

Summary report on the
**Fourth intercountry
meeting of the directors
of public health
laboratories in the
Eastern Mediterranean
Region**

Cairo, Egypt
5–7 December 2022



**World Health
Organization**

REGIONAL OFFICE FOR THE **Eastern Mediterranean**

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1. Introduction

Laboratories are an essential part of health systems that contribute directly to the improvement of health services. Reliable and timely results from laboratory investigations are critical to decision-making in all aspects of health care. In addition to the health and well-being of individuals, critical public health decisions concerning health security, national development and meeting international obligations, such as the International Health Regulations (2005), all depend upon laboratory diagnosis.

Within the WHO Eastern Mediterranean Region, while progress has been made, strengthening and sustaining laboratory capacity remains a challenge. During the COVID-19 pandemic, public health laboratories met the increased demand for test results for diagnosis and surveillance. The pandemic drew attention to the role of laboratories in public health and emphasized the need for countries to invest in laboratory personnel, training and equipment. However, there has been a tendency for this investment to decrease as the emergency winds down.

Recognizing the need to build laboratory capacities, the countries of the Region endorsed a regional strategic framework for strengthening health laboratory services 2016–2020 during the 63rd session of the Regional Committee for the Eastern Mediterranean in 2016. The framework was intended to guide countries in developing and improving sustainable national health laboratory systems, and to enable partners to align their financial and technical support for health laboratory

services. It lays out several strategic goals that countries should target to build more resilient laboratory systems. In 2020, the 67th session of the Regional Committee extended the time frame for implementation of the strategic framework until 2023, aware of the concerted regional engagement in the COVID-19 pandemic response at the time.

The fourth meeting of public health laboratory directors in the Region was held in Cairo, Egypt, on 5–7 December 2022. It provided countries and WHO with an opportunity to define priority areas of work to maintain and strengthen their health laboratory systems services in light of the COVID-19 pandemic. The meeting also provided an opportunity to recognize excellence in the laboratory sector and to identify a way to elevate these resources as regional public goods that can be used for emergencies and to enhance routine capacity in the Region.

The objectives of the meeting were to:

- review progress and challenges at regional and country level in the implementation of the regional strategic framework for strengthening health laboratory services 2016–2023, particularly considering COVID-19;
- identify a way forward on cross-cutting approaches for communicable disease detection and surveillance; and
- identify new laboratory resources and a means to engage them as regional public goods.

2. Summary of discussions

Strengthening laboratory management toward accreditation (SLMTA)

Participants discussed the implementation of SLMTA in the Region. All groups agreed to adopt SLMTA as a method to strengthen the laboratory quality management systems in the Region.

The following approach was suggested:

- coordination by laboratory directors at national level;
- use of senior-level advocacy;
- adoption of a centralized approach;
- prioritization of national laboratories before moving to subnational laboratories;
- use of face-to-face training, mentoring and auditing;
- adoption of a training of trainers (TOT) model;
- implementation of 12 laboratory quality management system elements;
- evaluation by stepwise assessment and a star rating system simultaneously, using the Stepwise Laboratory Quality Improvement Process Towards Accreditation (SLIPTA) checklist;
- aiming for national and regional accreditation; and
- identification of national funds or donor support.

WHO will coordinate SLMTA implementation in the Region.

Each country should designate focal points/representatives to work on a proposal for implementing SLMTA in the Region.

A virtual consultative meeting will be held during the first quarter of 2023 to further discuss regional needs and implementation modalities.

Progress in implementation of the regional strategic framework for strengthening health laboratory services

During group discussions, the participants identified achievements, challenges and recommendations in the following areas of the regional strategic framework.

Leadership, legislation and governance

Achievements

- National laboratory strategic plans and national laboratory policies are available in some countries.
- Some countries have established national laboratory services departments with established budget lines for laboratory services.
- Some countries have national laboratory technical working groups responsible for coordination.
- There are integrated laboratory electronic systems.
- There are partially integrated laboratory systems and platforms, including for multiplex and specimen referral.
- A tiered laboratory network has been established.

Challenges

- Poor coordination of clinical and public health services due to lack of a specific unit/department in the ministry of health to oversee laboratory services in some countries.

- Poor coordination of One Health programmes.
- Lack of laboratory policies and strategic plans and/or their implementation.

Recommendations

- Advocate for well-established structures for laboratory services at the ministry of health level to oversee laboratory services and secure funding.
- Support the development and implementation of laboratory policies and strategic plans.
- Integrate laboratory services, platforms, specimen referral and data management systems.
- Initiate the One Health approach and review its different elements.
- Designate a focal point for laboratory quality management and biosafety and biosecurity at the national level.

