

Scoping and Strengthening the Antimicrobial Stewardship Landscape for Novel Antibiotics In Kenya



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Project Summary

This is a pilot project in coordination with Ministry of Health (MoH) Kenya, GARDP and tertiary health care facilities (HCFs) in Nairobi to improve Antimicrobial Stewardship (AMS) preparedness for Cefiderocol introduction and use.

This scoping project is designed to conduct a preliminary health system analysis, including policy and economic aspects. It seeks to understand the drivers and enablers in the healthcare system, from the health care facility level (micro level) to the national policy level (macro level), to support an AMS program ecosystem. In addition, it will undertake stakeholder mapping and organize stakeholder consultations to lay the ground for appropriate use of novel antibiotics in selected HCFs in Kenya.

Objectives

Track 1: Situational Analysis

- Objective 1.1:** Evaluate the current capacities, processes, and capabilities of antimicrobial stewardship (AMS) in critical care selected healthcare facilities (HCF).
- Objective 1.2:** Analyse policy levers that can enhance stewardship efforts in tertiary HCFs.
- Objective 1.3:** Assess the potential for building an economic case and generating resources for scaling up AMS in Kenya, representative of the LMIC context.

Track 2: AMS Ecosystem Enablement

- Objective 2.1:** Create a detailed stakeholder map to identify key players and strategies for engaging them to enhance AMS programs in HCFs.
- Objective 2.2:** Strengthen and foster strategic linkages between healthcare facility leadership and national authorities to support the implementation of the project titled "Towards an Antibiotic Roadmap for the sustainable Entry and Management of Antibiotic X (TANDEM-ABX) in Low- and middle-income countries"

Track 3: Clinical Protocol Development

- Objective 3.1:** Formulate clinical protocols and decision-making pathways for the sustainable use of Cefiderocol, facilitated by a panel of experts specializing in diagnostic stewardship, safety monitoring, and active pharmacovigilance.

Track 4: Social Innovation for AMS

- Objective 4.1:** Build a comprehensive case for the behavioural, policy, and economic innovations necessary to effectively scale up AMS initiatives in Kenya.

