

Interim Healthcare-associated infections: a new tool for surveillance and alerts under development

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Background

Healthcare-associated infections (HAIs) are a recurring problem in low-resource settings, often aggravated by a high prevalence of multi-drug-resistant organisms (MDRO). In many MSF projects, clinical and laboratory data are fragmented across paper charts, lab reports, and logbooks. Because existing data are difficult to analyse operationally, localised clusters go unrecognised, and probable outbreaks are detected late. To address this, a project was launched to develop a tool that links clinical and laboratory data for earlier detection.

Project Design

To develop the Healthcare-associated Infections Surveillance and Alerts Tool (HAI-SAT), the project team is: 1) setting up clinical data fields based on standardised WHO HAI surveillance definitions; 2) deploying mobile data collection forms using KoboCollect so clinical teams can input data offline; 3) programming data pipeline scripts to routinely extract and merge clinical inputs with WHONET microbiology data ; and 4) creating a data-protected visualisation dashboard.

Current Status

The automated data pipeline and scripts are currently drafted to merge the different clinical and laboratory data sources into a single compiled line list. This line list will establish a baseline to help teams identify clusters, thus support to identifying probable outbreaks. The dashboard interface has been drafted to display time-series trends and automatically flag potential cases, while allowing clinical teams to manually validate flagged data. A 3-month field pilot is planned for an Operational Centre Paris (OCP) hospital project to evaluate the tool's utility.

Future Directions

HAI-SAT aims to link clinical data streams with laboratory results to turn fragmented information into actionable surveillance. While development is ongoing and the field pilot is planned, this tool is designed to help clinical teams establish baselines, recognise clusters early, and speed up operational responses to probable outbreaks. In the future, the compiled data can also be used to support broader operational research and infection prevention improvements.

This ongoing project introduces HAI-SAT, a tool utilising KoboCollect and WHONET. It aims to accelerate HAI detection, cluster recognition, and operational outbreak response.