



# DEPARTMENT OF DEFENSE (AFHSC)

## MERS-CoV Surveillance Summary #47

### 5 FEB 2015



**CASE REPORT:** As of 5 FEB 2015, 984 (+24) cases of Middle East respiratory syndrome coronavirus (MERS-CoV) have been reported including 361 (+7) deaths in the Kingdom of Saudi Arabia (KSA), Jordan, Qatar, the United Arab Emirates (UAE), the United Kingdom (UK), France, Tunisia, Italy, Oman, Kuwait, Yemen, Malaysia, Greece, Egypt, Lebanon, the Netherlands, Iran, Algeria, Austria, Turkey, and the U.S.

On 8 JAN, CDC reported a new fatal case of MERS-CoV in Oman – official [confirmation from WHO was announced on 16 JAN](#), along with report of an additional Oman case in the same Dakhelyia Region. A third and fatal case of MERS-CoV, also in Dakhelyia, Oman, was [reported by WHO on 23 JAN](#). On 1 FEB, Qatar's Supreme Council for Health (SCH) [announced its first MERS-CoV case this year](#) in Doha, Qatar.

According to the CDC, there was a “dramatic increase in [MERS-CoV] cases in 2014.” Media outlets, as well as the ECDC and [a review article](#) in the American Journal of Infection Control, attribute this spike in cases to lapses in infection control protocols. The authors of the review indicate that both contact and droplet precautions should be utilized until test results rule out MERS-CoV. Additionally, the authors reiterate “strict infection control measures are essential, given that MERS-CoV survival on hospital surfaces is at least 48 hours and that it has been detected for up to 16 days in respiratory specimens and stool and up to 13 days in urine.”

On 21 JAN, [the KSA MOH announced it will be collaborating with CDC](#) and the Field Epidemiology Training Program at Riyadh's King Saud University to train Saudi health professionals in epidemiologic and infection control practices.

Media reports of 400+ camel deaths per month in UAE have raised concerns and prompted UAE government officials to announce the opening of a laboratory specifically for examining camel specimens. This announcement comes amid UAE officials' public denial that MERS-CoV played any role in contributing to recent camel herd deaths.

Researchers at [Colorado State University announced a study](#) with NIH to determine the role of camels in spreading MERS-CoV with the hope of finding a vaccine to combat MERS-CoV infection in camels.

**DIAGNOSTICS:** Clinical diagnostic testing is available at NAMRU-3, LRMC, NHRC, USAFSAM, Tripler AMC, SAMMC, WRNMMC, and NIDDL (NMRC). Surveillance testing capability is available at NHRC, AFRIMS, NAMRU-2, NAMRU-3, NAMRU-6, and Camp Arifjan. Additionally all 50 state health laboratories and the New York City DHMH have been offered clinical testing kits. AFHSC has placed updated [MERS-CoV testing guidelines](#) for DoD components on their website. These guidelines are aimed at capturing mild cases that may present in healthier populations such as DoD personnel.

**DOD RELEVANCE:** To date, thirteen DoD persons tested MERS-CoV negative. Risk to U.S. personnel, including those traveling in affected areas, is low.

**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 a KSA citizen. This was the sixth strain of human coronavirus identified (including SARS). Limited human-to-human transmission has been identified in [at least 29 spatial clusters](#) predominately involving close contacts. Limited camel-to-human transmission of MERS-CoV has been proven to occur; and [recent studies suggest](#) camels infected with MERS-CoV may appear asymptomatic but are able to shed large quantities of the virus from the upper respiratory tract.

The most recent known date of onset is 19 JAN 2015; however at least 40% of symptomatic cases have been reported without onset date. Due to inconsistencies in reporting, it is difficult to determine a cumulative breakdown by gender, however AFHSC is aware of [at least 238 cases in females to date](#). On 18 JAN, Qatar's SCH reported that [their recent studies have shown](#) people in the 50-69 year age group are more vulnerable to the MERS-CoV virus.

CDC reports [174 of the total cases have been identified as healthcare workers](#) (HCWs). Of these, 134 are from KSA, 31 from UAE, 5 from Jordan, 2 from Iran, and 1 from Tunisia. Information on the characteristics of reported cases is limited, however, CDC reports among the 174 HCW cases: 11 died; 55 were asymptomatic; 20 had comorbidities; and 15 presented with only mild symptoms.

