

Reducing VA Healthcare-Associated Infections through Antibiotic Stewardship

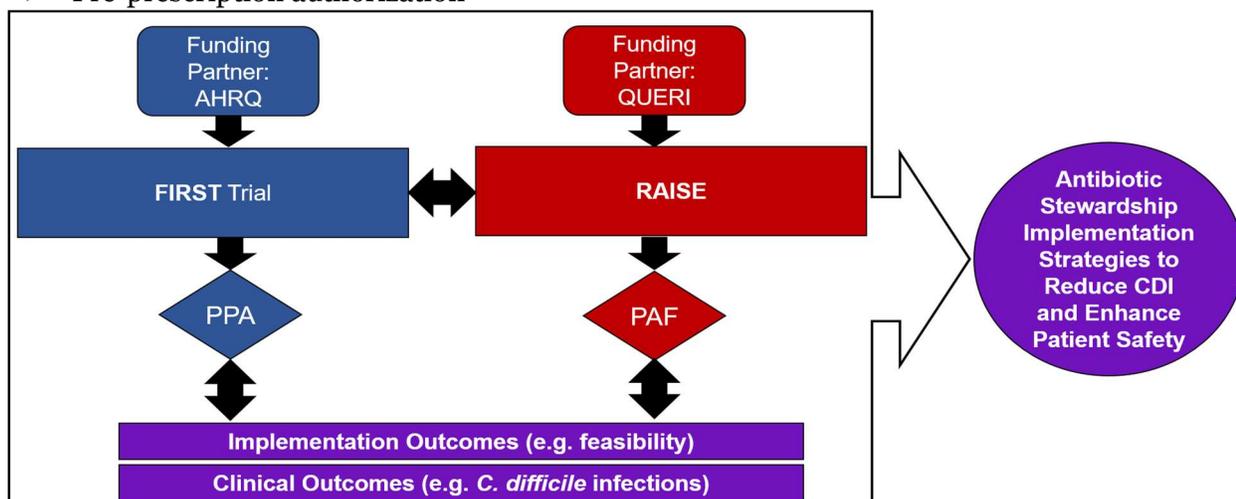
Antibiotic stewardship is critical to keep Veterans safe while receiving medical care at VA. Inappropriate antibiotic use is a major risk factor for healthcare-associated infections such as *C. difficile*, and it contributes to the development of other antibiotic-resistant organisms that threaten patient safety. RAISE aims to use implementation science methods to evaluate evidence-based interventions to improve antibiotic stewardship and reduce healthcare-associated infections.

Enhancing Patient Safety by Reducing Infections

C. difficile infection (CDI) is the most common healthcare-associated infection in the United States, and can cause significant illness among patients. Risk factors for CDI include being over 65 years old and prolonged use of antibiotics – factors frequently found in Veteran patients served by VA. Antibiotic stewardship practices, which reduce overuse and inappropriate use of antibiotics, are essential for reducing CDI in healthcare settings. However, these practices can be difficult to implement – they are complex and require changing established behaviors and procedures.

RAISE aims to help VA medical facilities improve their antibiotic stewardship practices to reduce CDI and increase patient safety. RAISE partners with an AHRQ-funded trial (FIRST) to evaluate two core antibiotic stewardship practices:

- Prospective audit with feedback (PAF)
- Pre-prescription authorization

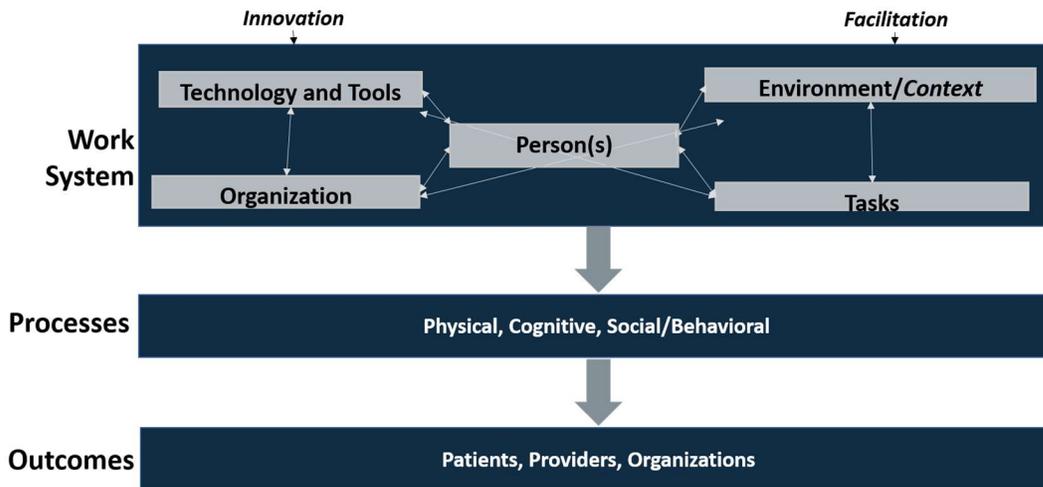


By collaboratively evaluating these two core practices, RAISE will produce implementation strategies to assist VA facilities in implementing these complex but critical practices.

Understanding the Healthcare Work System

Because antibiotic stewardship is so complex, RAISE uses a systems engineering approach to evaluate how these factors fit into all aspects of the healthcare work system. For example, the following aspects of the work system could be involved in deciding whether to prescribe an antibiotic:

- **People** – patients, prescribers, pharmacists
- **Technology and Tools** – electronic ordering system, medical record
- **Organization** – oversight of prescribing, communication between pharmacists and prescribers
- **Environment** – existing antibiotic use and CDI rates, education around antibiotic stewardship
- **Tasks** – gather medical history, order antibiotic, discuss antibiotic appropriateness, change prescription



By understanding the different parts of the work system involved in antibiotic stewardship, RAISE can evaluate what implementation processes should be developed, and measure the effects of these processes on outcomes such as antibiotic use and CDI rates.

Promoting Antibiotic Stewardship Across VA

Through this work, RAISE will:

- Develop individualized implementation plans for participating sites
- Measure clinical outcomes due to antibiotic stewardship practices, including effects on CDI rates, length of stay, readmission rates, and rates of other healthcare-associated infections
- Produce recommendations for implementation strategies to support antibiotic stewardship programs
- Disseminate recommendations and strategies via the VA Healthcare-Associated Infection Prevention Network (VHIN)