Overview

Healthcare-associated infections (HAI) are a major cause of morbidity and mortality among Veterans. According to the Centers for Disease Control & Prevention (CDC) there were 722,000 HAIs in U.S. acute care hospitals in 2011, resulting in 75,000 deaths. Moreover, an Institute of Medicine study estimated the cost of these infections at $4.5 to $5.7 billion per year at a per-patient cost ranging from $5,000 to $50,000 per episode. Prevention of HAI is included the VHA Blueprint for Excellence, as preventable HAIs greatly impact patient safety through increased readmissions and mortality.

For these reasons, the VA National Center for Patient Safety (NCPS) has committed funding to create the Patient Safety Center of Inquiry, Human–factors Engineering to prevent Resistant Organisms (HERO Center) located at the William S. Middleton Memorial Veterans Hospital in Madison, WI. The first project will implement and evaluate an evidence-based intervention—daily chlorhexidine bathing of hospitalized Veterans for prevention of HAI. In year two, investigators will use the VA Healthcare-Associated Infection Prevention Network (VHIN) to assess current practices and needs related to HAI prevention in collaboration with VHIN partners across the VA healthcare system.

This Building Implementation Science for VA Healthcare-Associated Infection Prevention Partnered Evaluation Initiative will advance the agenda of the NCPS by:

- Developing a research network to rapidly deploy and evaluate evidence-based interventions for HAI prevention across VA, in order to organize processes of delivering evidence-based healthcare;
- Facilitating future quality improvement studies to achieve the best possible outcomes within sustainable cost; and
- Allowing a broad-scale evaluation of practices, while examining variation in intervention effect mediators and moderators along with patient acceptance.

Specific aims of the VA Healthcare-Associated Infection Prevention Network (VHIN) include:

- Establishing the national VHIN infrastructure to connect individual VA facilities and mitigate barriers to implementation of HAI prevention activities;
- Assessing current practices and needs related to HAI prevention quality improvement (QI) in collaboration with VHIN members and partners;
- Activating patients and their families in infection prevention studies as active consumers and stakeholders, as a precursor to a national patient core group that will advance patient-centered infection-prevention issues;
- Evaluating the formation and use of VHIN using process evaluation measures; and
- Ensuring sustainability of VHIN, including patient engagement.

(over)
Implementation Strategy

The HERO Center and VHIN will synergize each other to advance an infection-prevention agenda within the national VA healthcare system. The HERO Center will:

- Undertake implementation science quality improvement projects using human-factors engineering to promote best practice for the prevention of multi-drug resistant organisms in the VA;
- Conduct an initial project to assess implementation of daily chlorhexidine bathing at four different VA healthcare facilities; and
- Leverage the VHIN infrastructure to expand the chlorhexidine bathing initiative and other QI projects aimed to prevent HAI across the VA.

VHIN will:

- Build a frontline, practice-based research and quality improvement network to conduct HAI prevention initiatives, with the goal to promote best practices within the VA healthcare system;
- Provide a platform to rapidly implement, evaluate, and disseminate evidence-based QI initiatives for HAI prevention, including results of HERO Center projects;
- Serve as a framework for VA researchers to connect and implement pragmatic implementation QI projects either within the HERO Center or through other collaborative VA mechanisms; and
- Conduct a needs assessment of current practices related to infection prevention throughout the VA healthcare system. Results of this assessment will provide an agenda for future QI projects through the HERO Center and for VHIN partners.

For More Information

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