Strengthening Laboratory Diagnostic Capacity in Jordan

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Primary Partners: USAID Jordan, 4 MOH 5

Context

Before the COVID-19 pandemic, Jordan's laboratory diagnostic capacity was characterized by limited diagnostic testing, primarily for infectious diseases, and a shortage of skilled personnel. The pandemic highlighted deficiencies in Jordan's laboratory systems, including inadequate diagnostic capacity, poor quality management, and a lack of cross-sectoral collaboration. This led to delays in detecting and responding to outbreaks, particularly during the initial phases of the COVID-19 pandemic.

Activity Impact

In response to these challenges, LHSS implemented a comprehensive laboratory diagnostic strengthening strategy that included training, quality management, and cross-sectoral collaboration. The strategy was designed to improve the reliability of diagnostic test results, reduce the turnaround time, and enhance the quality of laboratory management.

- **Training**: A total of 113 laboratory technicians participated in PCR and rapid antigen testing (RAT) training sessions. These sessions covered both the theoretical and practical aspects of the tests, including how to interpret results and ensure quality control.
- **Quality Management**: The laboratories were introduced to an ISO 15189-compliant tool to assess the robustness of their laboratory management systems. This tool helped the laboratories understand their current level of compliance and identify areas for improvement.
- **Cross-Sectoral Collaboration**: LHSS worked closely with other stakeholders, including the MOH, universities, and private laboratories, to ensure a coordinated approach to laboratory strengthening.

Evidence

The impact of the LHSS initiative on laboratory diagnostic capacity in Jordan was significant. After the strengthening activities, the following outcomes were observed:

- **Increased Diagnostic Capacity**: The number of active molecular testing laboratories in Jordan increased from 10 to over 60, enabling the Government of Jordan (GOJ) through the MOH, the RMS, university hospitals, and the PHA to take the lead in detecting new variants and providing genomic data to guide government decisions.
- **Reduced Turnaround Time**: The average turnaround time for COVID-19 testing was reduced from 72 hours to 24 hours, allowing for more timely decision-making.
- **Improved Quality of Results**: The quality of diagnostic test results improved, as evidenced by a reduction in the number of false negatives and positives.

Lessons Learned

- **Importance of Cross-Sectoral Collaboration**: Working together with multiple sectors, including the MOH, universities, and private laboratories, is crucial to achieving comprehensive laboratory strengthening.
- **Strategic Timing**: The initiative was timely, as it coincided with the early phases of the COVID-19 pandemic, ensuring that the necessary capacity was in place for future emergencies.

Facilitators

- **Leadership and Commitment**: The MOH's strong leadership and commitment to laboratory strengthening were key drivers of the success of the initiative.
- **Collaboration**: Strong partnerships with other stakeholders, including universities and private laboratories, facilitated the implementation of effective laboratory strengthening strategies.

Challenges

- **Resource Constraints**: Limited resources, particularly in terms of personnel and equipment, were significant challenges that needed to be addressed.
- **Regulatory Framework**: Adapting to the regulatory framework and ensuring compliance with international standards were ongoing challenges.

Activity Summary

The Laboratory Health Systems Stabilizer (LHSS) was a 12-month initiative in Jordan that sought to strengthen laboratory diagnostic capacity and improve the quality of laboratory management. The project had three main objectives:

1. **Capacity Building**: To improve the diagnostic capacity of public and private laboratories, focusing on the implementation of PCR and rapid antigen testing (RAT) for COVID-19.
2. **Quality Management**: To build MOH capacity to detect new variants and provide genomic data to guide the government in making quick and informed public health decisions.
3. **Cross-Sectoral Collaboration**: To foster collaboration among other stakeholders, including the MOH, universities, and private laboratories, to ensure a coordinated approach to laboratory strengthening.

The main facilitator for this laboratory strengthening Activity was the collaboration among other laboratory stakeholders including HCAC, WHO, CDC and DTRA that facilitated the collaboration towards strengthening the laboratories.

Lessons learned included:

- **Intra-sectoral Collaboration**: Collaborative partnerships between stakeholders, including MOH, universities, and private laboratories, were essential for success.
- **External Support**: External support from USAID Jordan and MOH was crucial in enabling the initiative.
- **Quality Assurance**: Quality management practices were critical to maintaining the reliability of diagnostic test results.

In conclusion, LHSS's laboratory-strengthening activities have significantly improved laboratory diagnostic capacity in Jordan, setting a foundation for future emergencies and improving public health outcomes.