



Food and Agriculture
Organization of the
United Nations



World Health
Organization

Global Technical Meeting on MERS-CoV and Other Emerging Zoonotic Coronaviruses

Virtual Meeting
15-16 November 2021

Concept note and agenda



Concept note

Since its identification in the Kingdom of Saudi Arabia in 2012, Middle East Respiratory Syndrome Coronavirus (MERS-CoV) continues to pose a significant public health, health security and economic threat to the global community. To date, more than 2500 cases of human infection have been reported to the World Health Organization¹ and cases have been exported to all regions of the globe. MERS-CoV is one of three high impact, zoonotic coronaviruses that have emerged in recent years. SARS-CoV emerged in 2002 and spread to 29 countries before the epidemic ended in July 2003. Since the emergence of SARS-CoV-2 first reported in December 2019, over 229 million human cases and 4.7 million deaths have been reported globally².

Over the last 9 years, Member States have been working to prevent MERS outbreaks and these efforts substantially supported early actions of the COVID-19 pandemic. Affected countries continue to reduce the global threat of MERS through addressing key knowledge gaps, enhancing surveillance, and strengthening the ability to detect human cases early and contain hospital outbreaks. However, these control and prevention efforts need to be maintained, including those areas where MERS-CoV is likely to be circulating in dromedary camels across large parts of the Middle East and Africa.

In 2019, WHO estimated that in the period 2016-2018, 1,465 cases of MERS-CoV infection and between 293–520 deaths have been averted due to global efforts to detect infections early and reduce transmission and these estimates are currently being updated for 2019-2021³. A case definition for confirmed positive animal cases was published⁴ that facilitates national reporting of MERS-CoV in dromedary camels to OIE. In May 2021 OIE General Assembly, Members adopted the inclusion of MERS-CoV as an OIE listed disease and a Manual chapter on international standards for diagnosis of MERS-CoV has also been adopted. Furthermore, MERS-CoV research, prevention, and preparedness efforts have accelerated the global fight against COVID-19, underlining the importance of global collaboration and integrated efforts.

Although global efforts have prevented hundreds of infections and deaths and likely several large-scale outbreaks, vigilance for MERS-CoV must be maintained by all countries, even in the context of a global pandemic. More can be done to limit spillover infections at the animal-human interface from dromedaries using a One Health approach, requiring continued strengthening of multisectoral collaborations, surveillance in dromedaries and persons in direct contact with herds, accelerated developments of effective therapeutics and vaccines for both dromedaries and humans. These efforts are critical to build

¹ http://www.fao.org/ag/againfo/programmes/en/empres/mers/situation_update.html

² <https://covid19.who.int/>

³ Donnelly, C. A., Malik, M. R., Elkholy, A., Cauchemez, S., & Van Kerkhove, M. D. (2019). Worldwide Reduction in MERS Cases and Deaths since 2016. *Emerging Infectious Diseases*, 25(9), 1758-1760.

<https://doi.org/10.3201/eid2509.190143>

⁴ <https://www.oie.int/en/disease/middle-east-respiratory-syndrome-mers/>

capacities at local levels across many countries that will benefit not only MERS-CoV prevention and control efforts, but also preparing for the potential spillover of known and emerging zoonotic pathogens with epidemic and pandemic potential. To limit onward human-to-human transmission of high threat respiratory pathogens such as MERS-CoV, improvements in standard infection prevention and control measures must be made in all healthcare settings around the world.

One of the major successes of the global efforts to address MERS has been the way it has informed the early response activities of the COVID-19 pandemic. In many countries, MERS investment and hard work provided a critical foundation for response to COVID-19: expert networks for MERS-CoV including laboratory, infection prevention and control, mathematical modelling and clinical care networks were immediately utilized for COVID-19 and the technical guidance for MERS-CoV was used to rapidly inform initial technical guidance for COVID-19.

The COVID-19 pandemic has required the world to reevaluate outbreak and pandemic preparedness, including surveillance, to be strengthened and in a constant state of readiness. Public health lessons learned from COVID-19 should be communicated and applied to MERS-CoV through integrated, One Health surveillance, prevention and control efforts. Likewise, efforts towards the control and prevention of MERS-CoV have contributed to the fight against COVID-19, particularly in the areas of One Health and vaccine development.

