



Food and Agriculture Organization  
of the United Nations

# Middle East respiratory syndrome coronavirus (MERS-CoV)



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## Middle East respiratory syndrome coronavirus (MERS-CoV)/Introduction

Since the identification of Middle East respiratory syndrome coronavirus (MERS-CoV) in the Kingdom of Saudi Arabia in 2012, human cases continue to be reported to the World Health Organization (WHO).

Since 2012, human cases have been reported from 27 countries in the Middle East, North Africa, Europe, the United States of America, and Asia but the majority of cases (about 83%) have been reported by Saudi Arabia.

At the end of April 2019, a total of 2428 laboratory-confirmed cases of Middle East respiratory syndrome (MERS), including 838 associated deaths (case–fatality rate: 34.5%) were reported globally; the majority of these cases were reported from Saudi Arabia (2037 cases, including 760 related deaths with a case–fatality rate of 37.3%).

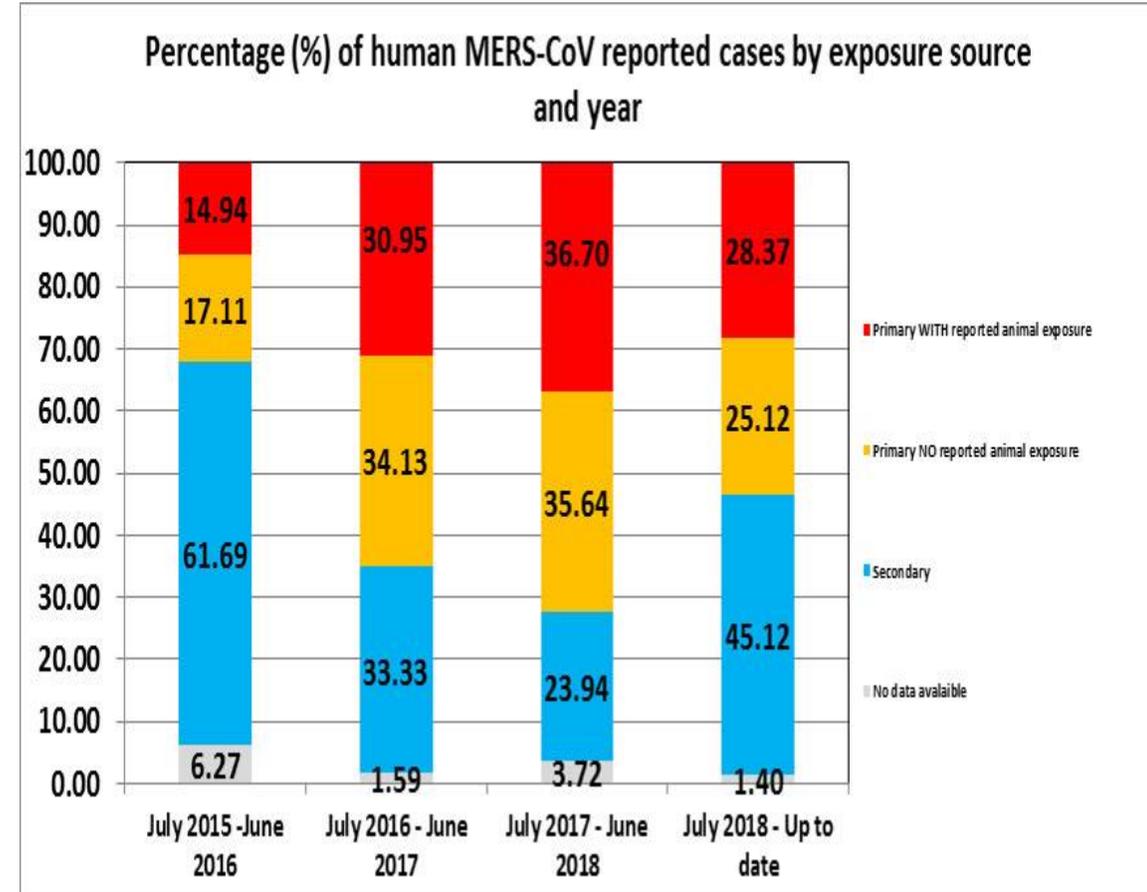
For detailed information on human cases, please refer to WHO at <http://www.who.int/emergencies/mers-cov/en/>



## Middle East respiratory syndrome coronavirus (MERS-CoV)/Introduction

Qatar, Oman, Jordan, Saudi Arabia, Iran and Kuwait have reported MERS-CoV positive cases to OIE. also there is Countries with published animal findings (serology and/or virology).

