STOP BSI

High health care costs, limited access, and poor quality of care are major concerns for the public, providers, payers, and policy makers. Unfortunately, we do not have many examples of how to solve these problems.

A major healthcare problem for which a successful improvement model ***exists***, is infections from central line catheters (CLA**BSI**) in intensive care units (ICUs). Yet, according to the Centers for Disease Control, (CDC), each year an estimated 250,000 of these infections occur in hospitals in the United States, and an estimated 30,000 to 62,000 patients who get the infections die as a result.

Researchers from the Johns Hopkins University Quality and Safety Research Group (JHU QSRG) in partnership with the Michigan Health & Hospital Association Keystone Center (MHA Keystone),and clinicians and administrators from over 70 Michigan based hospitals nearly eliminated CLABSI in over 103 intensive care units (ICUs) ; an improvement that has been sustained for nearly four years.

The goal of the "STOP BSI" initiative is achieve these same results across the country, by working with state level associations to implement the program.

The QSRG Improvement Model

The JHU QSRG model has two components: a *technical* component which provides concise evidence based recommendations on how to address a specific clinical challenge, and an ***adaptive*** component, which provides a framework for patient safety improvement at the local unit level. In our experience, both components are essential.

We implement the program by joining efforts with state based agencies, most often the state hospital association (SHA) and work directly with the SHA for the duration of the two year project. The trusted state association is the main contact with local ICU teams; Johns Hopkins safety leaders interact with the teams through conference calls and workshops sponsored by the state association.

What is the intervention?

The project requires that ICU teams do the following:

a. Implement the Comprehensive Unit-based Safety Program (CUSP) to improve teamwork between doctors and nurses and learn from mistakes. This program includes five steps and that are both qualitative and quantitative:

   The Johns Hopkins Comprehensive Unit Based Safety Program "CUSP"

   1. Educate staff on the science of safety
   2. Identify defects in care
   3. Assign an executive as part of the ICU CLABSI team

4. Learn from one defect per month
5. Work to improve teamwork and safety culture using tools we provide

b. Implement interventions to reduce CLABSI that include:

- Educate staff on five evidence based practices to reduce CLABSI:
  - Remove Unnecessary Lines
  - Wash Hands Prior to Procedure
  - Use Maximal Barrier Precautions
  - Clean Skin with Chlorhexidine
  - Avoid Femoral Lines
- Implement a checklist to ensure compliance with these practices,
- Empower nurses to ensure doctors comply with the checklist
- Collect unit level data each month using standardized definitions
- Provide feedback on infection rates to hospitals and at unit level
- Implement a monthly team checklist to assess overall progress of project

Project Leadership:

Peter Pronovost M.D. and Christine Goeschel R.N. developed and led the Michigan patient safety project and will provide overall strategic leadership for this effort. The work would not succeed, however, without the dedication, knowledge and skill of the extended team of QSRG faculty, which includes doctors, nurses, sociologists, psychologists, health policy and management specialists, health care economists, biostatisticians and other health care related disciplines.

What are the responsibilities of the JHU team?

- Appoint a JHU project coordinator to work directly with each state-level coordinating agency.
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- Provide technical support (content and tools needed to implement the program)
- Provide database to collect CLABSI data
- Provide reports regarding tends in CLABSI to participating teams
- Participate on team conference calls and serve as faculty at bi-annual conferences
- Assist with development of the agenda for conference calls and bi-annual conferences
- Share what we are learning from our related work

What are the responsibilities of the state level coordinating agency?

- Coordinate efforts to eliminate CLABSI. This includes working with the Hopkins team for technical support and working directly with participating hospitals.
- Provide a project manager to coordinate the project with support from Hopkins project manager
- Recruit hospitals to participate
- Host a bi-annual conference of participating ICU teams.
- Coordinate and host monthly communication (?conference calls) with teams
- Help to ensure teams provide accurate and timely data submission for this project.
    - Monthly CLABSI data using standard CDC definitions
    - Monthly team checkup data that generally take less than 5 minutes to complete.

(We also recommend annual safety culture assessment using a validated survey instrument)

What are the responsibilities of participating hospitals?

- Create and support a project team that includes at a minimum:
    - MD leader (typically 20% effort)
    - Nurse leader (typically 20% effort)
    - Data collector (typically 10% effort)
    - Executive to participate with the project team (monthly meetings)
- Submit required infection data that is complete and on time (monthly and at baseline)
- Submit a monthly team checklist to provide insight on local project management
- Participate in project conference calls
- Participate in face to face meetings
- Implement improvement tools that are part of project
- Share team experiences within their hospital and with other participating project teams

For more information email:

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