



## Reduction of Urinary Tract Infection in Long Term Care

Tony Long, RN, MS, Nelda Booker, RN, MSN, MHA



### Background

Infections are a leading cause of illness and death in nursing homes. These infections include catheter-associated urinary tract infections (CAUTIs). This type of infection can lead to an increase in mortality, morbidity, length of stays and cost of care (Hanchett, 2012).

- In 2014, Sentara Nursing Center-Norfolk urinary tract infection rate climbed to 5.93%.
- Sentara set an ambitious goal to decrease the rate of urinary tract infections to 2.25%. The national rate of 5.63% and Virginia average 7%.

### Purpose

- This quality assurance performance improvement initiative (QAPI) was conducted to reduce the number of catheter-associated urinary tract infection (CAUTI) and urinary tract infections at a long-term care facility.
- The purpose was to provide education for nursing staff on proper hand hygiene and the use of the CAUTI bundle.

### Interventions

#### Staff Education

- All nursing staff; RN's, LPN's and CNA's were educated on proper hand hygiene with the All Hands on Deck initiative.
- All nursing staff completed a competency training on the CAUTI bundle which incorporated a checklist for sterile urinary catheter insertion and care of the catheter and drainage bag.
- Unit Managers were educated on the indication of use and medical necessity for a urinary catheter.

#### All Hands on Deck



The All Hands on Deck was an educational initiative which stressed the importance of proper hand hygiene. Four main areas were addressed:

- Peer checking,
- Involvement of all staff and residents
- Communication tools
- Accountability

### CAUTI Bundle



The CAUTI bundle consisted of three broad areas.

#### Verification of Need for Catheter

Does the resident have:

- Urinary retention/obstruction
- Perioperative or procedural use (short term)
- Healing of Stage III or IV perineal or sacral wounds
- Continuous bladder irrigation
- Abdominal pressure monitoring, or bladder trauma
- End of Life comfort measures
- Other – as ordered and documented daily by MD

#### Insertion of catheter using aseptic technique

- Use of proper hand hygiene
- Use of catheter insertion kit with sterile gloves

#### Recommended guidelines

- Review urinary catheter necessity daily
- Perform hand hygiene before and after each patient contact
- Secure catheter to prevent irritation of the urethra
- Maintain an unobstructed flow maintaining the drainage bag below the level of the bladder and off of the floor
- Provide individual labeled collection container at the bedside

### Quality Indicators

- The Nursing Home Quality Indicators are from the minimum data set (MDS) which are required reporting on a monthly basis and then averaged for for a yearly rate.
- Below are the rates for Norfolk calendar year 2012, 2013, 2014, and January – July 2015.
- For 2015, Norfolk at 2.61% is nearing the Sentara goal of 2.25%, but well below the Virginia average.

#### Nursing Home Quality Comparison - Norfolk

Nursing Home Quality Indicators	CY % 2012	CY % 2013	CY % 2014	CY % 2015 Jan – July 2015	Goal %	Thres hold %	National Avg %	VA State Avg %
UTIs	1.57	1.76	5.93	2.61	2.25	2.48	5.63	7

### Conclusion

- The QAPI initiative educated all staff on hand hygiene and introduced the CAUTI bundle. These initiatives have markedly reduced the number of UTIs at the Norfolk nursing center.
- To sustain the gains from the se initiatives the Director of Nursing will address medical necessity of all catheters in monthly Standards of Care meetings.
- The Director of Nursing and Clinical Managers will make daily rounds to ensure maintenance guidelines are being followed.
- Residents and family members will be educated on proper maintenance guidelines especially hand hygiene.

### References

Hanchett, M. (2012). Preventing CAUTI: A Patient-Centered Approach. *Prevention Strategist*, 42-50

Contact Information: Tony Long, cxlong@sentara.com