

Current major event

Technical consultation meeting to establish a genomic surveillance network in the Eastern Mediterranean Region for emerging and re-emerging infectious diseases

WHO Office for the Eastern Mediterranean Region's (WHO/EMRO) organized a technical consultation workshop on the 1st–2nd of February 2023, in Amman, Jordan to synthesize the process of establishing strategy for establishing a genomic surveillance network for emerging and re-emerging pathogens in the Region.

Editorial note

The COVID-19 pandemic has added to the complexity and challenges faced in the Eastern Mediterranean Region, particularly in countries initially lacking essential infrastructure or expertise to diagnose or sequence SARS-CoV 2 to inform public health decision making.

Genomic surveillance provides an invaluable tool for identifying and monitoring pathogens' mutations that impact pathogen fitness, vaccine efficacy or impact molecular diagnostics. Building on the existing influenza surveillance network, WHO EMRO, with support from international partners, successfully aided the implementation of COVID-19 sequencing across the Region. Furthermore, WHO EMRO supported the expansion of regional reference laboratories in three member states, namely Morocco, United Arab Emirates and Oman, in addition to strengthening in-country Next Generation Sequencing (NGS) capacities to 21/22 Member States.

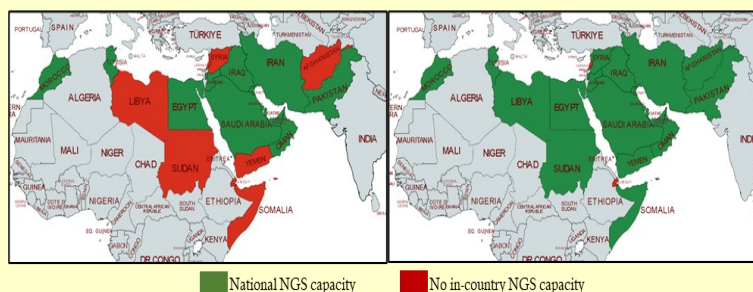
A technical working group was commissioned to consult with expert stakeholders from across the region, on the scope, terms of reference, objectives and implementation of a genomics surveillance strategy. Multi-level and cross-sectoral discussion was facilitated, to ensure a broad range of inputs could be consolidated into the strategy, aiming to ensure tangible interventions and support that would work at all levels of the network. The strategy will contribute the expansion and sustainability of genomic surveillance capacity established during the COVID-19 pandemic through the regional influenza laboratory network which is part of the Global Influenza Surveillance and Response System (GISRS).

The consultative meeting consisted of expert presentations, group discussion and plenary sessions from international and national experts on existing pathogen surveillance networks, data sharing, and data platforms used to inform public health outcomes. These plenary sessions were paired with guided group discussions covering the vision for the genomic surveillance

Next-Generation Sequencing (NGS) capacities in EMR

Pre-2020 (National NGS Capacity)

Post-2022 (National NGS Capacity)



network, opportunities and challenges with data sharing in the Region. Integration of genomics with traditional surveillance networks was also prioritized to support public health interventions, and the critical details of how a regional genomics network should operate to best support national and regional public health, and provide high quality data to international networks and responses.

Major themes emerged during the analysis of gaps and limitations, including lack of visibility, coordination and support for logistics, training and expansion of sequencing capacities to cover new pathogens, lack of expertise in novel and emerging pathogen surveillance, and challenges with infrastructure to support data analysis and data sharing.

Group discussions were open and informative, with over 200 suggestions and recommendations gathered across the four sessions. These were analyzed and formulated into key recommendations, including harmonization of operating procedures and protocols, standardization of training and risk assessments, improved awareness and visibility of genomics programs, strengthened quality management, monitoring and evaluation to ensure workforce sustainability, and improved coordination and advocacy for cross-border, multi-sectoral collaborations for health interventions and research in the Region.

A well-coordinated support in these areas is critical to the success and engagement with the network, while advocacy at the regional level is needed to encourage stakeholders and build trust in genomic surveillance as a tool to support public health responses. Potential mechanisms to support these strategies included the formation of a steering committee to provide high level guidance and advocacy for the network, supported by technical working groups covering pillars such as surveillance integration, risk assessment, logistics, quality management, training and more.

The aim is to finalize and present the draft strategy in the second half of 2023 for consideration and endorsement by Member States, to ensure that all stakeholders are clear on the roles and responsibilities that will ensure sustainable genomics in the Region.

Update on outbreaks in the Eastern Mediterranean Region

COVID-19 in 22 EMR countries

Current public health events of concern [cumulative N° of cases (deaths), CFR %]

Coronavirus disease 2019 (COVID-19): 2019-2023

Afghanistan	[209 280 (7878), 3.8%]
Bahrain	[696 614 (1536), 0.2%]
Djibouti	[15 690 (189), 1.2%]
Egypt	[515 698 (24 809), 4.8%]
Iran (Islamic Republic of)	[7 567 473 (144 828) 1.9%]
Iraq	[2 465 545 (25 375), 1%]
Jordan	[1 746 997 (14 122), 0.8%]
Kuwait	[663 456 (2570), 0.4%]
Lebanon	[1 231 713 (10 825), 0.9%]
Libya	[507 174 (6437), 1.3%]
Morocco	[1 272 442 (16 296), 1.3%]
occupied Palestinian territory (oPt)	[703 228 (5708), 0.8%]
Oman	[399 449 (4628), 1.2%]
Pakistan	[1 576 915 (30 643), 1.9%]
Qatar	[493 724 (686), 0.1%]
Saudi Arabia	[829 228 (9613) 1.2%]
Somalia	[27 324 (1361), 5%]
Sudan	[63 809 (5013), 7.9%]
Syrian Arab Republic	[57 423 (3163), 5.5%]
Tunisia	[1 150 962 (29 331), 2.5%]
United Arab Emirates	[1 051 732 (2349), 0.2%]
Yemen	[11 945 (2159), 18.1%]