Seven years of MERS-Cov outbreak, crucial I morbidities, and aggressive mortalities

Hamid Yahya Hussain¹

1 School and Educational Institutions Health Unit, Health Affairs Department, Primary Health Care Services Sector, Dubai Health Authority, Dubai

*Corresponding Author: Prof. Hamid Yahya Hussain, School and Educational Institutions Health Unit, Health Affairs Department, Primary Health Care Services Sector, Dubai Health Authority, Dubai. Email: <u>hussainh569@gmail.com</u> **Received:** September 25, 2019; **Accepted:** October 16, 2019

Keywords: MERS-Cov, outbreak, Mortalities, Morbidities.

Between 2012, and June 30th, 2019 one of the longest outbreaks, that is still going on currently revealed tremendous challenges for the global, regional and many national health care systems, a confirmed case of MERS-CoV infection by laboratories which worldwide collected by WHO is 2449, as well as about 845 deaths. Associated with. The overall account of mortalities includes approved cases by laboratory confirmation incidence that communicated with WHO through IHR system, up to date through follow-up with concerned member states.

Spreading over Geography

Amongst the countries witnessed floating out of Middle East Respiratory Syndrome coronavirus (MERS-CoV, experienced human cases :, United Arab Emirates (UAE), Oman, Saudi Arabia (KSA), Jordan , Kuwait, Yemen Qatar, the, United Kingdom, Lebanon, the Netherlands, Iran, Algeria, Turkey, Austria, Greece, Republic of Korea, China, Thailand, the Kingdom of Bahrain.

France, Germany, Italy, Tunisia, Malaysia, the Philippines, the United States of America (USA), Egypt, the total number of incidents reported through the longest course of the outbreak revealed that 2,454 cases were clinically and laboratory confirmed; of which about 884 (36%) deaths (as of September 2012).

Other Countries e.g. Bangladesh, Burkina Faso, Chile, Egypt, Ethiopia, Iran, Iraq, Israel, Jordan, with published animal findings (virology or /and serology), Saudi Arabia (KSA), Somalia, Spain (Canary Islands), Sudan, Tunisia, United Arab Emirates. Kenya, Kuwait, Mali, Morocco, Nigeria, Oman, Pakistan, Qatar.

Risk Considering

As a risk assessment strategy, Infection with MERS-CoV was made based on very basic assumptions that the diseases is

extremely aggressiveness in fatality nature, which lead to high and significant mortality. Many available pieces of evidence revealed that, humans are infected with MERS-CoV showed to be easily transmissible by direct and indirect contacts with UN protected domestic animals e.g. camels. Transition among human being, revealed one of the characteristics of MERS-CoV has reflecting transition liability among humans. Non-sustained man-to-man transmission has occurred mainly observed in health care settings.

Potential spread of MERS-Cov

overall risk assessment does not change by The notification of new additional cases e. World health organization anticipate that, more incidences of MERS-CoV infection expected to keep reported with Middle East, more and more cases shall be spread out to other countries through infected persons with a positive history of contacting dromedary camels, animal products (like, consumption of camel's raw milk), or exposing to other infected patients (e.g, if they are a household contact or in a health care setting

Public Health Response

Many regional and national public health systems, has launched a full-scale investigation of the outbreak, including identification of all household and healthcare worker contacts of confirmed patients. As hundreds of contacts have been identified for index cases, including tenths household contacts and much more of healthcare worker contacts. All identified contacts were continued to be monitored for two weeks from the last date of exposure according to world health organization and national guidelines for MERS-CoV. Presently, symptomatic and high-risk exposure contacts continued to be been for MERS-CoV infection by RT-PCR at least once and many contacts of known patients have been tested repeatedly. Any secondary cases of MERS-

