

## **OPSI Best Practice Award 2010**

### **Finalist: Marietta Memorial Hospital**

#### **Description: *Catheter-Associated Urinary Tract Infection Reduction***

Historically Catheter-Associated Urinary Tract Infections (CA-UTI) are the most common type of hospital-acquired infection (HAI), estimated to comprise 40 percent of all HAI's. They are also the second most common cause of blood stream infections and are the largest reservoir of multi-drug resistant organisms. After performing a root cause analysis to determine improvement opportunities, an interdisciplinary team comprising physician, nurse management, direct care nursing staff, infection control practitioner and nursing support staff sought to significantly decrease the incidence of CA-UTI's. This 12-month project began in April 2009.

#### **Implementation:**

After reviewing opportunities to significantly reduce CA-UTI's, the team developed a strategic plan to meet the needs of the organization and involve an interdisciplinary process. Catheter criteria was developed with the medical staff to assure that urinary catheters were only inserted when necessary and left in place until that concern was no longer present. The criterion was placed on the medical record to serve as a reminder to health care workers to discontinue as soon as possible. The criterion was also added to the nursing staff documentation intervention. Catheter days were monitored with the goal of decreasing the dwell time and therefore decreasing the possibility of infection. A significant decrease in catheter days was observed on the unit.

Hand hygiene education was provided to assure washing is done immediately before and after any manipulation of catheter site or apparatus. Catheter insertion using aseptic technique and sterile equipment competency was developed for all nursing staff on each unit to participate to assure consistency. Education competency was added to the Nurse Education Orientation conducted prior to care assignments. Specimen collection technique competency was reviewed to assure proper technique for cleaning sampling port and obtaining a urine specimen. Maintenance of catheter education was provided to direct nursing staff to assure that meatal care was provided twice daily and after bowel movements with soap and water to reduce CA-UTI.

Education was provided to ancillary and non-nursing staff (therapy and radiology staff) maintaining an unobstructed flow by keeping the catheter and collection tubing from kinking and keeping the bag below the level of the bladder. An education handout was created to provide the patient and family with information regarding prevention of CA-UTIs.

#### **Results/Sustainability:**

The unit became a pilot program to demonstrate reduction in UTI occurrences in a 6-month time period. The UTI rate decreased from 17.4 in April 2009 to 4.55 in September 2009 with the implementation of prevention measures. In April 2009, the UTI rate was 17.39 with occurrence of four CA-UTI's. The total number of catheter days was 121 with a 13.4 average length of catheter days. Data from September 2009 revealed a UTI rate of 4.5 and occurrence of one CA-UTI. Catheter days in September 2009 were 31 with a 3.87 average length of catheter days. The Urinary Tract Infection Prevention Model demonstrated significant reduction in occurrence of CA-UTI's and has been implemented across the organization.