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WHO Director-General Dr Margaret Chan, on the advice of the Emergency Committee set up under the International Health Regulations (2005), declared that clusters of microcephaly and other neurological disorders reported in Brazil, following a similar cluster in French Polynesia in 2014, constitute a public health emergency of international concern. Following this declaration, the WHO Office for the Eastern Mediterranean Region (EMR) conducted two rounds of emergency meetings with a view of enhancing preparedness and readiness for Zika virus infection and associated conditions, in conjunction with representatives of the ministries of health of 12 countries. The first round was held on 22–23 February in Cairo, Egypt, inaugurated by Dr Jaouad Mahjour, Director of Programme Management; while the second round was held in Casablanca, Morocco, on 28–29 February, inaugurated by Dr Yves Souteyrand, WHO Representative for Morocco. The objectives of the meetings were to:

provide information and technical documents about Zika virus infection and associated conditions

present the draft regional plan for preparedness and response to Zika virus infection; and

agree upon priority activities to be implemented by Member States and WHO to enhance preparedness and response capacities to Zika virus infection.

In a message delivered during the inaugural sessions, Dr Ala Alwan, WHO Regional Director for the Eastern Mediterranean, urged Member States to remain vigilant and be prepared to face and manage new global health threats such as Zika virus with adequate knowledge, information and skills to prevent, detect and respond to these threats. He noted that the causal relationship between the increase in incidence of microcephaly and neurological disorders and the circulating Zika virus was currently being investigated. Until further knowledge, establishing and strengthening entomological surveillance and vector control in countries with presence of the Aedes mosquito would ensure early detection and effective monitoring of any abnormal increase in neonatal malformations or neurological disorders for which no known medical could be identified. He closed by encouraging participants to take the opportunity of the meeting to better understand the risks of transmission of Zika virus in the Region, global and regional strategies that could be adopted to early detect possible introduction and prevent local

transmission, and plan for public health measures for effective response. Discussing Zika virus situation in the EMR and recommendations for effective prevention and control measures were among outcomes of the meetings.

Overview of Zika virus: current situation in the Region

No human infection from Zika virus has so far been reported from any country in the EMR. However , serological evidence of the circulation of Zika virus has been reported in at least two countries in the Region. The current situation does not rule out the possibility of occurrence of Zika virus infection, as travel is likely to contribute to the risk of importation of cases to any country in the Region. While the risk of importation is equally high in all countries in the Region, the risk of local transmission following introduction of the virus through a viraemic patient returning from countries with active Zika virus circulation remains high in areas where the mosquitoes that primarily transmit this virus exist. According to this risk stratification, countries need to enhance preparedness and readiness measures.

Aedes mosquitoes, which primarily transmit Zika virus infection to humans, are present in a number of EMR countries, including Djibouti, Egypt, Oman, Pakistan, Saudi Arabia, Somalia, Sudan and Yemen. Vector-borne diseases pose particular challenges to national public health authorities, because of their complex nature requiring multidisciplinary competencies and strong rapid interaction between committed sectors. Aedes mosquitoes have been found in at least eight countries of the Region, while their presence or absence is still to be assessed in others. Therefore, a strong entomological surveillance system is needed in the Region.

Key public health measures for preventing Zika virus infection

Mosquito surveillance is a key component of any local integrated vector management programme. Preventing or limiting the transmission of dengue, chikungunya and Zika viruses is completely dependent on the control of mosquito vectors and reduction of person-mosquito contact. Aedes aegypti and A. albopictus are the mosquito species mostly incriminated/ suspected as vectors of arboviral diseases. Entomological sampling methods to assess Aedes population density and evaluate the control interventions have been largely implemented, especially in Asian countries. There is a need to introduce and adapt those methods in countries through standardized protocols, including traditional Stegomyia indices to be used in outbreak prevention.

The main sampling tools for collection of all stages of Aedes mosquitoes were described; however, it was noted that mosquito-based surveillance is not the preferred method for monitoring or predicting dengue, chikungunya or Zika virus outbreaks. For these arboviruses, it

is more efficient to detect cases in people. Lack of entomological capacity is one of the main contributing factors to poor entomological surveillance for arboviruses. Countries need to conduct routine entomological surveillance, research and share with the scientific community, irrespective of whether the scope of the research area features high on the research agenda (i.e. molecular diagnostics). Malaria laboratories can diversify to include other arboviruses; an inventory of resources for medical entomology in the Region (i.e. experts, training institutes, research agencies and laboratories working for medical entomology) needs to be assembled. Furthermore, a network of medical entomologists needs to be established to support the work of entomological surveillance and vector control for arboviral diseases.

There is a strong need to build/strengthen an early warning system to predict, early detect and assess transmission of vector-borne diseases in the Region, through operational research and integrating vector surveillance with syndromic-based and event-based disease surveillance.

The key vector control measures targeting all stages of Aedes mosquitoes was highlighted, which include environmental, mechanical, biological, chemical and genetic methods. Insecticide resistance (pyrethroid and temephos), population movement, climate change remain key concerns.

Operations support

A draft regional plan for enhancing preparedness and response to Zika virus was presented. The plan outlined the following six objectives and areas of work, under which priority activities will be implemented within the next six months:

1. Providing leadership and coordination for enhanced preparedness and response capacities
2. Enhancing capacities required under the IHR (2005) at international points of entry
3. Establishing effective surveillance systems and conducting risk assessment for Zika virus disease and potential complications
4. Reinforcing entomological surveillance and vector control
5. Improving access to quality diagnostics testing and rapid turnaround of results; and
6. Improving risk communication and community engagement for Zika virus (* further details provided opposite)

To support the operationalization of this plan and respond to any emergency request for assistance from the countries in managing the risk associated with Zika virus, an incident management system (IMS) with designated staff has been established in the WHO Regional

Office.

The meetings concluded with agreement on a set of actions recommended for urgent implementation by Member States with support from WHO and concerned partners in order to keep the Region free from Zika virus infection. Box 1 lists a selection of the key recommendations.

WHO has not recommended any travel or trade restrictions within countries, areas and/or territories with Zika virus transmission. Countries reporting sporadic Zika virus in travellers arriving from affected countries pose little, if any, risk of onward transmission. All travellers need to stay informed about Zika virus and other mosquito-borne diseases. Pregnant women need to be advised not to travel to areas of ongoing Zika virus transmission until more is known about the possible causal relationship between Zika virus and congenital malformation of newborns. The national health authorities may make public health and travel recommendations to their own populations, using a risk assessment approach.

Conclusion and next steps

The Regional Office will finalize the regional response plan based on the actions recommended above and will implement a set of priority activities to enhance preparedness and readiness before the next high-risk season. It will also identify a network of institutions, experts, reference laboratories and training centres in the Region to support Member States in implementation of the priority activities included in the regional response plan, such as the entomological surveillance, vector control, field investigation and laboratory detection as well as long-term capacity-building for prevention and control of arboviral diseases.

[1] This report is extracted from the Summary report on the Regional meeting to enhance preparedness and response capacities to Zika virus infection, Cairo, Egypt 23-22 February 2016; and Casablanca, Morocco 29–28 February 2016 (http://apps.who.int/iris/bitstream/10665/206084/1/IC_Meet_Rep_2016_EN_16740.pdf)

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