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Medical Student and Resident Foley Catheterization training program to decrease Post-Operative Catheter Associated Urinary Tract Infections

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Background

Catheter Associated Urinary Tract Infections (CAUTIs) are a leading cause of nosocomial infections, representing greater than 30% of hospital acquired infections. CAUTI rates are estimated at > 560,000 incidences per year, and are associated with significant increases in patient morbidity and mortality, increased length of hospital stay by 2-4 days, and a nationwide economic burden estimated at $400-500 million per year. At Thomas Jefferson University Hospitals, CAUTI rates have increased progressively from 2010-2014, from a rate of 0.99% in 2010 to 2.1% in 2014. In 2014, TJUH fell in the 10th decile in the National Surgery Quality Improvement Process (NSQIP) database for CAUTIs.

Intervention

Curriculum Design

Objective

Determine whether a more comprehensive medical student urinary catheter training curriculum can be successful in decreasing post-operative CAUTI rates in general and vascular surgery patient populations.

Primary target:

- Reduce post-operative UTI rates by 0.5% over 6 months

Secondary targets:

- Achieve 100% medical student confidence in Foley catheter placement, understanding indications and contraindications to urinary catheterization
- Improve objective performance of urinary catheterization skills as determined by objective clinical skills exam (OSCE) scores

Barriers

- Determination of influence of Foley catheterization training program in presence of other protocols/interventions targeted to decrease CAUTIs
- Reliable evaluation of use and utility of Foley ‘time-out’
- Standardization of instruction from residents to students during orientation and throughout clerkship

Curriculum evolution

- Program optimization through data analysis, medical student and resident feedback
- Standardization of Foley catheterization training program in accordance with TJUH urinary catheterization protocol
- Integration of Foley catheterization training program into TJUH urinary catheterization protocol
- Addition of just-in-time simulation as an objective measure of skills competency prior to patient catheterization
- Development of mobile app to replace reference card
- Maintain program durability and expand model to other clinical skills

Discussion

The Foley catheterization training program integrates educational curriculum development into quality improvement initiatives. This provides a method for improving patient care through creation of a sound fund of knowledge and understanding of the importance of quality initiatives early in medical education from which to build.

References