



Rapid response team member in Sennar being trained on the use of rapid diagnostic tests (Photo: WHO)

In its efforts to support the Government of Sudan to address the cholera outbreak declared by the Federal Ministry of Health on 8 September 2019, the World Health Organization (WHO) conducted a technical mission to review the readiness of central and state-level laboratories for the detection and confirmation of cholera.

The mission, which took place on 6–24 October 2019, comprised field visits to laboratories, evaluation of the cholera specimen referral system, and two training workshops for laboratory specialists and members of rapid response teams in Sennar State.

The field visits included inspection of the National Public Health Laboratory (NPHL) and 23 other laboratories in the states of Sennar and Blue Nile to assess their basic infrastructure, the qualifications and competency of staff and current practices for detecting and confirming *Vibrio cholerae*.

The NPHL is capable of providing conventional bacteriology testing, including culture and antibiotic susceptibility testing. However, gaps exist that are likely to compromise service provision in support of the cholera outbreak response effort, including the limited number of laboratory staff and the lack of sustainable resources and quality-assured laboratory procedures. At the peripheral level, of the 23 laboratories assessed in the affected states of Sennar and Blue Nile, the Blue Nile Reference and Public Health Laboratory is the only one capable of providing conventional bacteriology testing for cholera samples, but is short on the reagents necessary for cholera testing.

The assessment also revealed that the existing cholera sample referral system is leading to significant delays in transporting samples from peripheral to central levels. The rapid mortality and transmissibility associated with cholera make the timeliness of receiving the samples at the NPHL critical to the identification, treatment and prevention of new cases in the country.

The assessment identified short-term and long-term priorities covering the areas of laboratory diagnostic capacity, quality assurance, the cholera referral system and rapid diagnostic tests (RDTs).

Based on the assessment findings and the need to utilize RDTs at cholera treatment centres, WHO, in collaboration with the Federal Ministry of Health, conducted two successive one-day training workshops for laboratory specialists and rapid response teams. Both groups received hands-on training on RDT use, while laboratory specialists received additional training on the proper collection, transportation and disposal of cholera samples.

WHO will work with the Federal Ministry of Health and others stakeholders to develop an action plan to improve cholera diagnostic capacity at national and state levels.

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