Over the last nine years, FAO, OIE, and WHO have brought together public health and animal health experts from affected and at-risk countries, academic scientists and subject matter experts of high threat respiratory pathogens including influenza, SARS and MERS, to review the latest scientific evidence on MERS-CoV and improve multi-sectoral collaboration. As a follow-up to previous technical meetings on MERS-CoV hosted by WHO, FAO and OIE, the 2021 Global Technical Meeting will focus on MERS-CoV and other emerging zoonotic coronaviruses. The meeting will bring together the global community to share the latest findings from accelerated efforts to implement the MERS-CoV public health research agenda and R&D road map.

The specific objectives of the meeting are to:

- Summarize the latest scientific findings and country experiences on MERS-CoV, focusing on recent advances since the last Global Technical Meeting on MERS-CoV held in September 2017³
- Facilitate coordination and communication between animal health, public health and environmental sectors in 1) Outbreak preparedness and response, 2) MERS-CoV and other zoonotic coronavirus surveillance activities and laboratory capacity and 3) MERS-CoV and emerging zoonotic coronavirus preparedness, prevention, control, and intervention measures, including vaccination
- Highlight how MERS-CoV research, prevention and control activities have contributed to the global effort against SARS-CoV-2

- Apply lessons learned from COVID-19 to the control and prevention of MERS-CoV and other emerging zoonotic coronaviruses.
- Summarize priority actions and research for the continued advancement in the control and prevention of MERS-CoV.

Expected outcomes of the meeting are:

- A reinforced global commitment to maintain vigilance for prevention, detection and response activities targeting MERS-CoV and other emerging zoonotic coronaviruses, in the context of the COVID-19 pandemic.
- Update the public health research agenda for MERS-CoV and highlight newly prioritized research questions.

Participants

Stakeholders invited to attend the Global Technical Meeting on MERS-CoV include representatives from Ministries of Health and Ministries of Agriculture in affected and in at-risk countries, MERS-CoV and zoonotic CoV subject matter experts and researchers, funding agencies, industrial partners and representatives from FAO, OIE and WHO at headquarters, regional and national levels.

Language

The meeting will be held in English with French and Arabic simultaneous interpretation.

Meeting Venue

Virtual, by invitation

DAY 1 15 November 2021		
Time (CET)	Topics	Speakers
12:00 - 12:15	Welcome and opening remarks	Keith Sumption, FAO Michael Ryan, WHO Montserrat Arroyo, OIE Haleema Al Serehi, Ministry of Health, KSA
12:15 - 13:55	Plenary Session 1: How MERS-CoV supported the COVID-19 response	Chair: Maria Van Kerkhove, WHO
	Global Preparedness for MERS-CoV and the COVID-19 Response	Maria Van Kerkhove, WHO
	MERS-CoV and COVID-19 vaccine development	Sarah Gilbert, University of Oxford, UK
	Panel discussion: How the pandemic has affected work on MERS-CoV	Sarah Gilbert, University of Oxford, UK Maria Van Kerkhove, WHO Sophie von Dobschuetz, FAO
	Facilitator: Shagun Khare, WHO	Gounalan Pavade, OIE Haleema Al Serehi, Ministry of Health, KSA
	EMRO regional MERS meeting summary	Abdinasir Abubakar, EMRO
13:55 - 14:00	5 min Break	
14:00 - 15:30	Plenary Session 2: Assessing the risks of MERS-CoV and other CoVs	Chair: Maria Van Kerkhove, WHO
	Update on MERS-CoV in animals	Emma Gardner, FAO Gounalan Pavade, OIE
	MERS-CoV Risk at the Animal-Human Interface	Malik Peiris, HKU, HK SAR
	Overview of CoVs in animals	Alessio Lorusso, IZSAM, Italy
	Assessing the risk of nosocomial outbreaks	Muhammad A. Halwani, Al Baha University, KSA
15:30 - 15:35	5 min Break	
15:35 - 17:00	Parallel session 1: Surveillance challenges (no translation facilities available)	Chair: Ryan Aguanno, FAO
	Sustainable surveillance in animal populations (domestic and wild)	Ibrahim Ahmad Qasim, Ministry of Environment, Water and Agriculture, KSA
	Human surveillance at mass gatherings	Anas Abdulhafeez Khan, MoH, KSA
	Integrating MERS-CoV, SARS-CoV and nCoV into respiratory disease surveillance: GISRIS+	Stefano Tempia, EMRO
	OH outbreak investigation milestones and metrics	Mark Smolinski, Ending Pandemics
15:35 - 17:00	Parallel session 2: Addressing nosocomial outbreaks (no translation facilities available)	Chair: Abdullah Algwizani, KSA Public Health Authority
	Risk factors for superspreading events in health care facilities	Jaffar Al Tawfiq, Johns Hopkins Aramco Healthcare, KSA
	IPC for respiratory pathogens including MERS-CoV	Majed Alshomrani, National Guard Health Affairs, KSA
	Improvements in IPC following nosocomial outbreaks	Tong Ryong Jung, KDCA, ROK
	Environmental persistence of MERS-CoV	Neeltje van Doremalen, NIH, USA
17:00 - 17:10	Day 1 closure	Maria Van Kerkhove, WHO

