

## Current Event

### Infection Prevention & Control (IPC) Measures for MERS-CoV

Outbreaks in healthcare facilities (HCF) revealed gaps in practices and inadequate compliance with IPC. Interventions were made to ensure a safer environment in HCFs.

## Editorial Notes

An IPC platform was established as a main constituent of the Command and Control Centre (CCC) to prevent, reduce, and contain MERS-CoV Hospital Acquired Infections (HAI). The IPC platform has four main components: Assessment for readiness, Response, Training and Auditing.

The IPC assessments provided a baseline for IPC practices and developing training activities. MOH developed a set of Unified Key Performance Indicators (KPIs), periodic assessment tool and some relevant scoring system in collaboration with the Saudi Central Board for Accreditation of Healthcare Institutions (CBAHI).

The IPC response activities are implemented through a national program for Rapid Response Teams (RRT), which was initiated in May 2014. The RRT program assesses hospitals' readiness and their ability to respond to epidemic-prone emerging diseases. To-date, a total of 19 RRTs are covering the 20 health regions, and has already conducted 561 visits to HCFs. Implementation of RRT program has contributed in improving IPC practices, and resulted in fewer, smaller, and better management of outbreaks within HCFs (Figure 1).

The auditing of IPC practices was developed to ensure sustained compliance to IPC guidelines. The review process for auditing IPC practices was developed in collaboration with CBAHI, and was successfully piloted

## Impact of IPC Measures on MERS-CoV

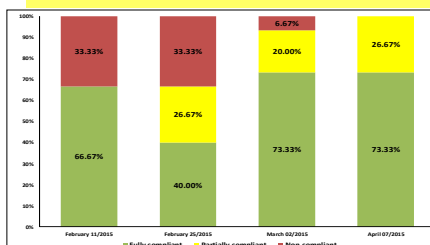


Figure 1: Impact of the RRT Visits in One Healthcare Facility

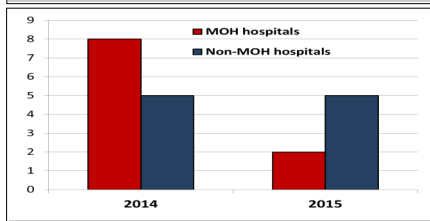


Figure 2: Number of MERS-CoV Hospital Outbreaks (2014-2015)

### Cases of MERS-CoV: International Week (IW) No. 51: 14–20 Dec 2015

Total	2
Symptomatic (S)	2
Asymptomatic (AS)	0
Healthcare worker (S)	1
Healthcare Worker (AS)	0

in one region. The trends of performance of IPC practices at HCFs is monitored by a scoring system; the continuous monitoring of IPC performance allowed implementation of immediate corrective actions as deemed necessary. All the 20 health regions in Saudi Arabia received training, including 83 hospitals. More than 500 hospital audits were conducted during the period between June 2014 and November 2015 (Table 1).

The activities of the IPC platform improved the alert systems at MOH HCFs, introduced systematic approach to deal with the identified gaps in IPC practice, and ensured the involvement of all HCFs, regional health directorates and MOH administration. As a result, significant reduction in hospital outbreaks have been observed in the hospitals of the ministry compared to others (Figure 2).

Table 1: Kingdom-wide Hospital Visits (≥ 200 beds)

Regional Directorate	CBAHI Late 2014		GDIPC-1 Early 2015		GDIPC-2 Late 2015	
	#	Score	#	Score	#	Score
Taif	3	50.88%	2	90.95%	2	96.26%
Makkah	4	50.72%	5	81.40%	4	91.07%
Tabuk	2	50.50%	2	84.39%	3	90.67%
Jazan	1	91.36%	1	84.72%	1	89.20%
Jouf	3	62.62%	3	74.53%	3	87.26%
Najran	2	65.03%	2	86.63%	2	86.96%
Qassim	4	73.22%	5	68.11%	5	85.51%
Bisha	1	59.47%	1	58.97%	1	84.72%
Asir	1	48.01%	5	86.46%	4	80.94%
Hassa	5	53.69%	5	74.45%	5	79.72%
Jeddah	7	53.71%	10	69.82%	8	79.63%
Madina	7	46.84%	6	40.84%	7	78.14%
North border	2	88.21%	2	70.18%	2	78.07%
Eastern	5	73.59%	5	65.28%	5	76.72%
Hail	2	79.49%	2	48.59%	2	76.20%
Baha	2	10.88%	2	69.44%	2	75.91%
Riyadh	8	46.18%	7	56.90%	6	64.19%
Hafr Albatin	2	66.94%	2	65.37%	x	Ongoing
Alqurayyat	1	47.67%	1	28.41%	x	Pending

## Recent Publications:

Sabir JS, Lam TT, Ahmed MM, Li L, Shen Y, et al, Guan Y. Co-circulation of three camel coronavirus species and recombination of MERS-CoVs in Saudi Arabia. *Science*. 2015 Dec 17. pii: aac8608. [Epub ahead of print]  
Bin Seo Y, Heo JY, Song MS, Lee J, Kim EH, et al. Environmental Contamination and Viral Shedding in MERS Patients during MERS-CoV Outbreak in South Korea. *Clin Infect Dis*. 2015 Dec 17. pii: civ1020. [Epub ahead of print]

## MERS-CoV in KSA 2015\*

Region	Case	Primary	Secondary	U.C.
Riyadh	294	102	184	8
Al-Ahasa	56	11	41	4
Eastern Region	21	10	11	0
Jeddah	17	9	7	1
Qassim	17	10	7	0
Najran	15	10	5	0
Taif	11	8	3	0
Madinah	7	1	6	0
Asir	4	2	2	0
Tabuk	4	4	0	0
Makkah	3	3	0	0
Hail	2	1	1	0
Al-Joaf	2	2	0	0
Jazan	1	1	0	0
Northern Bor-	1	1	0	0
Qunfotha	1	1	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
<b>Total</b>	<b>456</b>	<b>175</b>	<b>268</b>	<b>13</b>

\*Case: Confirmed Symptomatic. U.C.: Unclassified cases

\*Period: Form 29 Dec 2014 to 20 Dec 2015