

Current Event

Health Electronic Surveillance Network (HESN)

Since mandatory electronic reporting of suspected MERS-CoV cases in KSA was implemented in March 2015, the quality, acceptability, timeliness, and sensitivity of reports to HESN have improved.

Editorial Notes

As part of its initiative to develop its e-health, Kingdom of Saudi Arabia launched HESN on 24 October 2012 to provide health care workers and decision-makers with accurate information that enables them to offer high-level public health services. The system is flexible, updated continuously, standardizing the collection of data, and reducing paper work. Focus point of HESN is currently on certain public health areas as a solution rather than data repository (e.g. investigations of infectious diseases and outbreaks, vaccinations and inoculations) and expected to widen its circle in the future to include infection control, family health and non-communicable diseases. It will soon be having an outstanding analytical and predictive tools working on top of a smart data warehouse. HESN helped fulfill the need of having a unified electronic health services across the kingdom that ensures precision of data and prevents duplications.

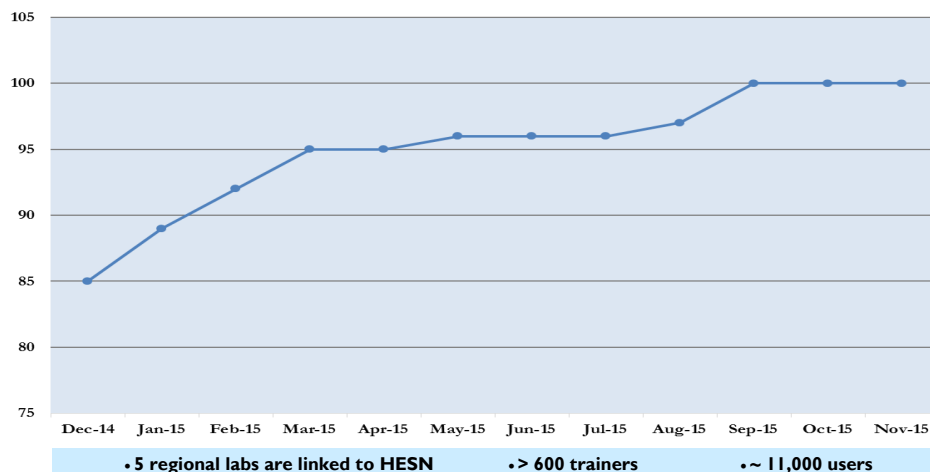
HESN provides notification to support the communication needs of public health professionals concerning communicable diseases including MERS-CoV. Once the case is identified as a suspect or confirmed by the regional labs, all concerned coordinators are notified according to their role

either via email and/or SMS. Since 3 Mar 2015, reports of suspected MERS-CoV cases to the MOH has occurred through HESN exclusively.

To measure improvements in electronic surveillance for MERS-CoV, HESN data were evaluated for two time periods: 1 Jan – 12 Mar 2015 and 1 Apr – 30 Aug 2015 (details are provided in the table below). Reports of suspected MERS-CoV cases greatly increased between the evaluated time periods, data completeness have improved and the number of participating reports (i.e., hospitals and public health offices) also greatly increased. Sensitivity of HESN and Timeliness of reporting also improved during the study period. Sensitivity was assessed by comparing data reported to HESN with the national line list of MERS-CoV cases maintained by the Communicable Disease Directorate (CDD). HESN continues to be strengthened through continued training, improved user access, and periodic evaluation.

Improvements Through Two Time Periods	1 Jan – 12 Mar 2015	1 Apr – 30 Aug 2015
Reports of MERS-CoV cases (daily average)	44 cases	121 cases
Number of participating reporters	216 reporters	326 reporters
Median reporting timeline (from onset to initial report)	4 days	2 days

HESN Overall Compliance over the last 12 Months



• 5 regional labs are linked to HESN

• > 600 trainers

• ~ 11,000 users

Recent Publications:

Bean NH, Martin SM. Implementing a network for electronic surveillance reporting from public health reference laboratories: an international perspective. *Emerging Infectious Diseases*. 779-773:(5)7;2001

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	16	10	6	0
Najran	14	9	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 Borders	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
Total	454	175	266	13

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

*Period: Form 29 Dec 2014 to 13 Dec 2015