising awareness of the local population). In addition, following the initiative of the General Secretary of Public Health of the Ministry of Health, NPHO organised, in cooperation with the Benaki Phytopathological Institute, in May 2019, workshops with all regional public health authorities, regarding the preventive actions for mosquito-borne diseases and especially the vector control programmes.
- **Entomological surveillance:** NPHO, in collaboration with the Department of Parasitology, Entomology and Tropical Diseases of the National School of Public Health (NSPH), the Benaki Phytopathological Institute, the MALWEST project (2012-2014), Universities, Regions, local authorities and subcontractors of the local mosquito control programmes has implemented, participated or coordinated -from 2010 to 2014- active vector surveillance programme. For the 2019 period, NPHO organizes an active vector surveillance programme to be performed in various areas of the country and continues the effort to collect entomological data from the local authorities.
- **Communication with international public health stakeholders:** Frequent communication and weekly information exchange with ECDC (real-time reporting of the diagnosed cases in TESSy).

CONCLUSIONS

In 2010-2014 and 2017- 2018, cases of West Nile virus infection were recorded in humans in various areas of Greece, while virus circulation was recorded in almost all regions. Given the complex epidemiology of the virus, the recurrence of WNV infection cases in humans is considered likely and should be expected in the country, as well as in other European countries, in each season.

In 2019, up to 27/06/2019, no human cases of WNV infection have been recorded in Greece. In the EU Member States and neighboring countries, in transmission period 2019 (up to 19/06/2019), no human WNV infection cases have been also recorded.

Epidemiological surveillance of the disease, systematic and early implementation of mosquito control programs and personal protective measures against mosquito bites are considered the most appropriate measures to control WNV infection outbreaks.

Since the circulation of WNV and its geographical distribution (i.e., the areas with recording of human cases) during each period cannot be predicted, personal protective measures against mosquitoes are encouraged, during the period of mosquito activity.