Note from the editors: Articles on Zika preparedness

Eurosurveillance editorial team [1]
1. European Centre for Disease Prevention and Control (ECDC), Stockholm, Sweden

Correspondence: Eurosurveillance editorial team (eurosurveillance@ecdc.europa.eu)

Citation style for this article:
Eurosurveillance editorial team. Note from the editors: Articles on Zika preparedness. Euro Surveill. 2016;21(28):pii=30289. DOI: http://dx.doi.org/10.2807/1560-7917.ES.2016.21.28.30289

Article submitted on 12 July 2016 / accepted on 14 July 2016 / published on 14 July 2016

Summer has come to Europe and with it the holiday season for many. With the sunshine and warmer temperatures comes pleasure but also a nuisance in form of invasive and non-invasive mosquitoes. It is no news to our readers that in some parts of Europe, in particular in the Mediterranean basin, *Aedes albopictus* mosquitoes have become established over the past decades [1].

Already earlier this year, in light of the emergence of Zika virus in South America and the Caribbean in late 2015, questions were raised about the risk for Europe. Findings that *Ae. albopictus*, even though less competent than *Ae. aegypti*, can be a potential vector for Zika virus transmission [2,3] have further fuelled the concerns of possible importation of Zika virus, also in light of the upcoming Olympic and Paralympic Games in Brazil, a country with a large Zika virus disease epidemic. The European Centre for Disease Prevention and Control (ECDC) has addressed concerns related to disease occurrence in connection with travel to the Games in Brazil in a recent risk assessment [4]. It concluded that visitors to Rio de Janeiro, Brazil, will be most at risk of gastrointestinal illness and vector-borne infection. However, given that the Games will take place during the winter season in Rio, when mosquito populations will be reduced, the risk of imported mosquito-borne infections such as Zika vrus disease, dengue and chikungunya is expected to be very low [4]. An article from EuroTravNet, published in *Eurosurveillance* last week, supported these conclusions based on observations in travellers returning from Brazil between June 2013 and May 2016 [5].

Preparedness is essential to address potential introduction and onward transmission in Europe of Zika virus and of other arboviruses, such as dengue and chikungunya viruses, transmitted by the same vectors. In this issue of *Eurosurveillance*, three articles supply evidence about Zika virus transmission dynamics and describe experiences that can support ongoing preparedness activities.

Rojas et al. provide insight into the transmissibility and epidemiology of Zika virus in Colombia from the early stages of the outbreak in the country [6]. Little has been published on the basic reproduction number (R_0) of Zika virus transmission so far. Rojas et al. estimated R_0 based on data from two different settings: (i) a middle-sized municipality with tropical climate on the mainland; and (ii) a densely populated island [6]. For the latter R_0 was 1.41 (95% confidence interval (CI): 1.15–1.74), lower than that for the municipality on the continent, 4.61 (95% CI: 4.11–5.16). The authors considered that the more reliable estimate was the one obtained from the island setting. Both estimates confirm the epidemiological picture of continuous rapid spread seen in the affected countries of South America and the Caribbean. Notably, the authors found a higher attack rate in women, without clear indication that this finding was due to testing or information bias.

The other two articles come from French overseas Territories of America (FTA) and Réunion, a French department in the Indian Ocean. Both draw on lessons learnt from earlier arbovirus epidemics (chikungunya and dengue) that had considerable impact on the health of citizens and put a strain on the public health systems. Daudens-Vaysse et al. share experiences and results from the epidemiological surveillance set up in the FTA at the beginning of the epidemic, covering the period from November 2015 to February 2016 [7]. They highlight challenges associated with the chosen case definition, namely the absence of rash, the foundation of their case definition, in a significant proportion of patients. Larrieu et al. describe surveillance and response systems and tools adapted in Réunion to different epidemiological phases including a potential epidemic [8]. The example of the recent early detection of two imported cases and the measures taken to prevent onward transmission illustrates the major strengths of the system put in place: a powerful vector control team and close interdisciplinary collaboration between various players including the public health authorities.

We hope our readers will find the papers interesting and the experiences relevant to Europe and also island settings facing possible emergence of Zika virus.

References

1. European Centre for Disease Prevention and Control (ECDC). Mosquito maps. Maps. Selected vector species. Aedes albopictus – current known distribution. January 2016. Stockholm: ECDC; 2016. Available from: http://ecdc.europa.eu/en/healthtopics/vectors/vector-maps/Pages/VBORNET_maps.aspx (Accessed 14 July 2016)
2. Moutailler S, Barré H, Vazeille M, Failloux AB. Recently introduced Aedes albopictus in Corsica is competent to Chikungunya virus and in a lesser extent to dengue virus. Trop Med Int Health. 2009;14(9):1105-9. DOI: 10.1111/j.1365-3156.2009.02320.x PMID: 19725926
3. Di Luca M, Severini F, Toma L, Boccolini D, Romi R, Remoli ME, et al. Experimental studies of susceptibility of Italian Aedes albopictus to Zika virus. Euro Surveill. 2016;21(18):30223. DOI: 10.2807/1560-7917.ES.2016.21.18.30223 PMID: 27171034
4. European Centre for Disease Prevention and Control (ECDC). Potential risks to public health related to communicable diseases at the Olympics and Paralympics Games in Rio de Janeiro, Brazil 2016. 10 May 2016. Stockholm: ECDC; 2016. Available from: http://ecdc.europa.eu/en/publications/Publications/Risk-assessment-mass%20gathering-Rio-2016-10May2016.pdf
5. Gautret P, Mockenhaupt F, Grobusch MP, Rothe C, von Sonnenburg F, van Genderen PJ, et al. Arboviral and other illnesses in travellers returning from Brazil, June 2013 to May 2016: implications for the 2016 Olympic and Paralympic Games. Euro Surveill. 2016;21(27):30278. DOI: 10.2807/1560-7917.ES.2016.21.27.30278
6. Rojas DP, Dean NE, Yang Y, Kenah E, Quintero J, Tomasi S, et al. The epidemiology and transmissibility of Zika virus in Girardot and San Andres island, Colombia, September 2015 to January 2016. Euro Surveill. 2016;21(28):30283. DOI: 10.2807/1560-7917.ES.2016.21.28.30283
7. Daudens-Vaysse E, Ledrans M, Gay N, Ardillon V, Cassadou S, Najioullah F, et al. , Zika Surveillance Working Group. Zika emergence in the French Territories of America and description of first confirmed cases of Zika virus infection on Martinique, November 2015 to February 2016.Euro Surveill. 2016;21(28):30285. DOI: 10.2807/1560-7917.ES.2016.21.28.30285
8. Larrieu S, Filleul L, Reilhes O, Jaffar-Bandjee M, Dumont C, Abossolo T, et al. Réunion Island prepared for possible Zika virus emergence, 2016. Euro Surveill. 2016;21(28):30281. DOI: 10.2807/1560-7917.ES.2016.21.28.30281

License and copyright