

The Qatar FIFA World Cup 2022 and camel pageant championships increase risk of MERS-CoV transmission and global spread



Mass gatherings, such as sporting events and festivals, create ideal conditions for human-to-human transmission of a range of infectious diseases, which can rapidly spread globally due to ease of travel.¹ In Qatar two mass gathering events are being held simultaneously, the FIFA World Cup 2022 championship² and the Camel Mzayen Club's camel beauty pageant festival.³ These have attracted hundreds of thousands of people from within the Middle East and across the world. Many are attending both events, interacting closely with each other and with camels, creating ideal conditions for the transmission of camel-associated zoonotic pathogens with epidemic potential.⁴ These pathogens include the highly lethal MERS-CoV. Dromedary camels in the Middle East are a major reservoir of MERS-CoV. Humans sporadically become infected through direct or indirect contact with MERS-CoV-infected camels or camel dairy products.⁵

MERS-CoV was first reported as a new human pathogen from Saudi Arabia in 2012.⁶ MERS-CoV is the most lethal of the three zoonotic coronaviruses (ie, MERS-CoV, SARS-CoV, and SARS-CoV-2) that have caused human outbreaks.⁷ As of Nov 1, 2022, 2600 people have been reported to have laboratory-confirmed Middle East respiratory syndrome (MERS), including 894 deaths (ie, a 34% case fatality rate), globally from 27 countries.⁸ Although the majority of infections have occurred in the Middle East, eight countries in Europe have also reported confirmed infections, all with travel links to the Arabian Peninsula. In May 2022, Qatar authorities reported to WHO two individuals with MERS, of whom one died.⁹ Both had primary MERS-CoV infections, contact with camels, and had consumed raw camel milk. With MERS-CoV being endemic in camels in Qatar, the simultaneous hosting of the FIFA World Cup 2022, and the camel beauty pageant, poses an enhanced risk of transmission and globalisation of MERS-CoV.

To reduce the risk of MERS-CoV spreading, WHO and Qatar authorities have conveyed extensive health messaging to travellers to Qatar.² This messaging includes avoiding direct contact with camels and

avoiding consuming raw camel milk or camel meat. However, these messages are easily overlooked in the festive and competitive atmosphere. Furthermore, contact between imported and local dromedary camels participating in the pageant, camel owners, and attendees of both events is inevitable, and so is the consumption of popular foods in Qatar, which includes camel dairy products.

Proactive surveillance for MERS-CoV during and after the FIFA World Cup 2022, and the camel pageant festival is essential since undetected infections could cause substantial global outbreaks. A notable case was the large 2015 MERS-CoV outbreak in South Korea, where an individual from South Korea visited four countries in the Middle East and fell ill after returning to Seoul. Waiting in an overcrowded hospital emergency room, the infection spread to others, and the ensuing MERS-CoV super-spreading events resulted in 184 infections with 36 deaths.¹⁰ Although this major outbreak outside the Middle East should have been a wake-up call for global public health authorities, attention on MERS-CoV has been diverted over time by outbreaks of Ebola virus disease, Zika, and COVID-19.¹¹

The risk of visitors to Qatar returning to their home countries infected with MERS-CoV remains real. All public health authorities and health-care workers, not only in the Middle East but in all countries from where attendees of either event have travelled, should have heightened awareness of the possibility of MERS-CoV infection. Although WHO does not advise specific screening for MERS-CoV at points of entry, health-care systems should always remain vigilant, especially in the ensuing month after the two events. Returning travellers should be advised to seek medical attention promptly if they feel ill, and they should inform their health practitioner of their recent travel to Qatar. The South Korean MERS-CoV outbreak¹⁰ highlighted the issues of a lack of clinical awareness of the possibility of MERS and gaps in infection control measures, both of which are driving factors for nosocomial outbreaks.¹² Human-to-human transmission of MERS-CoV in

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health-care settings has been associated with delays in recognising the early symptoms of MERS-CoV infection, slow triage of potential infections, and delays in implementing infection prevention and control measures.¹² Thus, early identification of MERS-CoV and the rapid implementation of appropriate infection control measures for potential infections will be crucial to avoid outbreaks since isolation of potential and confirmed MERS-CoV cases with airborne-infection control precautions has been shown to be effective in containing nosocomial outbreaks.¹²

WHO has in place global strategies for the prevention and control of epidemic-prone diseases, such as the Eliminate Yellow Fever Epidemics strategy 2017–2026; Ending Cholera a Global Roadmap to 2030; the Pandemic Influenza Preparedness Framework; and the Global Strategy for Influenza 2018–2030. MERS-CoV continues to circulate in camels and humans in the Middle East and is highlighted in WHO’s Blueprint list of pathogens with epidemic potential.¹³ With millions of dromedary camels across continents serving as huge potential MERS-CoV reservoirs,⁴ the continuing evolution of coronaviruses, intermittent detection of human MERS infections, MERS-CoV is here to stay and the time has come for WHO to include a Global Strategy for MERS-CoV preparedness. The risk assessment for any mass gathering should include consideration of other events being held in the same location and whether the combination could lead to enhanced risks. WHO recommendations for public health risk assessments for mass gathering events should include advice to host countries to carefully consider the enhanced risks of holding human and animal mass gathering events simultaneously to minimise transmission and globalisation of zoonotic pathogens.

We declare no competing interests.

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