CASE REPORT: As of 25 JAN 2017, 1,974 (+8) cases of Middle East respiratory syndrome coronavirus (MERS-CoV) have been reported, including at least 614 deaths (CDC reports at least 702 (+2) deaths as of 25 JAN) in the Kingdom of Saudi Arabia (KSA) (+8), Jordan, Qatar, United Arab Emirates (UAE), United Kingdom (UK), France, Germany, Tunisia, Italy, Oman, Kuwait, Yemen, Malaysia, Greece, Philippines, Egypt, Lebanon, Netherlands, Iran, Algeria, Austria, Turkey, Republic of Korea (ROK), China, Thailand, Bahrain, and the U.S. The KSA Ministry of Health (MOH) has classified all eight of the new cases as primary, of which three had confirmed direct contact with camels and the source of exposure for the remaining five are under investigation. Primary cases are individuals who have direct or indirect exposure to dromedary camels, or have had no known exposure to a confirmed MERS-CoV case. Secondary cases are individuals who have had direct or indirect exposure to a confirmed MERS-CoV case. All of the new cases occurred in KSA: Al Qarahrah (1), Hufoof (2), Jeddah (1), Jubail (1), Najran (1), Riyadh (1), and Taif (1).

AFHSB’s death count (Case Fatality Proportion (CFP) -31%) includes only those deaths which have been publicly reported and verified. While CDC’s death count (CFP -37%) may present a more complete picture, it’s unclear when and where those additional deaths occurred during the outbreak.

BACKGROUND: In SEP 2012, WHO reported two cases of a novel coronavirus (now known as MERS-CoV) from separate individuals – one with travel history to the KSA and Qatar and one in a KSA citizen. This was the sixth strain of human coronavirus identified (including SARS). Limited camel-to-human transmission of MERS-CoV has been proven to occur. The most recent known date of symptom onset is 25 DEC 2016. The KSA MOH has previously admitted to inconsistent reporting of asymptomatic cases. Due to these inconsistencies, it is also difficult to determine a cumulative breakdown by gender; however, AFHSB is aware of at least 611 (+1) cases in females to date. In its most recent MERS-CoV risk assessment on 5 DEC, WHO reported 20% of total MERS-CoV cases have been HCWs. Limited human-to-human transmission has been identified in at least 57 spatial clusters as of 25 JAN, predominately involving close contacts.

DIAGNOSTICS/MEDICAL COUNTERMEASURES: On 19 JAN, the Coalition for Epidemic Preparedness (CEPI) was launched at the World Economic Forum in Switzerland, with an initial $460 million in funding from Germany, Japan, Norway, the Bill & Melinda Gates Foundation, and the Wellcome Trust. CEPI’s initial targets are the development of two vaccine candidates each against MERS-CoV, Nipah virus, and Lassa fever, all of which were included on WHO’s list of top emerging pathogens likely to cause severe outbreaks in its MAY 2016 R&D Blueprint for Action to Prevent Epidemics.

On 24 JAN, Samsung Medical Center (SMC) in Seoul, ROK, submitted a 100-page statement to the MOH denying its culpability in the spread of MERS-CoV in the country in 2015. The statement was written in response to the MOH’s decision in DEC to impose a 15-day suspension on SMC and a fine of up to 2 million Korean Republic Won (1,715 USD) as punitive measures for the mishandling of MERS-CoV patients. According to the MOH, a patient later found to be a “super-spreader” infected at least 80 cases at SMC (of the total 186 cases associated with the entire ROK outbreak) before being diagnosed and isolated.

RELEVANT STUDIES: On 4 MAR, CDC published a study that tested archived serum (from 2013-2014) from livestock handlers in Kenya for MERS-CoV antibodies to search for autochthonous MERS-CoV infections in humans outside of the Arabian Peninsula. The study found two out of 1,122 samples tested positive, providing evidence of previously unrecorded human MERS-CoV infections in Kenya.

INTERAGENCY/GLOBAL ACTIONS: WHO convened the Tenth International Health Regulations (IHR) Emergency Committee on 2 SEP 2015 and concluded the conditions for a Public Health Emergency of International Concern (PHEIC) had not yet been met.

(+xx) represents the change in number from the previous AFHSB Summary of 11 JAN 2017.
All information has been verified unless noted otherwise.
For questions or comments, please contact: dha.ncr.health-surv.list.afhs-ib-alert-response@mail.mil
APPROVED FOR PUBLIC RELEASE
Global Distribution of Reported MERS-CoV Cases*
(SEP 2012–JAN 2017)

KSA (1,614 (+8) cases – 81.8%)

- Qatar (18)
- Philippines (2)
- Oman (9)
- Netherlands (2)
- Malaysia (1)
- Lebanon (1)
- Kuwait (4)

ROK (186 cases – 9.4%)

- UAE (78 cases – 4.0%)
- Turkey (2)
- Tunisia (3)
- Thailand (3)

UK (3)
US (2)
Yemen (1)
Austria (2)
Algeria (2)
Bahrain (1)
China (1)
Egypt (1)
France (2)
Germany (1)
Greece (1)
Iran (6)
Italy (1)
Jordan (27)

*Data includes confirmed, suspect and probable cases reported by WHO, CDC, and various country MOHs