Epidemiological Update

Chikungunya fever

23 May 2014

Given the continued dissemination of chikungunya virus in the Americas, the Pan American Health Organization / World Health Organization (PAHO / WHO) reminds Member States to continue efforts to reduce vector density, in addition to training health care workers on identifying clinically compatible cases and prepare health services for the possibility of chikungunya virus outbreaks as they may increase the demand for such services, particularly in areas with concurrent dengue outbreaks.

Situation summary

Autochthonous transmission of chikungunya in the Region of the Americas was first detected in December 2013. From then up to epidemiological week (EW) 20 of 2014, autochthonous transmission of the virus has been detected in the following six Member States and nine territories of the Caribbean sub-region: Anguilla, Antigua and Barbuda, British Virgin Islands, Dominica, the Dominican Republic, Guadeloupe, Guyana, Haiti, Martinique, Saint Barthelemy, Saint Kitts and Nevis, Saint Martin (French part) Saint Vincent and the Grenadines, Saint Lucia (imported case) and Sint Maarten (Dutch Part).[1] See Figure.

Table. Number of Chikungunya cases reported to PAHO/WHO, Epidemiological Week 20 of 2014

Suspected cases	61,864
Confirmed cases	4,356
Deaths	13

Chikungunya infection is a disease transmitted by the bite of *Aedes* mosquitoes, particularly *Aedes aegypti* and *Aedes albopictus*. Disease symptoms usually appear after an incubation period of three to seven days (range 1-12 days). Chikungunya virus can cause acute, sub-acute, and chronic disease. In its acute form, symptoms develop abruptly and include high fever and arthralgia. It affects all age groups and genders and, occasionally, there may be cases of co-infection with dengue.

Since the Epidemiological Update of 21 February 2014, autochthonous transmission of chikungunya was confirmed in Antigua and Barbuda, the Dominican Republic, Haiti, Saint Kitts and Nevis, and Saint Vincent and the Grenadines. In addition to Aruba, imported cases have been detected in Panama and the United States of America.

As of EW 20 of 2014, the situation in the French overseas collectivities has varied; in Saint Martin and Saint Barthélemy, virus circulation remains moderate, while in French Guiana, Guadeloupe, Martinique, the number of suspected cases has been increasing in recent weeks.

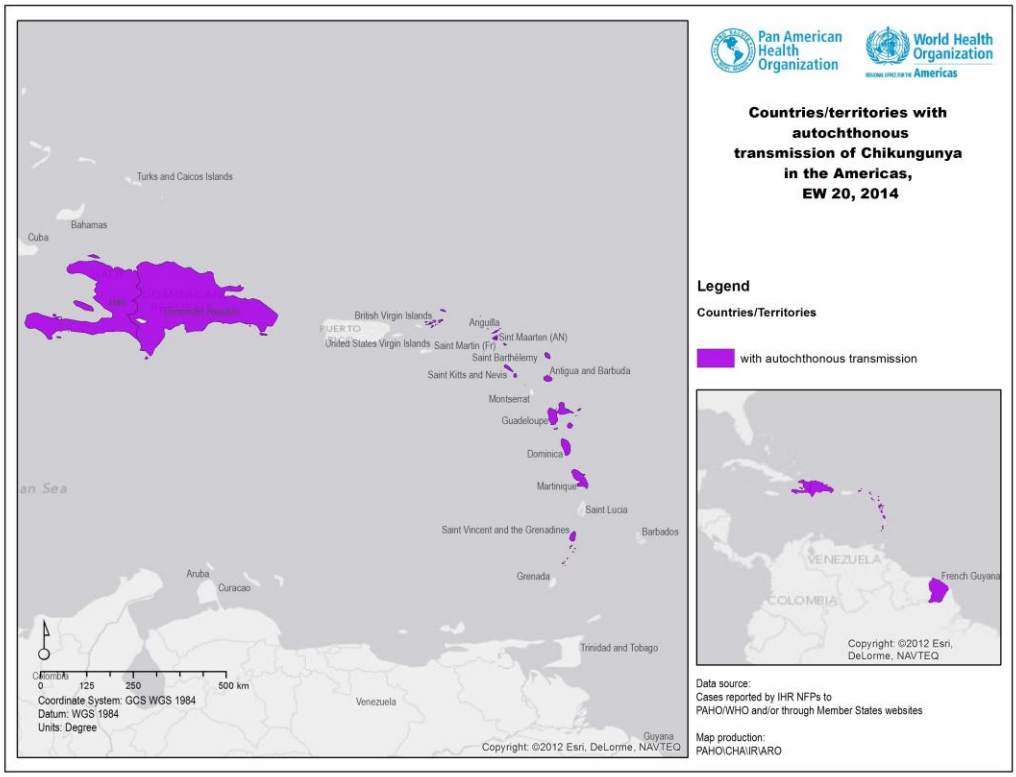
[1] The distribution of reported cases of chikungunya infection is updated weekly on PAHO/WHO's Chikungunya website available at: http://www.paho.org/chikungunya

In the Dominican Republic, the autochthonous circulation of chikungunya was detected in the EW 9 of 2014 (laboratory confirmed in EW 13). As of EW 17 of 2014, there have been 8,058 suspected cases nationally, of which San Cristóbal Province reported 68%. Twenty provinces have reported suspected outbreaks of chikungunya. Six of the provinces (Barahona, Hato Mayor, Monte Plata, San Cristóbal, San Pedro de Macorís, and Santo Domingo) have confirmed autochthonous transmission and imported cases were reported in the provinces of María Trinidad Sánchez and Puerto Plata. Three cases of co-infection of chikungunya and dengue were detected in the provinces of San Cristóbal (Nigua municipality) and Santo Domingo (Boca Chica and Santo Domingo Norte municipalities).