**INTERAGENCY/GLOBAL ACTIONS:** WHO [reiterated](#) on 3 FEB that people with diabetes, renal failure, or chronic lung disease, and immunocompromised persons are considered to be at high risk of severe disease from MERS-CoV infection. Therefore, these people should avoid close contact with animals, particularly camels, when visiting farms, markets, or barn areas where the virus is thought to be potentially circulating. People should also avoid raw camel milk or camel urine and eating meat that has not been properly cooked. WHO [convened the Eighth International Health Regulations \(IHR\) Emergency Committee](#) on 4 FEB to discuss MERS-CoV and concluded that the conditions for a Public Health Emergency of International Concern (PHEIC) have not yet been met.

CDC's [Level 2 Travel Watch](#) remains in effect for the Arabian Peninsula and specifically notes health care providers should be alert for patients who develop severe acute lower respiratory illness within 14 days of travel from countries in or around the Arabian Peninsula. On 30 JAN, the [CDC issued an MMWR](#) to provide updated guidance for the public, clinicians, and public health authorities encouraging them to consider MERS-CoV infection in persons with recent travel history in or near the Arabian Peninsula.

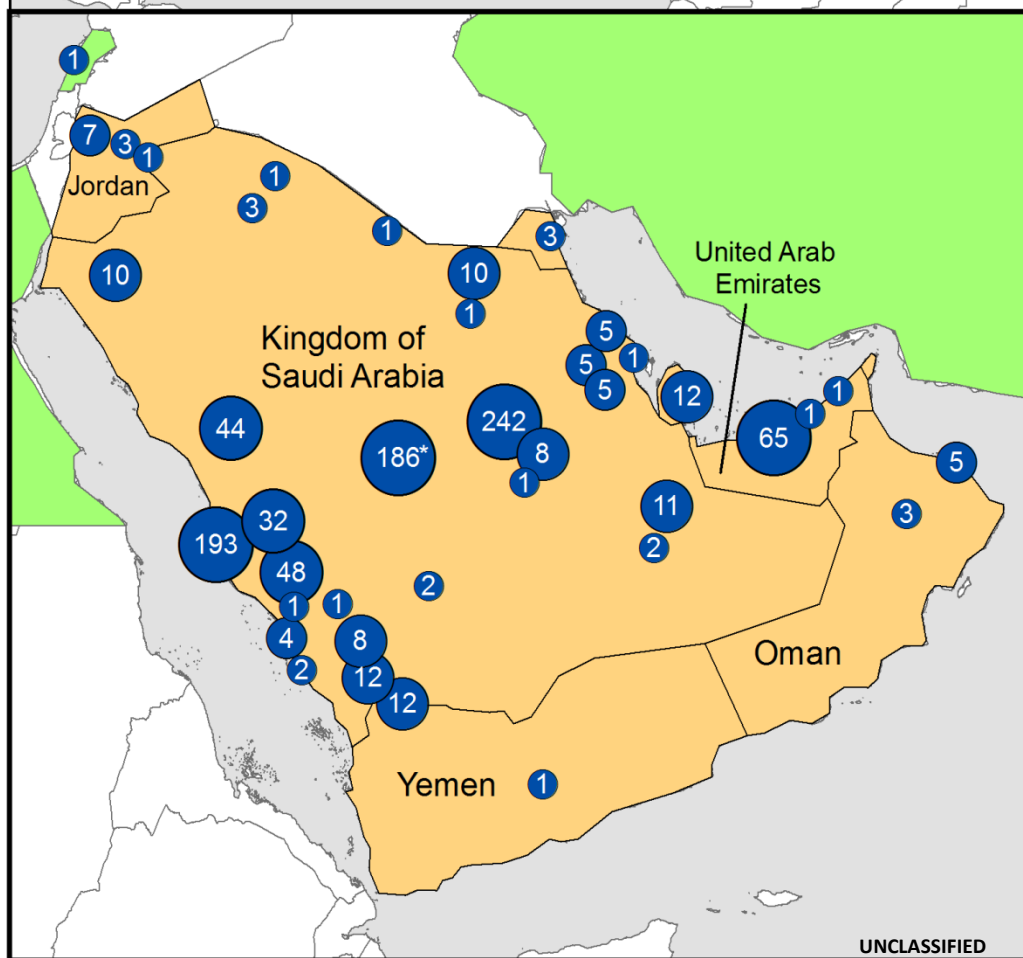
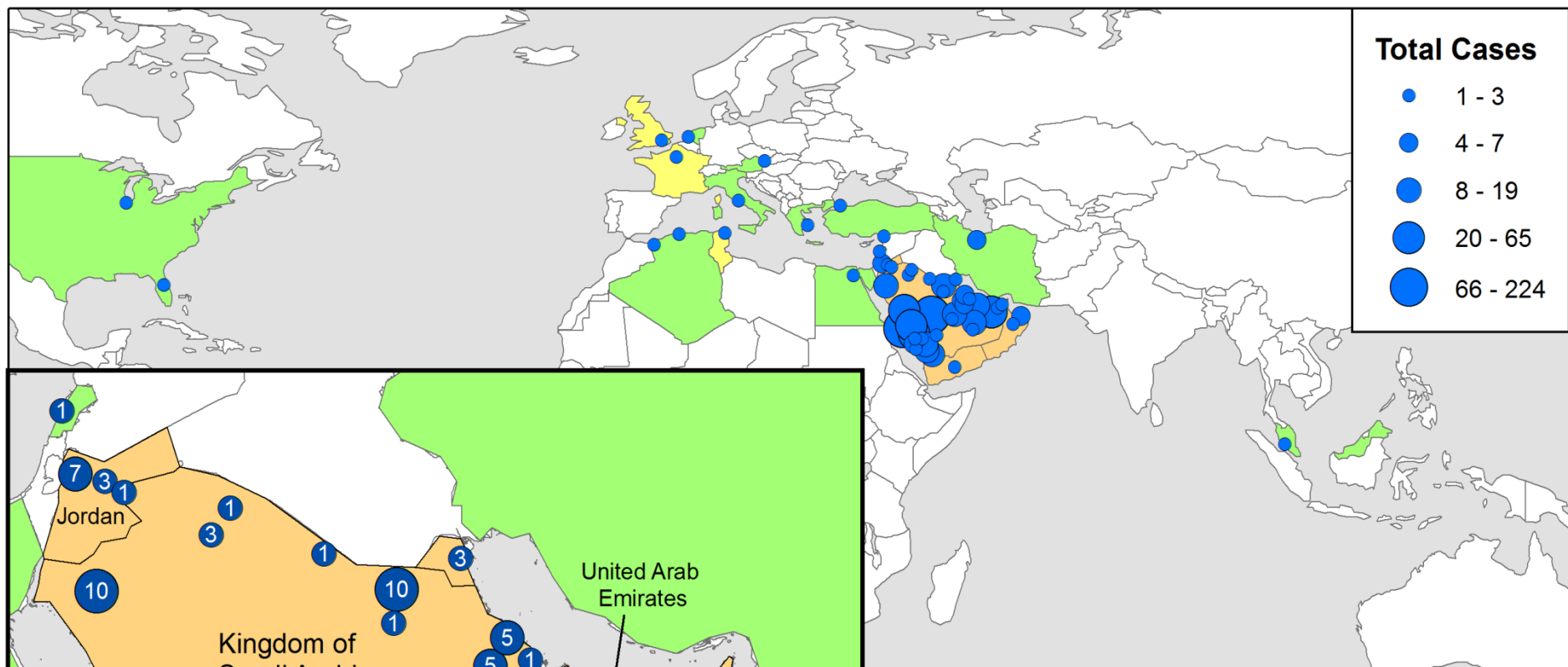
The European Centre for Disease Prevention and Control (ECDC) [released an updated risk assessment](#) of the MERS-CoV situation in the Middle East on 15 JAN that notes little change in overall risk of infection and reported no link between MERS-CoV transmission and religious pilgrimages or mass gatherings in KSA.

**Legend:** Text updated from the previous report will be printed in red; items in (+xx) represent the change in number from the previous Summary (9 JAN 2014).

