

# First US Case of MERS

Eric Toner, MD, May 2, 2014

Since we published and mailed [today's CBN report](#) (below) earlier, the CDC has announced the first confirmed case of MERS in the US.

According to [press reports](#) [1] the patient is a healthcare worker who traveled by air from Saudi Arabia and then by bus to Indiana by way of London and Chicago while asymptomatic on April 24. Respiratory symptoms started on April 27, and the patient was seen in an emergency department on April 28. Testing for MERS was initiated because of the travel history. The patient is isolated and is in stable condition and not on mechanical ventilation at this time. No other details are available at this time.

Clinicians should inquire about travel and occupational history in patients presenting with respiratory infections. Suspected MERS cases should prompt an immediate call to local public health officials. CDC currently recommends standard, contact, and airborne precautions in known or suspected MERS cases.

**Source:** <http://www.nbcnews.com/health/health-news/u-s-reports-first-case-mers-n95871>

## Update on Middle East Respiratory Syndrome Coronavirus

*By Matt Watson, Senior Analyst, May 2, 2014*

Over the past several weeks, the pace of the Middle East Respiratory Syndrome Coronavirus (MERS-CoV) epidemic, which had been slow but sustained, has increased dramatically. As of April 30, the European Centre for Disease Prevention and Control (ECDC) has reported a total of 424 cases and 131 deaths (case fatality rate = 31%),<sup>1</sup> with more cases reported in the month of April (n=217) than in all other months since the emergence of MERS 2 years ago (n=207).<sup>2</sup> The Kingdom of Saudi Arabia (KSA) has borne the brunt of the epidemic, with more than 80% of the reported cases and deaths, but cases have also been reported in the United Arab Emirates (32), Jordan (2), Egypt (1), Greece (1), Malaysia (1), and the Philippines (1).<sup>2</sup>

The cause for the rapid uptick in MERS cases is not clear. Proposed explanations include a seasonality effect, enhanced surveillance, or insufficient hospital infection control practices.<sup>3</sup> A viral mutation enabling more efficient human-to-human transmission had been suggested, but preliminary analysis of 3 samples taken earlier this month indicates that the virus has remained stable.<sup>4</sup>

## MERS and the Healthcare System

Of the 217 MERS cases reported in April, 62 occurred in healthcare workers.<sup>1</sup> It appears that, in the absence of strict infection control measures, MERS-CoV transmission, like transmission of the closely related SARS-CoV, is amplified by the healthcare environment. In August 2013, Assiri and

colleagues described a hospital outbreak of MERS in eastern Saudi Arabia in which 23 people were infected and 15 died.<sup>5</sup>

The WHO indicates that healthcare-associated infections are at play now, as well:

As much as 75% of the recently reported cases appear to be secondary cases, meaning that they are considered to have acquired the infection from another infected person. The majority of these secondary cases are mainly healthcare workers who have been infected within the healthcare setting, although several patients who were in the hospital for other reasons are also considered to have been infected with MERS-CoV in the hospital. The majority of the infected healthcare workers presented with no or minor symptoms.<sup>6</sup>

MERS has also had significant political effects. On April 21st, it was announced that the Saudi Minister of Health, Dr. Abdullah Al-Rabiah, was replaced by current Labor Minister Adel Fakhieh.<sup>7</sup> Subsequently, it was announced that Dr. Tariq Ahmed Madani would serve as a special advisor to the Minister for MERS.<sup>8</sup> Widespread international and domestic concerns regarding the Ministry's transparency and overall effectiveness of its MERS response was cited as a contributing factor to the decision to replace Dr. Al-Rabiah.

## Clinical Implications

MERS has not yet been diagnosed in the United States, though continued international spread of MERS-CoV is considered likely.<sup>6</sup> As has been demonstrated in Saudi Arabia and previously in Jordan, the risk of nosocomial transmission to healthcare workers and other patients is significant. Clinicians should maintain a high index of suspicion when evaluating patients presenting with severe acute respiratory illness who have a recent history of travel to the Middle East. CDC currently recommends standard, contact, and airborne precautions in known or suspected MERS cases.<sup>9</sup>

### References

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