Dromedary camels have been confirmed by several studies to be the reservoir of MERS-CoV in humans. Zoonotic transmission were reported in multiple occasions.







Overall objective of MERS-CoV project under the Emerging Pandemic Threats Programme (EPT-2), 2015-2019



To fully understand the animal source(s) as well as infection and transmission dynamics of the MERS-CoV

To minimize or interrupt animal-to-animal and animal-to-human transmission of MERS-CoV through targeted risk-mitigation interventions.





## Major output of MERS-CoV project



**MERS-CoV transmission and re-infection status/dynamics in camel populations described**



**Potential risk factors (behaviours and practices) for human exposure to MERS –CoV from camels described**



Activities of MERS-CoV project under the Emerging Pandemic Threats Programme (EPT-2), 2015-2019

Support laboratory  
diagnostic capacity for  
MERS – CoV testing



Conduct longitudinal  
surveillance preceded  
by the cross sectional  
surveillance



Conduct Value  
chain studies



Conduct risk assessment  
on MERS – CoV  
occurrence in dromedary  
camels and other  
livestock



Conduct risk-based  
cross sectional  
surveillance





## Middle East respiratory syndrome coronavirus (MERS-CoV)/Meetings and events

While progress has been made in research and surveillance, significant gaps remain in understanding the virus, including how it circulates in dromedary camels, the natural reservoir host, or how it spills over into the human population.

Several committee meetings, technical consultations and workshops were convened on the Middle East Respiratory Syndrome Coronavirus (MERS-CoV), either jointly or separately by the Food and Agriculture Organization of the United Nations (FAO), the World Organisation for Animal Health (OIE), and the World Health Organization (WHO).

All these meeting have contributed to increased awareness and understanding of the complex epidemiological features of MERS-CoV, including the role of animals, but many questions are still unanswered as of today.



## Middle East respiratory syndrome coronavirus (MERS-CoV)/Meetings and events

**Two High Level Technical Meetings** organized in January 2016 and September 2017, whereas research progress and knowledge gained was summarized and communicated as well as research gaps and new research topics were identified

**Inter-regional training workshop on analysis of camel value chains and human behaviors in view of MERS CoV surveillance** has been conducted at December 2016, involving representatives from Egypt, Jordan, Ethiopia and Kenya and delivered by AGAH, FAO-HQ experts.





## Middle East respiratory syndrome coronavirus (MERS-CoV)/ Recommendations and Priority Actions

- MERS-CoV Surveillance
- Research
- Food safety and Environment
- Risk communication
- Inter-sectoral collaboration
- Regional coordination



## Middle East respiratory syndrome coronavirus (MERS-CoV)/ Important link

Doha Declaration FAO, 29 April 2015

[http://www.fao.org/ag/againfo/programmes/en/empres/documents/docs/Doha\\_Declaration\\_2015.pdf](http://www.fao.org/ag/againfo/programmes/en/empres/documents/docs/Doha_Declaration_2015.pdf)

MERS-CoV case definition for reporting to OIE

<http://www.oie.int/scientific-expertise/specific-information-and-recommendations/mers-cov/>

Muscat Declaration FAO, 21 May 2014

[http://www.fao.org/fileadmin/user\\_upload/newsroom/docs/Oman%20Muscat%20Declaration\\_Final%20May%202014.pdf](http://www.fao.org/fileadmin/user_upload/newsroom/docs/Oman%20Muscat%20Declaration_Final%20May%202014.pdf)

OIE Questions and Answers on MERS-CoV

[http://www.oie.int/fileadmin/Home/fr/Media\\_Center/docs/pdf/Disease\\_cards/Q\\_A\\_MERS-CoV\\_EN\\_update\\_August\\_2014\\_Final.pdf](http://www.oie.int/fileadmin/Home/fr/Media_Center/docs/pdf/Disease_cards/Q_A_MERS-CoV_EN_update_August_2014_Final.pdf)

# Thank you



*Protecting people, animals, and the environment everyday*