All information has been verified unless noted otherwise. Sources include the CDC, NIH, WHO, KSA MOH, AJIC, ECDC, SCH Qatar, and CIDRAP.

For questions or comments, please contact: [usarmy.ncr.medcom-afhsc.list.dib.alert-response@mail.mil](mailto:usarmy.ncr.medcom-afhsc.list.dib.alert-response@mail.mil)

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## Geographic Distribution of MERS-CoV Cases 4 FEB 2015

- Imported Cases
- Imported Cases with Local Transmission
- Local Transmission



\*186 cases have been reported in the Kingdom of Saudi Arabia without specific location information



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#### MERS-CoV NUMBERS AT A GLANCE

|                                                | Total in 2012   | Total in 2013       | Total in 2014        | Total in 2015  | Cumulative Total<br>(2012-2015) |
|------------------------------------------------|-----------------|---------------------|----------------------|----------------|---------------------------------|
| Confirmed Cases                                | 9               | 171                 | 775 (+3)             | 29 (+21)       | 984 cases (+24)                 |
| Confirmed Deaths*                              | 6 deaths        | 72 deaths           | 273 deaths           | 10 deaths (+7) | at least 361 deaths<br>(+7)     |
| Case-Fatality<br>Proportion                    | 66%             | 42%                 | 35%%                 | 37%            | 37%                             |
| Mean Age                                       | 45 years        | 51 years            | 49 years             | 59 years       | 50 years                        |
| Gender Breakdown*                              | 1 female        | at least 58 females | at least 175 females | 5 females (+5) | at least 238 females            |
| # of Healthcare<br>Workers (HCWs)<br>reported* | at least 2 HCWs | at least 31 HCWs    | at least 87 HCWs     | 1 HCWs (+1)    | at least 174 HCWs               |

\*Disclaimer: Data reported on MERS-CoV cases is limited and adapted from multiple sources including the KSA MOH, CDC, and WHO. Consequently, yearly information may not equate to the cumulative totals provided by WHO and CDC.

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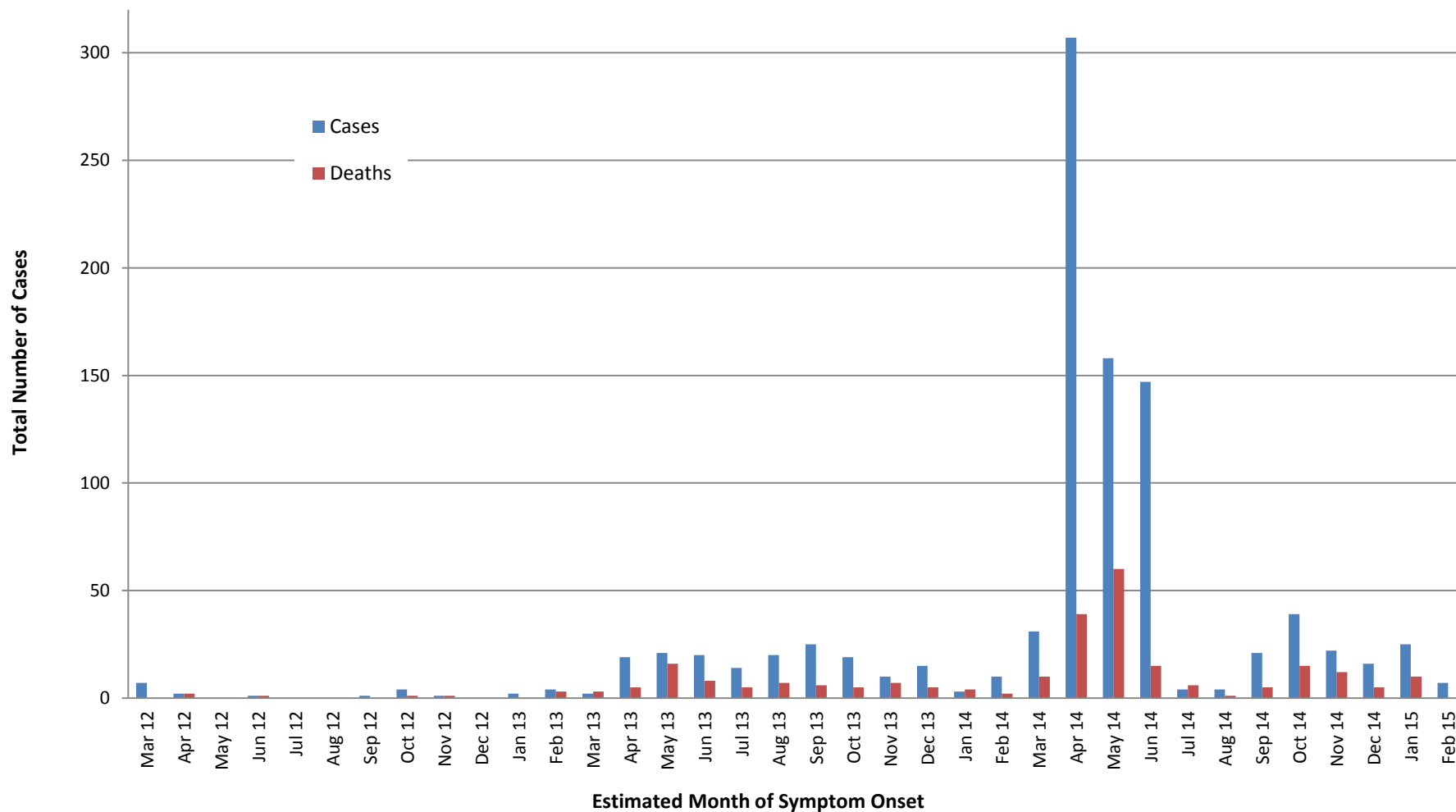
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### MERS-CoV Epidemiological Curve - 5 FEB 2014



