

Current Event

Outbreaks of MERS-CoV in 2015, KSA

MERS-CoV outbreaks in 2015 at healthcare facilities (HCF) in Saudi Arabia were reviewed.

Editorial Notes

There were fewer outbreaks of MERS-CoV in HCFs in 2015 as compared with 2014. The first outbreak of MERS-CoV (N=16 cases) occurred in a private hospital in the Eastern province in early February 2015 and continued for four weeks; the case- fatality rate (CFR%) was 44%. The index case was a cardiology patient with inadequate transfer information to SSH (Figure 1). Before its end, another outbreak started at KKUH in Riyadh and resulted in 23 cases, including 13 cases among Health Care Workers (HCW). At KKUH, the index case was a cardiology post-CABG patient. Later, further transmission happened from a secondary case in the emergency department (ER) of the hospital; the CFR% during the KKUH outbreak was 34%.

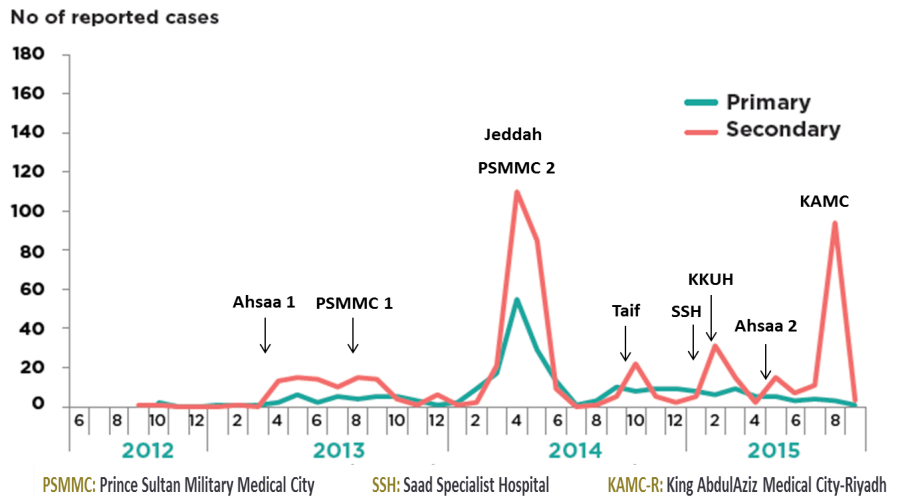
A significant outbreak of 52 cases happened in Al-Ahsaa region in two hospitals in late April, 2015. The outbreak started as a family cluster of 7 cases. Cases were distributed between a small 70 bed cardiac center and another 250 bed hospital. It ended by mid June. The CFR% was 40%.

The largest outbreak of the year started at King Abdulaziz Medical City (KAMC) in Riyadh in mid-July and peaked in August and ended by mid September. Total cases were 134. Of all cases, 89 cases occurred within the KAMC and 45 cases in other hospitals. The CFR% during July-September outbreak was 44%.

The year ended with a small cluster of seven cases at a private hospital in Al-Ahhsaa that ended in 3 weeks.

ER was the start point of almost all

Figure 1: MERS-CoV Hospital outbreaks 2012-2015



Cases of MERS-CoV: International Week (IW) No. 1: 3 - 9 Jan 2016

Total	0
Symptomatic (S)	0
Asymptomatic (AS)	0
Healthcare worker (S)	0
Healthcare Worker (AS)	0

outbreaks. Outbreaks were related to some index cases that were missed because it has been difficult to attribute the clinical presentation of cardiology patients, that were suggestive of heart failure and/or coronary artery disease, to MERS-CoV. Inadequate awareness of physicians to the case definition of suspected cases of MERS-CoV contributed to the emergence of outbreaks. Overcrowding at ER and inadequate implementation of respiratory triaging for cases was observed in most outbreaks. In most instances, early implementation of strict Infection and Prevention Control (IPC) measures through Rapid Response Teams and hospital IPC staff and administration involvement has led to smaller outbreaks. Hospital shut down at KAMC has led to spread of cases to other hospitals. Alerts from MOH brought the chain of outbreaks to an end. The only exception was a small cluster of 12 cases at National Guard hospital in Madinah.

Recent Publications:

Hsieh YH. 2015 Middle East Respiratory Syndrome Coronavirus (MERS-CoV) nosocomial outbreak in South Korea: insights from modeling. PeerJ. 2015 Dec 17;3:e1505. doi: 10.7717/peerj.1505. eCollection 2015.

MERS-CoV in KSA 2016*

Region	Case	Primary	Secondary	U.C.
Riyadh	0	0	0	0
Al-Ahsaa	0	0	0	0
Eastern Region	0	0	0	0
Jeddah	0	0	0	0
Qassim	0	0	0	0
Najran	0	0	0	0
Taif	0	0	0	0
Madinah	0	0	0	0
Asir	0	0	0	0
Tabuk	0	0	0	0
Makkah	0	0	0	0
Hail	0	0	0	0
Al-Joaf	0	0	0	0
Jazan	0	0	0	0
Northern Borders	0	0	0	0
Qunfotha	0	0	0	0
Al-Baha	0	0	0	0
Bisha	0	0	0	0
Hafr Al-Batin	0	0	0	0
Qurayyat	0	0	0	0
Total	0	0	0	0

Case: Confirmed Symptomatic. U.C.: Unclassified cases
*Period: Form 3 Jan 2016 to 9 Jan 2016