Figure 1. Project Activities

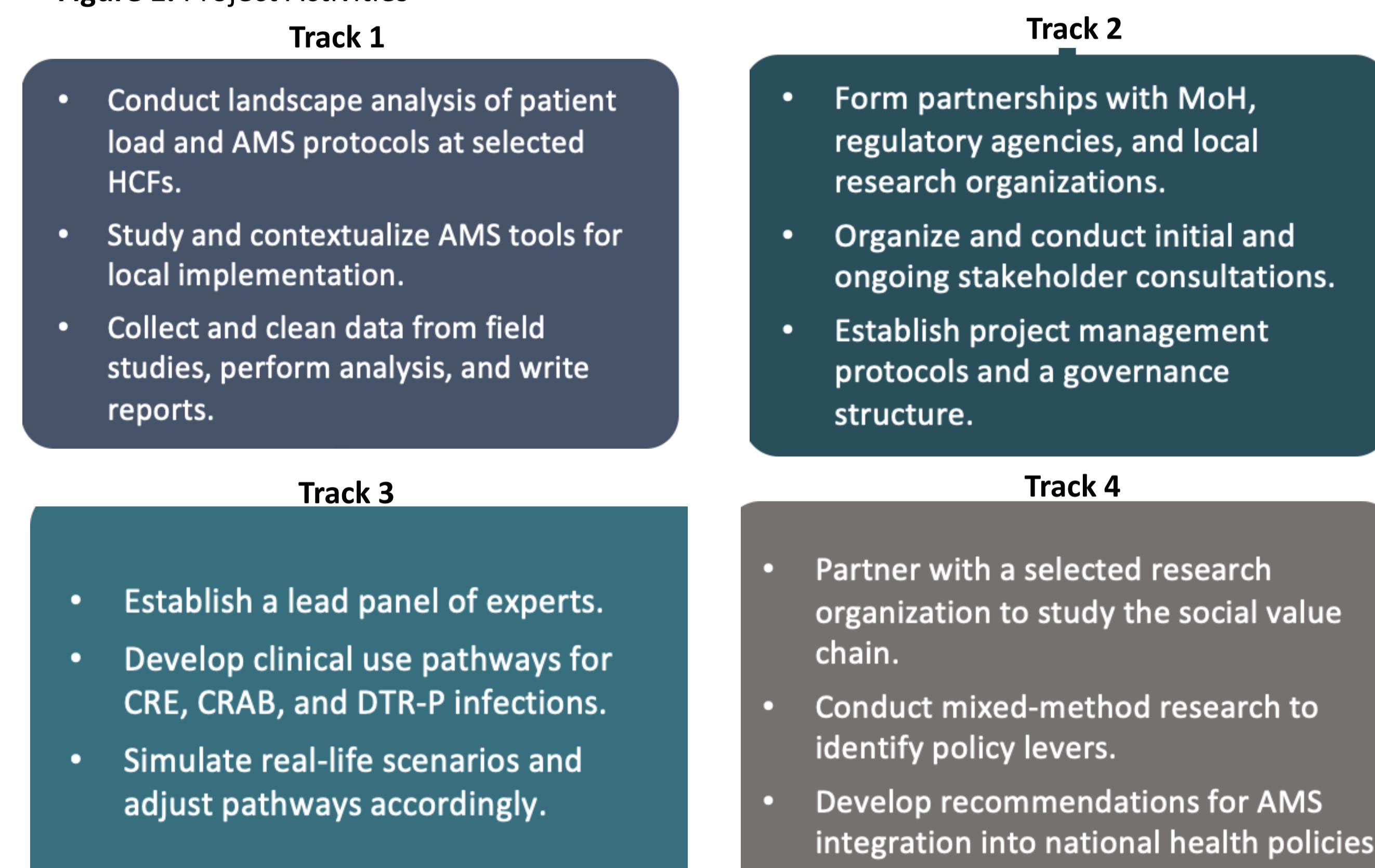


Figure 2. Implementation Process