Since the confirmation of the first autochthonous cases of chikungunya in Haiti in EW 18 of 2014, there have been 3,460 suspected cases recorded nationwide. The departments that have the highest number of cases are Ouest (2,225 cases), Nord-Ouest (418 cases), Sud-Est (334 cases), Sud (212 cases) and Nippes (129 cases). The remaining 142 cases are distributed in the other five departments.

In Haiti, as well as in the Dominican Republic, the chikungunya virus has rapidly spread within the departments and provinces of the respective countries causing an increasing demand for health care. Accordingly, it is necessary for the health care services to adapt to meet the increased demand without compromising the quality of care for other prevalent diseases such as dengue.

Figure. Countries/territories with autochthonous transmission of chikungunya in the Americas.



Recommendations

The PAHO/WHO recommendations in the 9 December 2014 Epidemiological Alert and the 24 January 2014 Epidemiological Update on chikungunya remain unchanged.

Of those recommendations, we highlight the following:

- Given the broad distribution of *Ae. aegypti* and *Ae. albopictus* in the Americas, prevention and control measures should be aimed at reducing vector density, and attempting to obtain the acceptance and collaboration of the local population in the adoption of such measures. It is important to provide quality and transparent information on this disease through local communication outlets.

- An effective and operational control dengue program provides the basis for adequate preparation against chikungunya, because the biology and control procedures for *Ae. aegypti* are similar to those of *Ae. albopictus*. To respond to the introduction of the chikungunya virus, the prevention and control recommendations developed for the management of dengue as part of the Integrated Strategy for the Prevention and Control of Dengue (EGI -Dengue) may be used and intensified. The integrated vector management (IVM) program, an independent quality control program, should be incorporated into the approach.

- To succeed, the chikungunya IVM program must include intersectoral participation and collaboration at all levels of government and of health, education, environment, social development and tourism agencies. IVM programs also benefit from the participation of non -governmental organizations (NGOs) and private organizations. The chikungunya virus control program must maintain risk communication and mobilize the whole community.

- In order to facilitate decision making in the face of early identification of chikungunya fever by healthcare providers a diagnostic algorithm and guidance on clinical manifestations, laboratory diagnosis, clinical management and public health measures relevant to clinicians are available via the links provided below. The guidance also addresses recommendations in light of the possibility of blood-borne transmission of this virus.

Personal prevention measures

Patients infected with the chikungunya can be the reservoirs of infection for others in the household and in the community. Therefore, public health measures to minimize mosquito exposure become imperative to prevent the outbreak from spreading.

Patients and their household members must be educated about the risk of transmission to others and ways to minimize this risk by minimizing the vector population and vector contact.

To minimize the vector population:

- Intensify efforts to reduce larval habitats in and around the houses; remove stagnant water from all junk items lying around in the household and in the peri-domestic areas.

To minimize the vector-patient contact:

- Have the patient rest under mosquito netting (bed-nets), preferably permethrin-impregnated nets.

- Have the patient as well as other members of the household wear full sleeves to cover extremities.

- Wire-mesh/ nets on doors and windows are recommended.

These personal prevention measures are also effective in preventing acquisition of the virus by healthy people.

The personal prevention measures and guidance on laboratory diagnosis and clinical management are elaborated in the PAHO/WHO Aide Memoire for the clinical management of cases and diagnostic algorithm (available under related links 4 and 5).

Related Links

1. Preparedness and Response for Chikungunya Virus – Introduction in the Americas. PAHO/WHO and US Centers for Disease Control and Prevention, 2011. Available at: http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=16984&Itemid=
2. Chikungunya - PAHO/WHO Health Topics. Available at: http://www.paho.org/chikungunya
3. Chikungunya – WHO Fact sheet No. 327, March 2008. Available at: http://www.who.int/mediacentre/factsheets/fs327/en/
4. PAHO/WHO Diagnostic algorithm: http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=23978&Itemid=270&lang=en
5. PAHO/WHO Aide Memoire for the clinical management of cases: http://www.paho.org/hq/index.php?option=com_docman&task=doc_download&gid=23974&Itemid=270&lang=en

References

1. Dominican Republic Epidemiological Bulletin. Epidemiological Week 17 of 2014. Available at: http://digepisalud.gob.do/boletines/boletines-semanales/cat_view/34-boletines-_semanales/113-abril-2014.html
2. Haiti Ministry of Public Health and Population. Chikungunya : 20 May 2014 Press Release. Available at: http://www.mspp.gouv.ht/site/downloads/CHIKUNGUNYA%20GAGNE%20ENCORE%20DU%20TERRAIN%202.pdf