CoV infection continued to be registered to international statistical and epidemiological reports. The health authorities believe that the possible active human-to-human transmission is minimized. The latest cases represent contacts who initially tested negative for MERS-CoV by RT-PCR, but were confirmed positive in subsequent repeat testing. World health organization expects more cases of epidemiologically related to known cases. At the health care facilities level, high risk of MERS-CoV transmission, infection prevention, and control measures have been enhanced, including intensive mandatory on-the-iob training on infection control measures for all healthcare workers in an emergency room and ICU. Aggressive disinfection operations have been carried out in the emergency room and ICU of Hospitals A and respiratory triage has been enforced in all healthcare facilities in the Riyadh region. Additional hospital staff is also mobilized to support infection control activities. The health Authority media department continue to release an awareness campaign targeting Wadi Aldawasir city with special focus on camel owners and camel-related activities. The Agriculture authorities have lunched testing dromedaries in the outbreak territories. Some dromedaries have tested positive via PCR and these animals were removed from the local market. Movement in and out of the camel market has also been restricted. Camels owned by confirmed human cases were quarantined regardless of testing results as a precaution. Full genome sequencing of available human and dromedary specimens will be conducted.

Double Burden son Health & Economy

The Impact MERS-Cov outbreak on many regional, national and global socioeconomic outcomes were so great. Even of perceived threats by public, it shows an evidence of (a risk) generated by MERS, found to be much more dangerous than those of other infectious diseases, the (objective component of risk) which lead to deaths from MERS-CoV were smaller than the numbers of those from seasonal influenza or tuberculosis. It is thus obvious that the MERS epidemic was not a simple public health problem as per different national contexts when started earlier times, yet, burdens and consequences overall and society shall be exceeding the health sector borders. The reasons behind the difference in perception were the absence of clear guidelines to be outbreak communication followed. winning the public's trust should be emphasized in national guidelines, promoting understanding among the civil society, providing information transparently, making announcements as early as possible, any failure in of risk communication process during outbreak course, may resulted in the publics overestimation and overreaction to the outbreak. In during outbreak peak in Korea, thousands of educational institutions and schools were closed temporarily, and numerous public events were canceled or postponed. The Korean government was recommended and advised to reopen schools by WHO. Evidences available revealed that a drop of 41% in forging tourist witnessed, comparing with the same month of the previous year. Korea. About 10 billion US\$ loss was reported, contribute to almost to cut 0.1% off the gross domestic product growth rate in 2015. Likewise, similar social cost reflected the significance of risk communication during infectious disease outbreaks. It was strongly advised by a world health organization to improve risk communication.

REFERENCES

- Kim DH. The Middle East respiratory syndrome epidemic as a public health emergency. J Prev Med Public Health. 2015;48(6):265–270. [PMC free article] [PubMed] [Google Scholar].
- World Health Organization WHO statement on the ninth meeting of the IHR Emergency Committee regarding MERS-CoV. [cited 2015 Nov 25]. Available from: http://www.who.int/mediacentre/news/statements/2015/ihr-ecmers/en
- World Health Organization WHO outbreak communication guidelines. 2015 [cited 2015 Nov 25]. Available from: http://www.who.int/csr/resources/publications/WHO_CDS_2005_ 28en.pdf.
- Realistic risks: the communication of risk in disease outbreaks is too often neglected; that must change. Nature. 2015;523(7562):502. [Google Scholar]
- Kupferschmidt K. Communication gaps fuel MERS worries in Korea. ScienceInsider; 2015 Jun 4; [cited 2015 Nov 12]. Available from: http://news.sciencemag.org/asiapacific/2015/06/communicationgaps-fuel-mers-worries-korea.
- Gostin LO, Bayer R, Fairchild AL. Ethical and legal challenges posed by severe acute respiratory syndrome: implications for the control of severe infectious disease threats. JAMA. 2003;290(24):3229–3237. [PubMed] [Google Scholar]
- World Health Organization Rapid advice note on home care for patients with Middle East respiratory syndrome coronavirus (MERS-CoV) infection presenting with mild symptoms and management of contacts. 2013 Aug 8; [cited 2015 Nov 25]. Available from: http://www.who.int/csr/disease/coronavirus_infections/MERS_ho me_care.pdf?ua=1.
- 8. Wikipedia Kaldor–Hicks efficiency. [cited 2015 Nov 25]. Available from:

https://en.wikipedia.org/wiki/Kaldor%E2%80%93Hicks_efficienc.

www.cjmronline.com | Chinese Journal of Medical Research | July- September 2019