Success story: Nepal

Improving Antimicrobial Resistance Surveillance in Nepal using Operational Research

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Why was this study done?

Surveillance is the cornerstone for assessing the spread of Antimicrobial Resistance (AMR) and for informing and monitoring the impact of local, national and global strategies. Launched by the World Health Organization (WHO), the Global Antimicrobial Resistance and Use Surveillance System (GLASS) collects resistance data on bacterial pathogens frequently causing severe hospital- and community-acquired infections. It allows countries to share, compare and analyze data to drive their AMR response. It is thus important to ensure data quality in GLASS.

Ms Jyoti Acharya, Chief Medical Technologist at the National Public Health Laboratory and member secretary of the Human Health AMR Surveillance Technical Working Group, conducted an operational research study to evaluate the quality of AMR surveillance data and also assess the barriers to reporting at surveillance sites in Nepal.

What did the study show?

In terms of **quality of data**, there were shortcomings in completeness, consistency and timeliness.

| Data quality indicator	Shortcomings
Completeness	Only five of nine sites were reporting any data. Forty-four percent (44%) of antibiotic susceptibility testing was not done as per GLASS criteria.
Consistency	Thirteen percent (13%) of submitted records had discrepancies with the original records at surveillance sites.
Timeliness	Reporting delays of up to 269 days were observed.

The main **barriers to reporting** included: a lack of dedicated data personnel, computers and internet; no dedicated workspace; and insufficient training on data entry and analysis.

How did the study impact policy and/or practice?

Based on the study findings, the Ministry of Health, in collaboration with the AMR-technical working group, took the following actions:

- Standard Operating Procedures were updated and memoranda of understanding were established with surveillance sites to improve reporting performance.
- Laboratory reagents are being provided to improve quality of antibiotic susceptibility testing.
- Through support from the Fleming Fund, surveillance sites are being equipped with computers and internet connectivity and all data entry staff have undergone two rounds of training on quality-controlled data capture.
- A second study in 2023 will assess the impact of these interventions on data quality.
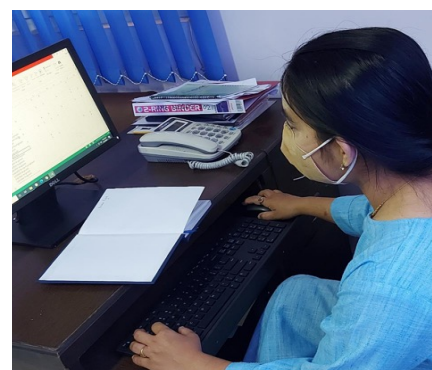
Pictures (left to right): Training of antibiotic susceptibility testing in microbiology laboratory; Data entry personnel being trained on data capture; Analysis and Improved bench space and computer provided by the Fleming Fund.

Publication title: