

GRANTEE HIGHLIGHT

# Oxford University

## Extending antimicrobial stewardship programs to underserved clinical activities in Northern Vietnam



In low- and middle-income countries, antimicrobial stewardship (AMS) programs are primarily concentrated in in-patient departments of central and referral hospitals. While antimicrobial resistance (AMR) is spreading rapidly, AMS policies are still in their early stages. Therefore, OUCRU set up a project aimed to improve AMR control by extending AMS to underserved clinical activities in Vietnam, i.e., outpatient departments (OPD) and district hospitals (DH) in Vietnam.

The interventions consist in a comprehensive AMS program in which prescribing practices will be improved through a learning process of five stages in the provincial hospitals. It includes training by an infectious diseases expert, tracking and providing feedback on antibiotic prescribing, evaluating and improving laboratory stewardship, point-prevalence survey for OPD retrospective audit and feedback for DH, and development of treatment guidelines. The interventions also encompass innovative clinical bacteriology solutions for DH without pre-existing bacteriology laboratory capacity. In one DH, we implemented a small-scale, standalone microbiology laboratory developed by Medecins Sans Frontieres, called Mini-Lab; in another DH, we organized daily transport of samples to the provincial hospital, in a hub-and-spoke fashion; a third DH serves as control and receives AMS intervention only.

We are monitoring several indicators to evaluate the impact of these interventions through a before-after design. These indicators include the proportion and amount of antibiotics prescribed by AWaRe classification, the proportion of antibiotics and lab tests that are prescribed appropriately, changes in clinicians' knowledge, and a wide range of lab performance indicators.

As of March 2024, the baseline data collection was completed, and interventions were being rolled out. To achieve this, the Oxford University Clinical Research Unit (OUCRU) collaborated with the National Hospital for Tropical Diseases, Dong Thap Provincial Hospital, Uong Bi Vietnam-Sweden Hospital, Ha Hoa District Hospital, Yen Lap District Hospital, Tan Son District Hospital, and Phu Tho Provincial Hospital.

The interventions are currently being successfully implemented. For example, clinicians practicing at the outpatient department of Dong Thap Provincial Hospital have expressed gratitude to trainers from Hanoi for presenting the Access-Watch-Reserve (AWaRe) classification, as it helped them with establishing priorities for drug-sparing policies. In district hospitals where microbiology solutions have been implemented, clinicians were surprised to discover that some presumptive antibiotic treatment missed the target, e.g., a skin and soft tissue infection due to an MRSA in an infant but treated with a combination of third-generation cephalosporin and metronidazole, and that the laboratory was critical to identify these situations and propose the most appropriate drug for each infection. The post-intervention data collection will happen between June and September 2024.

The Global Bridges grants scheme is much more than a funding mechanism. They initiated an active regular follow-up of our projects that allows us to present and discuss our challenges with leading experts. These specialists understand perfectly the technical aspects of the project but are also aware of the context and are able to propose adapted solutions.

Moreover, connecting with other grantees has allowed us to discover a broad range of innovative solutions to improve AMS programs in low- and middle-income countries. It is also a formidable opportunity for networking with resourceful and inspiring scientists around the world.

PARTNERS



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