

Letters

Acute febrile respiratory infection symptoms in Australian Hajjis at risk of exposure to Middle East respiratory syndrome coronavirus

TO THE EDITOR: Originating in Saudi Arabia in June 2012, the Middle East respiratory syndrome coronavirus (MERS-CoV), a virus similar to the severe acute respiratory syndrome (SARS) coronavirus, has reached nine countries and affected 130 people, of whom 58 (45%) have died.¹ The threat of this epidemic to Australia is uncertain. During the SARS epidemic, Australia was the “lucky country” — it had just six probable SARS cases and no known fatalities.² However, about 4500 pilgrims from Australia travel to Mecca, Saudi Arabia, for Hajj each year. About 50–150 people share a large tent (Box) and sleep in close proximity to each other for 5 days, which increases the risk of viral transmission.

To assess the risk that MERS-CoV poses to Australia, we conducted, following ethics approval, an anonymous survey of Australian Hajj pilgrims in Mecca during October 2012. We identified participants through their tent lists, which were provided by Saudi Arabia’s Ministry of Hajj, and recruited them through their tour group leaders. We distributed a questionnaire on

respiratory symptoms to 553 pilgrims and all consented to participate (100% response rate). Twelve were excluded because they were from New Zealand, so data from 541 pilgrims were analysed. Pilgrims were asked about recent acute febrile respiratory infection (AFRI), defined as the presence of subjective fever plus at least one respiratory symptom (cough, sore throat, runny nose or breathlessness). Those who had AFRI were asked whether they had decreased urine output or if their urine was darker in colour during the illness, and whether they had visited or been admitted to hospital because of the illness.

Of the 541 Australian pilgrims, who were aged 12–83 years (median age, 41.5 years), 337 (62%) were male. Eighty-one pilgrims (15%) had one or more pre-existing medical conditions, including diabetes, heart disease, lung disease and liver disease. Forty-nine pilgrims (9%) had AFRI, of whom seven complained of breathlessness, four had chronic medical conditions and nine complained of producing less urine. Two of those with less urine output had breathlessness, but not severe enough to seek medical attention. No pilgrims with AFRI required hospital admission, and none had laboratory tests for infections, so we cannot rule in any cases.

These data indicate that fewer Australian pilgrims developed

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symptoms of acute respiratory infection than Malaysian Hajji pilgrims who were surveyed in 2007, of whom 40% had cough, subjective fever and sore throat.³ It has also been reported that no cases of polymerase chain reaction-confirmed MERS-CoV infection were found among French Hajji pilgrims returning from the Hajj in 2012.⁴

Although this survey suggests the risk of MERS-CoV infection was low for Australian Hajji pilgrims, vigilance is needed and preventive measures should be encouraged at the individual and group level. A Cochrane review of observational studies of SARS suggests that personal protective measures, including simple face masks, were effective in reducing transmission of SARS.⁵ We are not aware of any clinical trial addressing these measures against SARS, so we are conducting a trial to assess the efficacy of face masks against respiratory viruses at this year’s and next year’s Hajj.

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- 3 Deris ZZ, Hasan H, Sulaiman SA, et al. The prevalence of acute respiratory symptoms and role of protective measures among Malaysian hajj pilgrims. *J Travel Med* 2010; 17: 82–88.
- 4 Gautret P, Charrel R, Belhouchat K, et al. Lack of nasal carriage of novel corona virus (HCoV-EMC) in French Hajj pilgrims returning from the Hajj 2012, despite a high rate of respiratory symptoms. *Clin Microbiol Infect* 2013; 19: E315–E317.
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A tent being shared by Australian Hajji in Mecca, Saudi Arabia