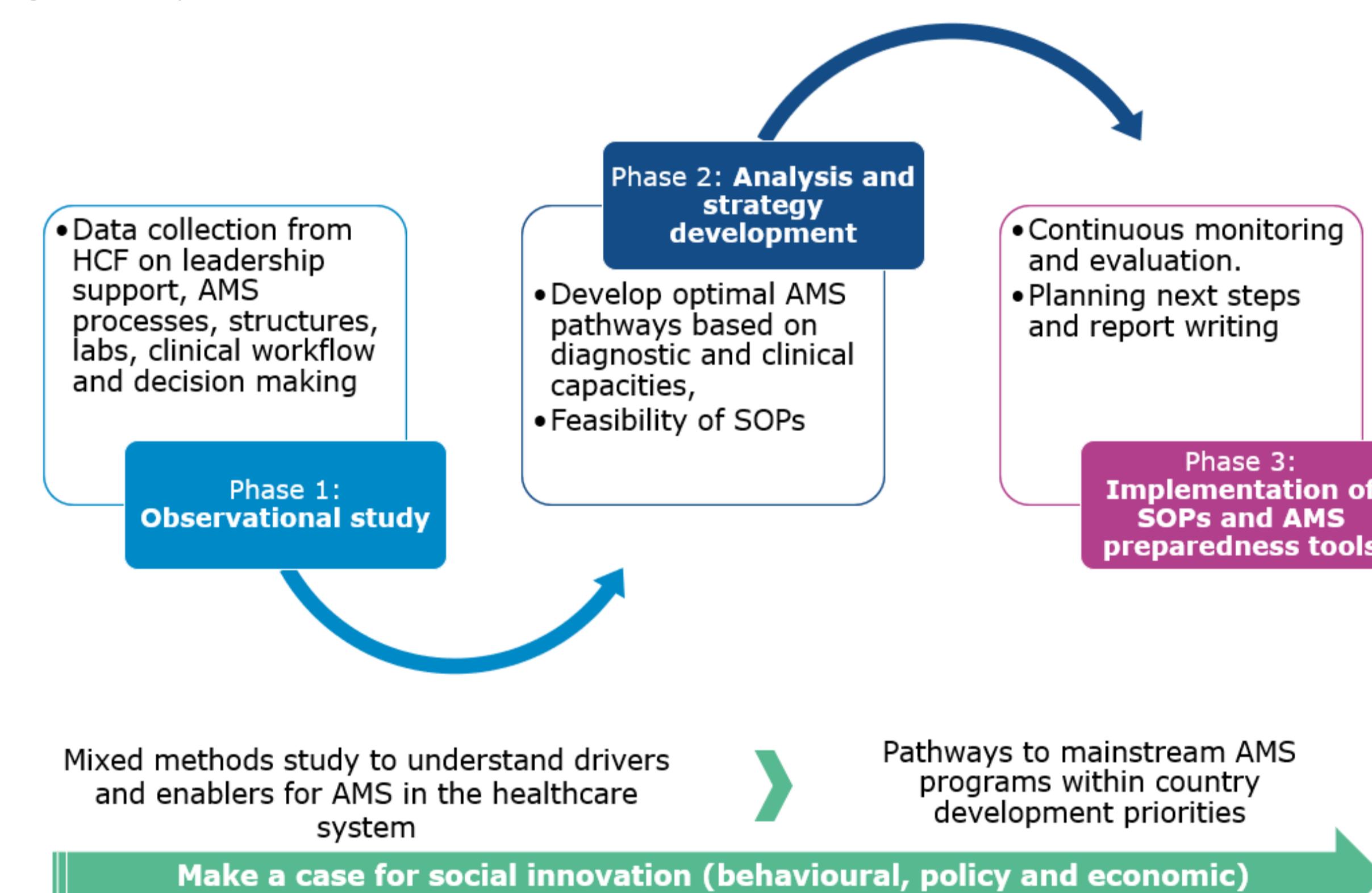
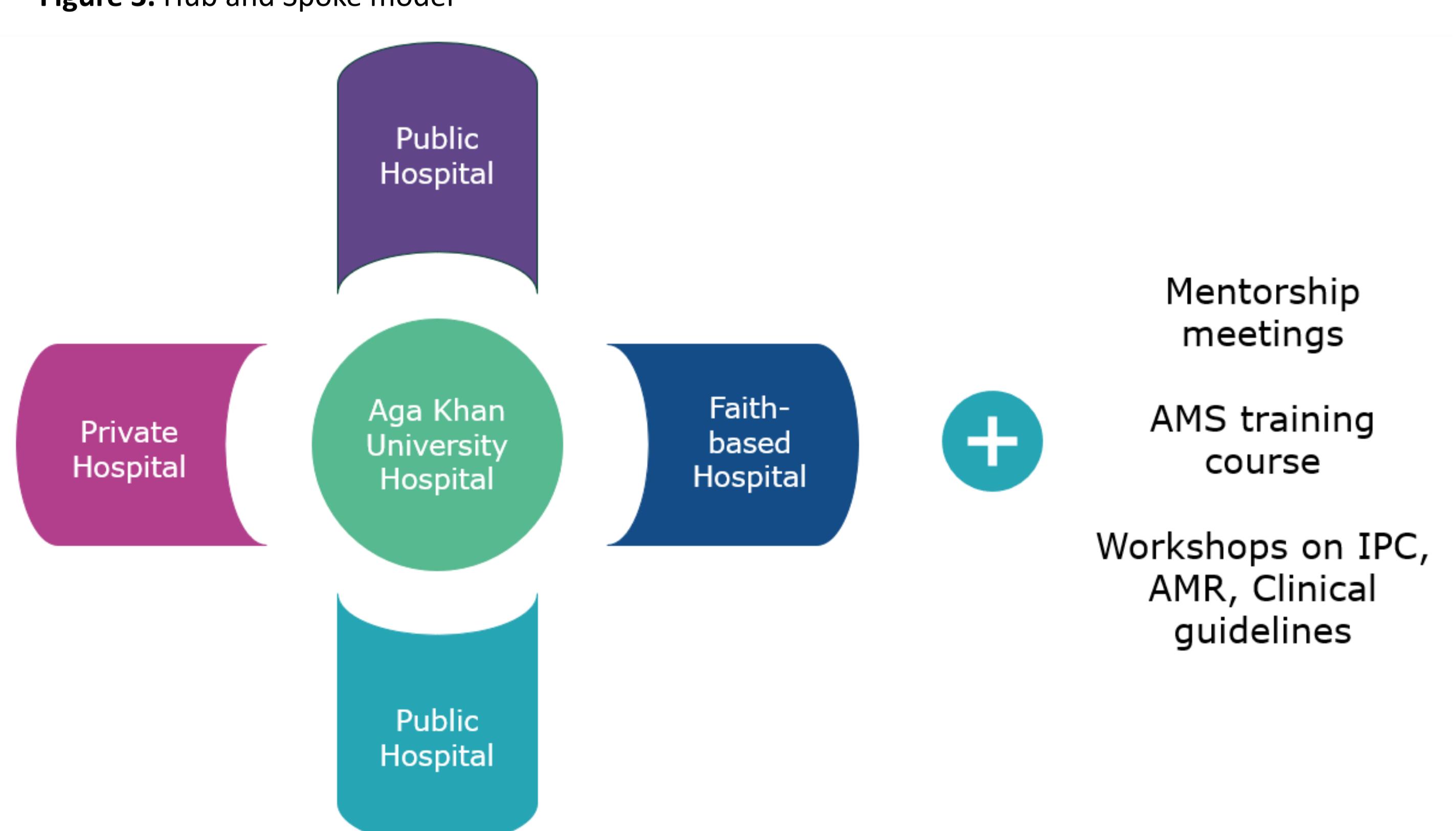


