
PRIMARY RISK ASSESSMENT

Outbreak of Chikungunya in the Caribbean

Date of the signal	Date of the RA	Signal provider	Experts consultation	Method
	09/12/2014		Marjan Van Esbroeck (ITG, NRC) Fons Van Gompel (ITG)	
Date of update	Closing date			

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RAPID RISK ASSESSMENT OF POTENTIAL PUBLIC HEALTH EVENT

Signal		An outbreak of chikungunya virus infection has been ongoing in the Caribbean region since December 2013 and spread to North, Central and South America. There is a simultaneous outbreak of chikungunya in French Polynesia.	
Description		Score	Description / arguments
1	Cause known?	Yes	A mosquito-borne viral disease caused by an alphavirus from the Togaviridae family. It is transmitted by the bite of <i>Aedes</i> mosquitoes. Chikungunya is endemic in parts of Africa, South-east Asia and on the Indian subcontinent.
2	Unexpected/unusual	Unusual	This is the first documented autochthonous transmission of chikungunya virus in the Americas.
3	Severity	Yes (medium)	The typical clinical signs of the disease are high fever, myalgia, skin rash and arthralgia which may cause a significant disease burden in the community. Some infected individuals (<25 %) are asymptomatic or only mildly symptomatic, challenging the case detection.
4	Dissemination (Low/Medium/High)	High in the Caribbean and Central America	The outbreak started on the Caribbean island of Saint Martin in early December 2013 and expanded through the Caribbean during the first half of 2014. Recently, suspected autochthonous cases have been reported from Central America (Costa Rica and El Salvador). Between November 21 and December 5 2014, PAHO reported 2986 additional confirmed cases and 60 718 suspected cases.
5	Risk of (inter)national spread	Possible where the vector is present	The risk for onward transmission in Europe is linked to importation of virus by viraemic patients in areas with competent vectors (<i>Aedes albopictus</i> on mainland Europe and <i>Aedes aegypti</i> in Madeira). From September to November 2014, 181 imported cases of chikungunya have been reported in the Netherlands. In Belgium, from January to August 2014, 33 cases of chikungunya were diagnosed at the NRC, of which 32 from the Caribbean, compared to 3 to 10 cases per year for the 2007-2012 period. Viraemic asymptomatic returning travellers could contribute to transmission of the disease if giving blood.
Preparedness and response in Belgium			

6	Preparedness		<p>Human:</p> <p>NRC Chikungunya: Diagnostic capacity is in place.</p> <p>Communities: autochthonous chikungunya under mandatory notifications.</p> <p>Vector:</p> <p>There is no national surveillance of invasive or exotic mosquitos, except around airports.</p>
7	Specific control measures (surveillance, control, communication)		Human surveillance and diagnostic capacity exist in Belgium through the NRC.
Public health impact			
A	Public health impact in Belgium (Low/Medium/high)	Very low	<p>The risk for Belgium lays in the exposition of Belgian tourists in the Americas and Caribbean region, especially during the Christmas holidays.</p> <p>The main vector is not present in Belgium. However it could be introduced through the business of recycling of used tires.</p>
B	Recommendations (surveillance, control, communication)		<p>To raise awareness among GPs and specially travel clinics of the possibility of having imported Chikungunya cases, and therefore to consider this as possible diagnostic for people returning from the Caribbean.</p> <p>Information for travellers to the region (prevention of mosquito bites) through the usual websites (diplobel, ITG).</p>
C	Actions		<p>Follow up of the epidemiological situation in the Caribbean by WIV-ISP.</p> <p>Health inspectorate to :</p> <ul style="list-style-type: none"> - Send a letter to inform GPs and travel clinic in order to raise awareness of the possibility of having imported Chikungunya cases, and therefore to consider this as possible diagnostic for people returning from the Caribbean. - Travel clinics and Ministry of Foreign Affairs to update their recommendations on their website - Send a reminder to the red cross (blood donation/transfusion centre) with regard to the epidemic in the Caribbean and inform them about the epidemiological situation and raise awareness on the potential risk of having an infected blood donor coming from affected areas.

REFERENCES

ECDC, Rapid risk Assessment: Chikungunya outbreak in Caribbean region (25 June 2014): <http://www.ecdc.europa.eu/en/publications/Publications/chikungunya-caribbean-june-2014-risk-assessment.pdf>

ECDC, Communicable Disease Threats Report: Week 49, 30 November-6 December 2014 <http://ecdc.europa.eu/en/publications/Publications/communicable-disease-threats-report-6-dec-2014.pdf>

PAHO. Number of reported cases of Chikungunya fever in the Americas. <http://www.paho.org/hq/index.php?Itemid=40931>

RIVM. Wekelijks overzicht van infectiesignalen: 4 december (week 49).

CNR Chikungunya: Personnal communication. Marjan Van Esbroek