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## **Progress report on implementing the regional strategy for integrated disease surveillance: overcoming data fragmentation in the Eastern Mediterranean Region**

### **Introduction**

1. At its 68th session in 2021, the WHO Regional Committee for the Eastern Mediterranean adopted resolution EM/RC68/R.3, which endorsed a regional strategy for integrated disease surveillance (IDS) to overcome data fragmentation in the Region. The resolution requested Member States to take the necessary steps toward achieving effective and integrated national disease surveillance systems that can connect to global disease surveillance systems by the end of 2025. The WHO Secretariat was tasked with integrating surveillance programmes within the Organization through a working group, providing the required support to Member States for IDS, and reporting to the Regional Committee at its 70th and 72nd sessions on progress in implementing the strategy.

2. This report provides an overview of the progress made by countries in implementing the regional IDS strategy and outlines WHO's actions related to the initiative from October 2021 to April 2023.

### **Progress made by countries/territories and WHO**

3. Following the adoption of the resolution and endorsement of the regional strategy, a technical working group (TWG) was established to guide and address strategic and technical issues regarding IDS in the Region. The working group comprises members of key departments in the WHO Regional Office, including the office of the Director of Programme Management, the WHO Health Emergencies Programme, the Department of Communicable Disease Control, the Science, Information and Dissemination Department, and the Polio Eradication programme. The primary objectives of the TWG are to identify cross-cutting disease surveillance activities across multiple surveillance systems and to develop proposals for coordination with Member States of the Region. Additionally, the working group aims to provide countries with consolidated guidelines, procedures, training and tools to support integration and to identify opportunities to coordinate the integration of laboratory networks that support disease-specific surveillance systems. Furthermore, the working group is tasked with providing consolidated technical and operational support upon request by Member States to review, assess, plan, implement, monitor and evaluate national IDS systems and assist Member States in the development of a financing strategy. The terms of reference of the TWG were endorsed by the Regional Director and shared within WHO through Circular No. 1345.

4. A desktop assessment of the national IDS situation in the Region was conducted against IDS strategy benchmarks. The assessment yielded recommendations to: establish a sustainable governance structure for disease surveillance activities to ensure their long-term viability; develop a clear road map for implementing IDS at country level, with clearly defined milestones and timelines; develop and disseminate national guidelines for disease surveillance activities to ensure consistency and accuracy across different health facilities; allocate sufficient funds in the national budget to support disease surveillance activities; invest in necessary infrastructure, equipment and supplies to support disease surveillance activities; develop and implement strategies to retain surveillance staff, such as providing training and career development opportunities; use data analysis tools to identify trends and patterns and inform public health decision-making; strengthen the linkages between laboratories and epidemiologists to improve the accuracy and completeness of disease surveillance data; and conduct

regular evaluations of disease surveillance systems to identify strengths, weaknesses and opportunities for improvement.

5. On 7 March 2023, the TWG organized a retreat that included participants from all relevant departments and senior management of the Regional Office to enhance the coordination and collaboration required for the successful implementation of IDS. The retreat concluded with an interdepartmental joint work plan that identified specific deliverables and timelines. The plan aims to improve project management processes and align stakeholders towards the common goal of enhancing disease surveillance in the Region. This collaborative effort is expected to enable stakeholders to respond more effectively to public health threats.

6. Pakistan and Somalia have developed national integrated disease surveillance and response (IDSR) road maps and guidelines and have initiated their implementation. In 2022, with the support of WHO, Pakistan revised its IDSR strategy, developed an action plan and training package, and expanded the number of pilot districts. In early 2023, Somalia launched an IDSR system by providing training to Federal and State disease surveillance staff. From 29 January to 2 February 2023, WHO supported the country in organizing a five-day training-of-trainers course on IDSR for 39 Federal and State-level participants. WHO has provided comprehensive support for the design, training for, implementation and monitoring of the IDSR system in Somalia.

7. The surveillance system in Lebanon was assessed using the indicators outlined in the regional IDS strategy. The assessment findings were used as a guide for a five-year strategic plan for the Epidemiological Surveillance Unit of the Ministry of Public Health towards integration.

8. As part of IDS, 11 countries in the Region are implementing event-based surveillance (Afghanistan, Egypt, Iraq, Jordan, Lebanon, Libya, Morocco, Oman, Qatar, Sudan and Tunisia). National guidelines and standard operating procedures for event-based surveillance have been developed in Afghanistan, Jordan, Libya, Morocco, Qatar and Sudan. The training of trainers, followed by cascade training and pilot implementation, was successfully undertaken in the countries. Regular supervision visits and ongoing technical guidance are provided by WHO to support implementation in these countries. Multisectoral technical working groups have been established for event-based surveillance in Egypt, Iraq, Lebanon, Oman and Tunisia, and guidelines are under development. During the FIFA World Cup 2022, Qatar used event-based surveillance as the cornerstone of the early warning system.

9. Public health event detection capacity has been further strengthened by deploying Epidemic Intelligence from Open Sources (EIOS) as a media scanning component of event-based surveillance in Afghanistan, Bahrain, Egypt, Iraq, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Sudan, north-west Syrian Arab Republic and Tunisia. WHO provides extensive support, including training, troubleshooting and follow-up, in this area to ensure robust and comprehensive IDS at the national level.

