

Progress report on the strategic framework for strengthening health laboratory services 2016–2020

Introduction

1. In October 2016, the strategic framework for strengthening health laboratory services 2016–2020 was endorsed by the 63rd session of the Regional Committee in resolution EM/RC63/R.4. In the resolution, the Committee urged Member States to (a) strengthen health laboratory services based on the strategic framework and adapted to their specific situation; (b) develop or further strengthen national laboratory policies and strategic plans; (c) ensure adequate resources for implementation of national laboratory policies and strategic plans; and (d) build and expand mechanisms for monitoring and evaluation of laboratory performance and implementation of national laboratory policies and strategic plans.
2. The Committee also requested WHO to (a) provide support to countries in strengthening health laboratory services based on the strategic framework; (b) encourage national and international partners to support countries in implementing the strategic framework; and (c) report on progress in implementing the strategic framework during the 65th and 67th sessions of the Regional Committee.
3. The strategic framework recognizes the critical role of health laboratories in patient diagnosis and treatment as well as in surveillance of and response to communicable diseases and emerging pathogens, including drug-resistant pathogens. The framework is built around six interrelated strategic goals, each consisting of a set of activities and corresponding desired outcomes, which countries can draw on based on their national priorities, resources, capacities, regulations and specific contexts. It also includes a monitoring and evaluation framework with country and regional indicators. Implementation of the strategic framework is essential for improvement of quality and safety of health laboratory services and fulfillment of countries' obligations under the International Health Regulations (IHR) (2005).
4. This report summarizes the progress made by WHO and Member States in implementation of the strategic framework, including challenges and the way forward.

Progress update

5. An intercountry meeting of the directors of public health laboratories in the Eastern Mediterranean Region was organized in 2016. The meeting aimed to review early progress and discuss approaches and tools to speed up implementation of the strategic framework.
6. In line with the strategic framework, Member States have made significant progress in strengthening leadership and governance of their national laboratory systems. Through their national laboratory working groups, countries are responsible for the development, endorsement and implementation of national laboratory policies and plans. To date, 13 out of the 22 countries in the Region have a functional national laboratory working group in place. However, no such body is in place in Djibouti, Egypt, Lebanon, Libya, Palestine, Qatar, Saudi Arabia, Somalia or Yemen. At the start of the strategic framework, only two out of 22 countries had national laboratory policies and/or strategic plans officially endorsed by the national authorities. To date, eight countries have endorsed their national laboratory policy and two countries are at the drafting stage. With regards to national laboratory strategic plans, five countries have endorsed such plans and eight are at the drafting stage.
7. Member States, with support from WHO and partners, have made progress in strengthening the organization and management of their national laboratory systems towards quality. In regard to national laboratory standards, four countries have endorsed such standards and four are at the drafting stage. WHO has facilitated laboratory quality management system trainings, including in Afghanistan, Jordan and

Pakistan. A regional external quality assessment programme for bacteriology, parasitology/mycology and serology, coordinated by laboratories in the Islamic Republic of Iran and Oman, has been running since 2005. The number of participating laboratories and countries has grown over the years to a total of 35 laboratories in 20 countries, with concurrent improvements in testing performance. Additionally, laboratories in the Region participated in global external quality assessment programmes for vaccine-preventable diseases and emerging infectious diseases including influenza, Middle East respiratory syndrome and arboviral diseases.

8. To work towards establishing sustainable, sufficient and competent human resources for laboratory service delivery, WHO and partners are developing a global laboratory leadership programme which will be adapted to countries in the Region. In Sudan, the curriculum for medical laboratory science has been reviewed and updated to support laboratory workforce development. In 2017, WHO organized a regional training and certification of assessors of health laboratories which included a training-of-trainers component.

9. Despite significant ongoing technical and financial investment to ensure safe and secure laboratory environments, attention is still needed in this area. This was confirmed by IHR (2005) joint external evaluation (JEE) in 14 countries, which showed that capacity for biosafety and biosecurity remains very weak in the Region. Nine countries were supported in establishing a core of qualified national biosafety officers and trainers. These qualified personnel now provide national and provincial biosafety and biosecurity training, and manage the maintenance and servicing of biosafety cabinets. Furthermore, to improve specimen referral and transport by air, staff from across the Region have been certified as shippers of infectious substances.

10. Laboratories in the Region were assessed to determine capacity for detection of antimicrobial resistance. Microbiology laboratories were assessed in Jordan, Pakistan and Sudan. Gaps were identified and corrective actions are being implemented to improve the competency of the workforce according to international standards. Technical support was provided to set up internal laboratory quality control systems in three countries (Iraq, Jordan and Sudan) through the provision of quality control strains for antimicrobial-resistant pathogens.

11. A regional emerging and dangerous pathogens laboratory network (EDPLN) was established in August 2017. A key objective of the regional EDPLN is to improve rapid and early diagnosis, identification and characterization of dangerous viral, bacterial and parasitic pathogens.

Challenges

12. Some of the main challenges facing the Region include ensuring that health laboratory services remain a priority at the national level, and ensuring that resource planning and budgeting for operations is adequate. Limited human and financial resources, as well as competing priorities, make it difficult to maintain momentum for implementing the strategic framework and the recommendations of the JEEs.

13. Efforts are being made to enhance laboratory workforce capacity. However, availability of sufficiently trained human resources is a challenge in some countries, particularly at the subnational administrative level.

14. Inadequate infrastructure and low compliance of personnel with biosafety and biosecurity requirements are common issues in countries of the Region, and can lead to unacceptably high levels of biological risk.

15. In-country and international specimen referral networks continue to face practical, logistic and administrative difficulties or delays that negatively impact timely pathogen confirmation and detection, especially in countries affected by emergencies.

16. Technical resources, such as laboratory experts and WHO collaborating centres, exist in the Region to assist countries and WHO in providing intercountry laboratory support. However, they are insufficient in number and scope, and are not optimally engaged.

17. Although vertical approaches have improved disease-specific laboratory programmes, such approaches have also resulted in fragmentation of laboratory services and duplication of efforts.

18. In addition, countries experiencing protracted emergencies continue to face difficulties in maintaining laboratory services and laboratory-based surveillance due to loss of infrastructure and resources.

The way forward

19. Member States, with support from WHO and partners, should continue to implement the strategic framework and work towards accelerating implementation of the IHR (2005) core capacities, supported by the Global Health Security Agenda. Outcomes of laboratory-related assessments, including JEEs, need to be well reflected in national plans of action for health security. This requires ongoing advocacy, commitment, resources and efforts from all stakeholders involved.

20. Member States, through their national laboratory working groups, should move forward with the development, endorsement and subsequent implementation of national laboratory policies and strategic plans, including adequate resource planning and budgeting.

21. Member States, WHO and partners should continue to improve laboratory performance and safety in the Region through country-level training programmes, exercises, laboratory leadership programmes and external quality assessment, and to address biosafety and biosecurity gaps through an emphasis on risk assessment.

22. Member States, WHO and partners should identify challenges related to in-country and international referral of specimens, including highly pathogenic specimens, and work towards identifying and implementing innovative and practical solutions, including for countries affected by emergencies.

23. WHO will continue to update and expand the regional roster of laboratory experts, and provide experts with the necessary training, orientation and field exposure to support not only their own countries but also other countries in the Region.

24. WHO will support laboratories in countries to work towards designation as a WHO collaborating centre, and utilize such capacities to support other laboratories both in the Region and globally.