

Zika Virus epidemic in the Americas

Zika virus is a mosquito-borne flavivirus transmitted primarily by *Aedes aegypti* mosquitoes but also by *Aedes albopictus* mosquitoes which bite both indoors and outdoors, mostly during daytime; therefore, one should ensure protection from mosquitoes throughout the entire day. These mosquitoes are also vectors for dengue and chikungunya virus and are found throughout most of the Americas, including parts of the United States.

Travel-associated cases of Zika virus infections have been reported in the EU. As the Zika virus epidemic continues to spread in the Americas and Caribbean, and the awareness of the risk of infection increases among clinicians and travellers, the number of reported travel-related Zika virus infections is expected to increase in the EU.

The *Aedes albopictus* mosquito species is established in many parts of the EU mainly around the Mediterranean including Malta. Onward transmission from imported cases within the continental EU is possible because *Aedes albopictus* is a vector for the transmission of Zika virus, even though this has not yet been confirmed for European mosquito populations. The risk of transmission of Zika virus infection is extremely low in the EU during winter season as the climatic conditions are not suitable for the activity of *Aedes albopictus* mosquito.

Imported cases to Malta are possible in people who travel to affected areas however the infection is not transmitted directly from person to person and hence an imported case cannot directly transmit the infection to others.

Epidemiological situation

The spread of the Zika virus epidemic in the Americas is likely to continue as the competent vectors *Aedes aegypti* and *Aedes albopictus* mosquitoes are widely distributed there. There is also a significant increase in the number of babies born with microcephaly in the north-eastern states of Brazil, however, the magnitude and geographical spread of the increase have not yet been well characterised. Despite growing evidence of a link between intra-uterine Zika virus infection and adverse pregnancy outcomes, a causal link between these events has not yet been confirmed.

As of 19 January 2016, the recent trends can be outlined as follows:

- El Salvador, Venezuela, Colombia and Brazil Suriname, French Guiana, Honduras, Mexico, Panama and Martinique are currently experiencing a rapidly evolving Zika virus epidemic with an increasing or widespread transmission;
- Bolivia, Guyana, Ecuador, Guadeloupe, Guatemala, Paraguay, Puerto Rico, Barbados, Saint Martin and Haiti have only reported sporadic transmission following recent introduction.

Signs and symptoms

80% of persons infected with Zika virus are asymptomatic. Symptomatic disease is generally mild and characterized by acute onset of fever, macula-papular rash, arthralgia, or non-purulent conjunctivitis. Symptoms usually last from few days to 1 week and severe disease requiring hospitalization is uncommon, and fatalities are rare.

Possible complications of Zika include:

- Further epidemiological studies are required to assess the strength of the association between Guillain-Barré syndrome and Zika virus infection.
- Evidence on a causal link between Zika virus infections during pregnancy and congenital CNS malformations is growing although the available information is not yet sufficient to confirm it.

No specific antiviral prophylaxis or treatment is available for Zika virus disease. Treatment is generally supportive and can include rest, fluids, and use of analgesics and antipyretics.

Early diagnosis

Enhance vigilance towards the early detection of imported cases of Zika virus infection. The European Centre for Disease Prevention and Control encourage increased awareness among obstetricians, pediatricians and neurologists and that Zika virus infections should be investigated for patients presenting with congenital central nervous system malformations, microcephaly and Guillain-Barre syndrome.

Travel advice to people travelling to affected areas:

- All travellers to affected areas should take individual protective measures to prevent mosquito bites.
- Travellers that have immune disorders or severe chronic illnesses should consult their doctor before travelling.
- Pregnant women and women who are trying to become pregnant, and who plan to travel to the areas experiencing transmission of Zika virus, should discuss their travel plans with their healthcare providers and consider postponing their travel to affected areas, especially to areas with increasing or widespread transmission.
- Individual protective measures to prevent mosquito bites should be applied all day long, especially during mid-morning and late afternoon to dusk, which are the periods of highest mosquito activity.
- Travellers showing symptoms compatible with dengue, chikungunya or Zika virus disease within three weeks after returning from an affected area should contact their healthcare provider.
- Pregnant women who have travelled to areas with Zika virus transmission should mention their travel during antenatal visits in order to be assessed and monitored appropriately.
- Personal protection measures to avoid mosquito bites should include:
 - Using mosquito repellents in accordance with the instructions indicated on the product label. DEET*-based repellent use is not recommended in children under three months of age.
 - Wearing long-sleeved shirts and long pants, especially during the hours of highest mosquito activity.
 - Using mosquito nets, whether they are impregnated or not, is essential if accommodation is not adequately screened or air-conditioned.

Summary

- The evidence concerning a causal link between Zika virus infections during pregnancy and congenital CNS malformations is growing, although the available information is not yet sufficient to confirm it.
- The spread of the Zika virus epidemic in the Americas is likely to continue as the competent vectors *Aedes aegypti* and *Aedes albopictus* mosquitoes are widely distributed there.
- As neither treatment nor vaccines are available, prevention is based on personal protection measures and travel advice
- High index of suspicion in persons who have travelled to affected areas for early diagnosis.