10. Mapping has been undertaken in the Region of current information technology (IT) capabilities for surveillance systems at the national level, with 20 countries/territories reporting the use of electronic platforms in at least one surveillance system. Six countries (Afghanistan, Iraq, Lebanon, Pakistan, Sudan and Yemen) have started using District Health Information Software version 2 (DHIS2) for surveillance. DHIS2 is an open source, fully-customizable data platform for collecting and analysing health data, with a broad support network globally, and can be considered by countries for use as a single consolidated IDS platform. Customized support is being developed to ensure sufficient IT capabilities at the national level to foster surveillance integration. Iraq has included the integration of surveillance systems into its eHealth strategy.

11. To further improve the analysis, reporting and use of surveillance data for decision-making, 20 surveillance officers and epidemiologists from 10 countries/territories, including Afghanistan, Iran (Islamic Republic of), Iraq, Jordan, Lebanon, Libya, Oman, Palestine, Sudan and Yemen, were trained

in December 2022. This is the first cohort, and a plan is in place to expand the training and ensure sufficient capacities at the national level to manage surveillance data.

12. In May 2023, a significant milestone was achieved with the convening of the first regional meeting on IDS and a workshop on DHIS2 as an electronic platform for IDS. The event brought together ministries of health, WHO country offices and partners to: assess the status of surveillance systems across the Region; guide Member States in developing implementation plans; and establish a robust monitoring and evaluation framework to strengthen IDS. The active participation and collaboration of all stakeholders underscored the shared commitment to strengthen disease surveillance systems in the Region and fostered an environment conducive to the exchange of knowledge and best practices.

## Challenges and recommended solutions

13. Challenges were identified during the desktop assessments of IDS in the Region, and confirmed during the regional meeting on IDS, and the following recommendations provided.

Key challenges	Recommendations
1. Need to reinforce governance for IDS	<ul style="list-style-type: none"> <li>• Establish a national governing body to support IDS</li> <li>• Enhance advocacy for donor investment in IDS</li> </ul>
2. Limited country technical and operational capacity to integrate different surveillance data	<ul style="list-style-type: none"> <li>• Develop/adapt technical guidance and standard operating procedures</li> <li>• Develop human resources plan with quantitative and qualitative aspects, including a pyramid of competencies for field epidemiologists and field epidemiology training programme (FETP)-type training</li> </ul>
3. Limited funding, or funding fragmentation to different surveillance systems, and powerful vertical programs	<ul style="list-style-type: none"> <li>• Share and pool resources to improve efficiency and effectiveness</li> <li>• Transition the polio programme and other vertical surveillance programs into a national surveillance programme</li> <li>• Cost the integrated surveillance</li> <li>• Develop a financial and resource mobilization strategy for IDS</li> </ul>
4. Donor-driven surveillance systems which limit the sustainability of IDS	<ul style="list-style-type: none"> <li>• Enhance capacity of countries/territories and promote ownership of the IDS system by national governments and other key stakeholders</li> <li>• Pool the resources for surveillance and promote integrated surveillance to avoid duplication of effort</li> <li>• Allocate domestic investment and funding (when needed)</li> </ul>
5. Limited multisectoral collaboration between surveillance actors	<ul style="list-style-type: none"> <li>• Involve all relevant sectors in the planning, design and implementation of IDS</li> <li>• Undertake capacity-building of sectors with suboptimal capacity</li> <li>• Expand partnerships and networks</li> </ul>
6. Lack of a clear vision and policy for a national integrated surveillance system by governments and stakeholders	<ul style="list-style-type: none"> <li>• Conduct comprehensive assessment of existing surveillance systems to identify gaps and needs, and plan to address gaps</li> <li>• Develop legislation and policies for a national surveillance system</li> <li>• Consolidate country-specific support by the Regional Office's IDS TWG within a single master plan that supports progressive convergence towards integration</li> </ul>
7. Limitations in data quality and completeness, even when surveillance systems are in place	<ul style="list-style-type: none"> <li>• Facilitate data use for decision-making at the local level</li> <li>• Undertake regular monitoring visits and supportive supervision</li> </ul>
8. Disconnection between laboratory and surveillance system	<ul style="list-style-type: none"> <li>• Develop a clear laboratory policy and network linked to laboratories at the country level</li> <li>• Allocate sufficient human resources for laboratories</li> <li>• Link epidemiological and laboratory data through agreed information technology (IT) solutions</li> </ul>

## **The way forward**

14. There is growing willingness and political commitment in the Region to adopt the IDS approach. The COVID-19 pandemic has underlined the important role of integrated surveillance and provided an opportunity to improve public health surveillance. Developing national IDS strategies and roadmaps and implementing them with the support of WHO and partners, will provide the foundation for IDS in countries. To be effective and efficient, all surveillance capabilities should feed into an identified body within the government for synthesis and decision-making.

15. Increased laboratory capacities for detecting pathogens and genomic sequencing (as a result of responding to the COVID-19 pandemic) need to be further utilized and maintained. Laboratory data for pathogen diagnostics should be shared in a timely manner for public health action, and data systems should be integrated into the broader surveillance system through an interoperable IT platform.

16. WHO headquarters and the Regional Office are looking to develop consolidated IDS guidance, encompassing both indicator-based surveillance and event-based surveillance, as well as training materials and technical reference materials. The Regional Office will continue to promote collaboration among countries and partners and provide opportunities for countries to exchange experiences. Regional meetings on IDS and DHIS2 will allow them to learn from different experiences and develop country-specific IDS roadmaps. Enhancing coordination between disease surveillance stakeholders is another major area that the Regional Office will be focusing on in the coming years.