Figure 3. Hub and Spoke model



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Implementation process

Using the Intervention and Implementation Research (IIR) framework that has been the anchor at ICARS, this project in collaboration with AKUHN has mainly 3 phases over a 2-year period (see figure 2).

In parallel, a mix methods study will be conducted to understand the drivers and enablers for AMS in the healthcare system by examining the behavioural and economic aspects needed to establish an AMS supportive ecosystem.

These insights will be used to foster optimal and sustainable use pathways for Cefiderocol. The project will delineate the characteristics of the 'last mile journey' of antibiotic use and decision-making for carbapenem-resistant Enterobacteriales (CRE), carbapenem-resistant Acinetobacter baumannii species (CRAB), Pseudomonas aeruginosa with difficult-to-treat resistance (DTR-P) infections in Intensive Care Units of selected tertiary HCFs.

Risks and Mitigation Strategies

Inadequate Stakeholder Engagement

- Develop a robust stakeholder engagement plan that includes identifying and involving key stakeholders from the outset.
- Regularly update stakeholders on project progress through newsletters, meetings, and workshops.

Resistance to Change Among Healthcare Providers

- Provide continuous education and training to healthcare providers about the benefits and necessity of antimicrobial stewardship.
- Implement change management strategies, including motivational incentives and recognition of good practice.
- Engage healthcare leaders and influencers to champion AMS initiatives within their spheres.

Public Health Implications

As antibiotic stewardship efforts in Kenya remain fragmented and confined to a limited number of facilities, ensuring that the right patient receives the right antibiotic at the right time, after its registration in the market, poses a significant challenge.

By focusing on developing pragmatic and sustainable use pathways for novel antibiotics such as Cefiderocol, this project is designed to set the groundwork for minimizing resistance development and enhancing overall healthcare outcomes.