

Current major event

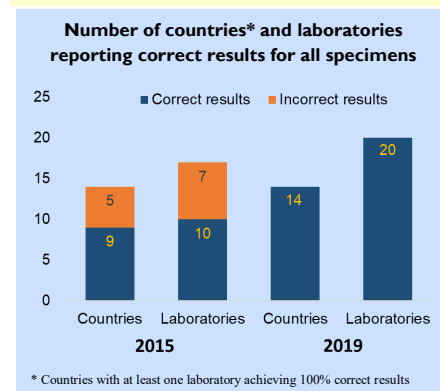
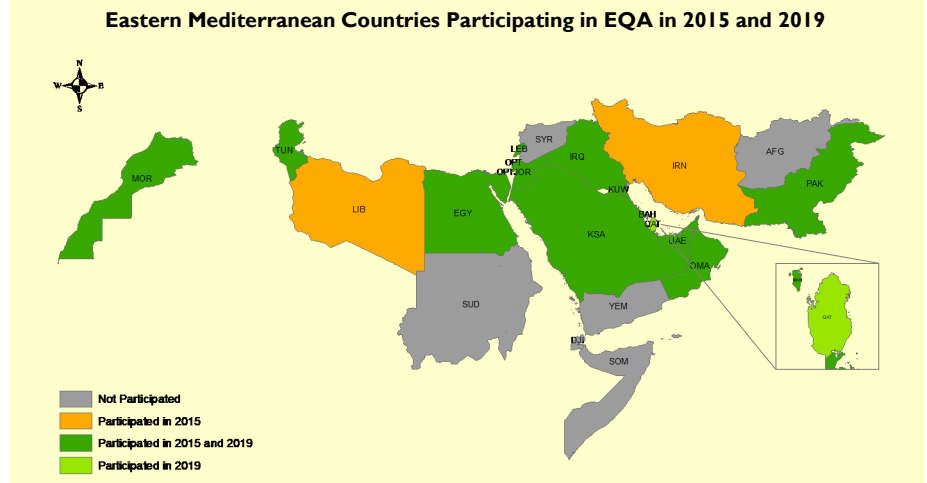
MERS-CoV Laboratory EQA

In 2019, the Infectious Hazard Management (IHM) unit of EMRO, in collaboration with HQ and AFRO, initiated an External Quality Assessment (EQA) for detection of Middle East Respiratory Syndrome Coronavirus (MERS-CoV) by PCR. The EQA was conducted in select laboratories of WHO EMR and African Region - the two regions bearing the highest burden and threat of MERS-CoV, respectively.

Editorial note

MERS-CoV continues to be a grade 2 emergency health threat regionally and globally. Since 2012, 27 countries globally have reported 2,449 cases of MERS with 845 associated deaths (CFR: 34.5%). Of those cases, 2,234 cases were detected in 12 EMR countries. The cases detected outside of the EMR Region were all travel-associated cases. Early identification is one of the critical steps in controlling the disease, especially in reducing risk of nosocomial transmission. This step requires specialized laboratories with appropriate diagnostic capacity. EQA programs are essential for monitoring the diagnostic proficiencies of reference laboratories.

The first EQA for MERS-CoV was conducted globally in 2015. The second round was initiated by IHM unit in 2019 and was conducted by the Quality Control for Molecular Diagnostics, UK (QCMD). The sensitivity and specificity of the tests were assessed using 8 samples of different MERS-CoV viral loads or common coronaviruses (OC43, 229E, NL63, HKU1). The panel was sent to 32 reference laboratories across EMR and African Region. 20 laboratories from EMR returned panel results (*see map*). 6 of the EMR laboratories were unable to



deliver the panel due to logistical and/or security issues.

Reference laboratories in EMR demonstrated good proficiency at detecting MERS-CoV, as 100% of participating reference laboratories reported correct results for all specimens of MERS-CoV (*see graph*). Only 3 participating laboratories reported false positive results for negative samples; however, most of these results were reported with relatively high Ct values - an indication of possible cross contamination introduced by the participants.

The achievement in the current EQA results serves as an indicator of improved laboratory capacity for MERS detection and performance across the Region. Member States should maintain their strong commitments and efforts towards sustaining this capacity. A credible and accessible laboratory is the cornerstone of any country's capacity to investigate public health events.

Update on outbreaks

in the Eastern Mediterranean Region

MERS in Saudi Arabia; **Cholera** in Somalia; **Cholera** in Yemen; **Multidrug-resistant typhoid fever** in Pakistan.

Current public health events of concern

[cumulative N° of cases (deaths), CFR %]

Avian influenza: 2006-2017

Egypt (A/H5N1) [359 (122), 33.98%]

Egypt (A/H9N2) [4 (0)]

Ebola virus disease (EVD): 2018-2019

Democratic Republic of Congo (DRC) [2 325 (1 563) 67.22%]

Uganda 3 (3), 100%

Cholera: 2017-2019

Somalia [7 802 (46), 0.58%]

Yemen [1 823 251 (3 435), 0.18%]

Diphtheria: 2018-2019

Yemen [3 524 (203), 5.76%]

Bangladesh [8 641 (45), 0.52%]

MERS: 2012-2019

Saudi Arabia [2 058 (767), 37.27%]

Multidrug-resistant typhoid fever: 2016-2019

Pakistan [8 546 (0)]