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#### Additional Resources and Media Reports

##### MERS-CoV Web Sites

- [WHO](#)
- [WHO Lab Testing Guidance](#)
- [WHO Travel Advice for Pilgrimages](#)
- [WHO 8<sup>th</sup> IHR Meeting Press Release](#)
- [CDC](#)
- [CDC Travel Advisory](#)
- [ECDC](#)
- [AFHSC Detecting and Reporting Guidelines for MERS-CoV](#)

##### Information and News

- [Latest WHO DON on MERS-CoV](#) (WHO, 5 FEB 2015)
- [CDC MMWR: Update on the Epidemiology of Middle East Respiratory Syndrome Coronavirus \(MERS-CoV\) Infection, and Guidance for the Public, Clinicians, and Public Health Authorities](#) (CDC, 30 JAN, 2015)
- [CDC Warns of MERS](#) (U.S. News and World Report, 29 JAN 2015)
- [CSU researchers investigate dangerous MERS virus](#) (Collegian Central, 23 JAN 2015)
- [Saudi Arabia reports 2 MERS cases, strategy changes](#) (CIDRAP, 21 JAN 2015)
- [Ministry hires experts to combat MERS, Ebola](#) (Arab News, 21 JAN 2015)
- [Elderly people are more vulnerable to MERS-COV](#) (Gulf Times, 18 JAN 2015)
- [Serious Action Needed to Fight Deadly Camel Disease](#) (Gulf News, 13 JAN 2015)
- [Middle East respiratory syndrome coronavirus unlikely to reach epidemic status, research says](#) (Medical Xpress, 11 DEC 2014)
- [CDC Calls Year Mission Critical](#) (NEWS Channel 5, 10 DEC 2014)
- [Middle East Respiratory syndrome coronavirus: Implications for health care facilities](#) (AJIC, DEC 2014)
- [MERS Coronavirus Neutralizing Antibodies in Camels, Eastern Africa, 1983–1997](#) (CDC, 19 NOV 2014 Emerging Infectious Diseases (EID) Journal)
- [Replication and Shedding of MERS-CoV in Upper Respiratory Tract of Inoculated Dromedary Camels](#) (CDC, 18 NOV 2014 EID Journal)
- [Camel breeding season brings more coronavirus fears](#) (Saudi Gazette, 13 NOV 2014)
- [WHO Statement on the Seventh Meeting of the IHR Emergency Committee Meeting regarding MERS-CoV](#) (WHO, 1 OCT 2014)
- [WHO DON on first novel coronavirus infection](#) (WHO, 23 SEP 2012)