

Cairo 10 May 2015 – The WHO Regional Office for the Eastern Mediterranean held an international scientific meeting on Middle East Respiratory Syndrome coronavirus (MERS-CoV) in Cairo, Egypt, to discuss and share new scientific evidence and identify remaining gaps in knowledge pertaining to the virus’s origin, reservoir, and transmission mode. The overall goal of the meeting was to improve the global health response based on the new evidences accumulated so far on the risk factors for transmission of this virus. In the two and a half years since emergence of MERS-CoV in 2012, the understanding of the epidemiology of the virus has greatly improved but several important questions remain unanswered.

Participations of the meeting include experts in human and animal health from Jordan, Oman, Saudi Arabia and United Arab Emirates, in addition to representatives of international health agencies: Centers for Disease Control and Prevention, Atlanta; United States Naval Medical Research Unit 3 (NAMRU-3); Institute of Virology, University of Bonn, Erasmus Medical Centre in Nedtherland; Institute Pasteur, Mount Sinai Hospital, Toronto, Canada; China Faculty of Medicine; Chinese University of Hong Kong, the US Centers for Disease Control and Prevention (US-CDC); Food and Agriculture Organization of the United Nations (FAO); and World Organisation for Animal Health (OIE).

To date, WHO has organized four international scientific meetings on MERS-CoV. The first was held in January 2013, the second in December 2013 and the third in Riyadh, Saudi Arabia, in March 2014, during which the final protocol for the case–control study on MERS-CoV was finalized. “These meetings, including this fourth one, have contributed immensely to improving our understanding of the virus, its evolution and risk factors for transmission, as well as identifying critical information and knowledge gaps that can better guide an effective global public health response,” said WHO’s Regional Director Dr Ala Alwan. “Today, once again, this meeting has underscored the need for the animal health and human health sectors to work together and collaboratively in MERS-CoV’s investigation, surveillance and research. Without the active collaborative support and engagement of both of these two sectors, the virus will continue to threaten public health,” Alwan concluded.

As a novel virus of zoonotic origin and with its ability to cause severe disease in a number of patients, the virus continues to pose a serious threat to global health security. The participants of the meeting discussed the new scientific knowledge that has been accumulated so far surrounding the origin, reservoir and transmission mode of MERS-CoV in animals and humans.

The participants confirmed that the epidemiological researches and all current accumulated scientific evidence prove that camels are the source of MERS-CoV. However, what's still unknown is how the virus is transmitted from camels to humans. By reviewing the research findings, participants concluded that all hospital outbreaks were caused by poor and inadequate infection control practices and measures in the healthcare environment, and not because of any change in the virus transmission.

As such, the meeting also reviewed the best practices in detecting, preventing and controlling the virus. Additionally, they looked into the most effective means of controlling the outbreak in both community and hospital settings.

Most importantly, they identified many knowledge gaps that need to be addressed to better understand the transmission dynamics of the virus among animals, between animals and humans, and from human to humans. These knowledge gaps include: the risk factors for transmission between camels and humans, the role of mild or asymptomatic cases in the infection transmission, the seasonal trend of the disease, the specific exposures that put the healthcare workers at highest risk illness, the underlying factors that are contributing into the transmissibility of the virus in healthcare settings, and the behaviors that put certain groups of people at higher risk of illness, etc.

The participants agreed to work together to translate the information that has been generated so far on the virus, into a set of evidence-based recommendations that aims at improving the global preparedness against MERS-CoV. As of 30 April 2015, WHO has been notified of 1111 laboratory-confirmed cases of infection with MERS-CoV globally, including at least 422 related deaths.

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