Laboratory quality management systems

Achievements

- Laboratory quality management systems have been partially implemented in some countries.
- There are functional laboratory accreditation/certification bodies in some countries.
- There is a regional external quality assessment programme for serology, bacteriology, mycology and antimicrobial resistance.

Challenges

- Suboptimal implementation of laboratory quality management systems due to lack of quality manuals, quality assurance programmes, laboratory mentors, laboratory quality auditors and funding.
- Inadequate national accreditation bodies.

Recommendations

- Support the establishment and/or implementation of laboratory quality management systems through the adoption of the SLMTA/SLIPTA approaches, especially in resource-poor countries.
- Establish a regional accreditation body.
- Establish a national essential diagnostics list.
- Establish vertical and horizontal collaboration, for example through twinning and peer laboratory auditing and mentoring.

Human resources for laboratory services

Achievements

- Education and training programmes have been established for laboratory workforce (pre-service training and in-service training).
- The establishment of the WHO Global Laboratory Leadership Programme.
- There is licensing and registration of laboratory workforce in some countries.
- Integrated task shifting service delivery models have been established.

Challenges

- High turn-over of laboratory workforce.
- Inadequate number of technical and laboratory managers.
- Lack of funding for training and scholarships for laboratory personnel to achieve high levels of education in bioinformatics, sequencing, etc.

Recommendations

- Recruit qualified laboratory staff.
- Establish national training programmes.
- Establish laboratory leadership curricula in universities.
- Establish pre-service training on safety and quality management systems.
- Scale up the Global Laboratory Leadership Programme.

Biosafety and biosecurity

Achievements

- There is partial availability of adequate and maintained physical infrastructure.
- Processes and procedures for risk assessment and risk minimization are partially in place.
- Systems and procedures for transporting biological specimens and infectious substances are partially in place.
- Systems of inventory of infectious agents and substances are partially in place.
- Some countries have companies for biosafety cabinet certification.

- National biobanking system infrastructure has been modified/established in some countries to enable long-term sample storage.

Challenges

- A lack of established biosafety and biosecurity legislation.
- An absence of national biosafety cabinet certification systems in most countries.
- A lack of national biobanking policies.

Recommendations

- Establish a national biosafety and biosecurity legislation and management system.
- Develop and implement a national biobanking policy and waste management policy.
- Establish a system for equipment maintenance, including safety equipment and biosafety cabinets.
- Establish a list of priority pathogens.

3. Conclusions

There has been significant progress since the endorsement of the regional framework for strengthening health laboratory services in 2016, including the investments made in laboratories to respond to the COVID-19 pandemic. However, substantial challenges remain. These include a lack of national policy and strategic planning for laboratory services, insufficient funding, inadequately trained laboratory staff, weak laboratory infrastructure, old and inadequately serviced equipment, a lack of essential reagents and consumables, weak

bio-risk management, and limited quality assurance and quality control implementation. These challenges are compounded by a lack of monitoring of the performance of laboratory services at the national level and the lack of due priority and recognition accorded to laboratories in national health systems.

4. Recommendations

WHO should continue to support efforts towards attaining sustainable health laboratory services through the provision of technical support and partner coordination.


The next framework should focus on the following areas:

- Strengthening laboratory leadership and governance, prioritizing the development and implementation of laboratory policies and costed strategic plans; WHO will work with countries and partners to advocate for laboratory resources (financial and human) from domestic sources and partners.
- Implementing laboratory quality management systems using already-existing approaches such as the strengthening of laboratory management towards accreditation and coordinating regional accreditation schemes with countries.
- Training of human resources for laboratory at the pre-service level to ensure the availability of competent human resources for laboratories, including biomedical engineers.
- Strengthening biosafety and biosecurity in laboratories, including the development and implementation of waste management policy and coordinated specimen biobanking.

- Creating an integrated public health laboratory infrastructure that services multiple diseases programmes and functions through greater implementation of policies that support multi-disease testing and treatment systems, diagnostic network optimization, bundled test procurement and a more rapid spread of innovation and best practices across disease programmes.

5. Next steps

- Revise the priorities for the new framework to include the recommendations from the meeting.
- Conduct a virtual consultative meeting to agree on revised priorities for the next framework and implementation modalities for SLMTA in the Region.
- Organize a high-level policy-maker meeting for ministries of health and partners to advocate for the need to strengthen laboratory services in the Region through a well-established governance and leadership structure coordinated by the ministry of health.



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