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May 20, 2013

TO: Each Supervisor

FROM: Jonathan E. Fielding, M.D., M.P.H.
Director and Health Officer

A handwritten signature in black ink that reads "JE Fielding mo".

SUBJECT: **MIDDLE EAST RESPIRATORY SYNDROME CORONAVIRUS**

This is to provide you with information on the Middle East Respiratory Syndrome Coronavirus (MERS-CoV). MERS-CoV is a newly discovered coronavirus that is linked to the cause of respiratory illness in 40 people from Saudi Arabia, Qatar, Jordan, the United Kingdom (UK), the United Arab Emirates, and France from April 2012 to May 2013. The World Health Organization (WHO) is reporting that approximately half of these patients have died. To date, there are no reports of persons in United States becoming infected and sick with the MERS-CoV. As of the date of this memo, the WHO and the CDC (the Centers for Disease Control and Prevention) have not issued travel health warnings for any country related to MERS-CoV.

Background

The coronaviruses are a group of viruses which generally cause minor illness. However, this coronavirus, MERS-CoV, is very different from most other human coronaviruses. Most people infected with MERS-CoV develop severe respiratory illness with symptoms of fever, cough, and shortness of breath. Two cases to date have experienced only a mild respiratory illness. There are no specific treatments for illnesses caused by MERS-CoV and medical care is supportive.

Transmission

This coronavirus differs genetically from the coronavirus which caused severe acute respiratory syndrome (SARS) in 2003. However, like the SARS virus, the scarce data available to date suggests that the infection is primarily an animal disease in nature (zoonotic) with bats appearing to be the natural host. Since most patients were unlikely to have been exposed directly to bats, it is speculated that a bat coronavirus has successfully crossed over to establish itself in a currently unknown intermediate animal host species, presumably in the Middle East. Although the route of transmission to humans is not definitely known at this time, the infection is likely spread through the respiratory route and has been documented to have limited person-to-person spread. CDC and the WHO are intensively studying this new virus.

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The most recent two cases are in health care workers from Saudi Arabia who were exposed to patients with confirmed MERS-CoV and is the first situation that definitively documented health care workers developing infection with MERS-CoV after exposure to patients; although, health care associated transmission had been anecdotally reported with MERS-CoV before in Jordan in April 2012. In the UK, a 60-year-old man with a recent history of travel to Pakistan and Saudi Arabia developed a severe respiratory illness on his return to the UK. It appears that he likely spread the virus to two family members, thus providing the first evidence of person-to-person transmission. Subsequently, a MERS-CoV patient who had traveled to the United Arab Emirates and then returned to France transmitted infection to his hospital roommate.

Current Actions

The Department of Public Health (DPH) has disseminated three announcements (in April and May 2013) targeted to infectious disease and emergency department physicians in all Los Angeles County acute care hospitals. These announcements requests these facilities to screen and triage patients with severe upper respiratory illness who have a history of travel within the previous ten days to the Arabian Peninsula or neighboring countries. Such patients should be placed in isolation with air-borne precautions and the facility should immediately notify DPH. DPH will continue to work with Emergency Medical Services, the CDC Quarantine Station at Los Angeles International Airport, and the California Department of Public Health to monitor for possible cases of MERS-CoV, assure that there are contingency plans for isolation of any individuals with this disease, and conduct rapid contact investigation to minimize spread.

If you have any questions or would like additional information, please let me know.

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PH:1305:005

c: Chief Executive Officer
County Counsel
Executive Officer, Board of Supervisors