DAY 2 16 November 2021		
Time (CET)	Topics	Speakers
12:00 - 12:35	Welcome	
	Day 1 summary	<i>Sophie von Dobschuetz, FAO</i>
	Overview from parallel sessions 1 and 2	<i>Ryan Aguanno, FAO</i> <i>Abdullah Algwizani, KSA Public Health Authority</i>
	Introduction to Day 2	<i>Sophie von Dobschuetz, FAO</i>
12:35 - 14:05	Plenary Session 3: How has COVID-19 shifted our thinking?	<i>Chair: Sophie von Dobschuetz, FAO</i>
	How will COVID-19 change our work?	<i>Video presentation</i>
	Panel discussion: How do we utilize this moment to improve genomic sequencing for CoVs worldwide	<i>Marion Koopmans, Erasmus, The Netherlands</i> <i>Supaporn Wacharapluesadee, King Chulalongkorn Memorial Hospital, Thailand</i> <i>Christian Drosten, Charité, Germany</i> <i>Stefan Weber, UAE</i> <i>Ahmad Albarag, KSA Public Health Authority</i> <i>Eun-Jin Kim, KDCA, Republic of Korea</i>
	Facilitator: Amal Barakat, EMRO	
14:05 - 14:10	5 min Break	
14:10 - 15:10	Parallel session 3: Communities and communications <i>(no translation facilities available)</i>	<i>Chair: Ahmed El Idrissi, FAO</i>
	Panel discussion: Camels, communities, and zoonotic risks	<i>Roba B. Jilo, Tufts University, USA</i> <i>Bhanu Chaudhary, UAE University</i> <i>Mindy Frost, WHO</i> <i>Rachel James, Coordinator, Collective Service RCCE Eastern and Southern Africa Office</i> <i>Mohamed Nour, Ministry of Public Health, Qatar</i>
14:10 - 15:10	Parallel session 4: Advancing Research and Development <i>(no translation facilities available)</i>	<i>Chair: Hanan Balkhy, WHO</i>
	Overview of R&D agenda	<i>Bart Haagmans, Erasmus, The Netherlands</i>
	Where are we with therapeutics for MERS-CoV? How has the work for SARS-CoV-2 advanced progress for MERS-CoV?	<i>Yaseen Arabi, KAIMRC, KSA</i>
	Update on MERS-CoV vaccination for dromedary camels	<i>Naif Alharbi, KAIMRC, KSA</i>
	Coronavirus Research and Innovation Network	<i>Julian Hiscox, University of Liverpool, UK</i>
15:10 - 15:25	15 min Break	
15:25 - 16:15	Meeting closure	<i>Chair: Gounalan Pavade, OIE</i>
	Overview from parallel sessions 1 and 2	<i>Ahmed El Idrissi, FAO</i> <i>Hanan Balkhy, WHO</i>
	Meeting summary and identification of next steps Closing Remarks	<i>Maria Van Kerkhove, WHO</i> <i>Sophie von Dobschuetz, FAO</i> <i>Gounalan Pavade, OIE</i>

