

## INTRODUCTION

- Urinary tract infection (UTI) is one of the most common diagnosis for readmission to the hospital (Goldberg, 2017).
- Older adults are at increased risk for UTI and hospital readmission.
- Readmission is costly and debilitating (Goldberg,2017) .

## BACKGROUND

- Older adults are prone to infections.
- Diagnosis of a UTI can be complicated.
- Early recognition of symptomatic UTI in older adults is problematic.
- Older adults often do not present with symptoms of a UTI such as fever, urinary burning or frequency.
- Early identification of UTI and timely initiation of appropriate treatment is important.
- Staff education on prevention and early indication of UTI can reduce incidence of an infection (Rantz, Et al 2014).

## PURPOSE

The purpose of this project was to measure the effectiveness of an educational program on the knowledge of nurses related to urinary tract infection

## METHOD

### Project Design

- Replication project, pretest-posttest design (Freeman-Jobson, Rogers, Ward-Smith, 2016).
- A modified version of the questionnaire adopted from Freeman-Jobson et al (2016) measured participants pre-post intervention knowledge of urinary tract infection.
- The education program was 50 minutes in length.

### Project Sample

- 21 nurses (18 RN's, 3 LPN's) across the 2 facilities who were employed on short-term care units participated in the educational program

## CHARACTERISTICS OF THE SAMPLE

Gender	n	%
Male	4	19
Female	17	81

Age Category	n	%
18-26	3	14.3
27-35	2	9.5
36-50	6	28.6

Job	n	%
RN	18	85.7
LPN	3	14.3

Years of Experience	Cumulative %
< 5 years	57.1
> 5 years	42.9

## INSTRUMENT

1. Identify the reason which does NOT place the older individual at risk for a UTI
  - a. Old age
  - b. Decreased mobility
  - c. High fat diet
  - d. Poor hygiene
2. Which is the best way to prevent UTIs
  - a. Increase fluids
  - b. Take preventive medication
  - c. Avoid caffeine
  - d. Use an adult diaper at night
3. UTIs are diagnosed by
  - a. Urinary odor
  - b. Deep yellow colored urine
  - c. A laboratory test
  - d. Changes in vital signs
4. When present, treatment for a UTI will include
  - a. Daily baths
  - b. Bedrest
  - c. An antibiotic
  - d. Placement of a urinary catheter
5. Which health condition does NOT place a person at risk for a UTI
  - a. Dementia
  - b. Diabetes
  - c. Blindness
  - d. Previous stroke
6. Assessment for UTI is the responsibility of
  - a. The MD only
  - b. The MD or the RN
  - c. The MD, RN, or PCT
  - d. Any family member
7. Urinary incontinence is the initial sign of a UTI
  - a. Yes
  - b. No
8. When are UTIs most likely to occur
  - a. Winter, during flu season
  - b. Summer, when the increased temperature increases dehydration
  - c. UTIs are not linked to any season
  - d. During the initial 30 days after admission
9. Routine toileting will prevent UTIs
  - a. Yes
  - b. No
10. Which of the following is NOT a symptom of a UTI
  - a. Confusion
  - b. Pain or tenderness in the lower abdomen
  - c. Fever
  - d. Decreased appetite
11. Asymptomatic bacteriuria is a result of
  - a. Increased age
  - b. Decreased mobility
  - c. Decreased bladder emptying
  - d. All of the above

## RESULTS

- Data were evaluated using paired sample t-test.
- pre-presentation evaluation (M=9.0, SD=1.06), post presentation evaluation (M=9.47, SD=.87), t=-1.817, p=0.088
- Individual item paired sample t-tests were performed to find content that was most improved after the educational program.
- Results from this analysis showed a significant improvement in knowledge related to how UTIs are prevented (p.003).
- Implementation of this program demonstrated 5% reduction in documented UTI and antibiotic use associated with UTI.

## DISCUSSION

- Early identification of UTI is important given its prevalence.
- Lack of educational programs geared towards improving UTI management skills of health care providers.
- This replication project supports future UTI training programs in skilled nursing facilities
- For effective results in future studies, education must be tailored to participant educational and experience levels.
- Support from nursing facilities leadership can improve attendance and embrace wider audience such as CNAs, PT, OT, speech therapists.

## LIMITATIONS

- Participants were not distinguished based on the level of education or experience in their role.
- CNA's were excluded from the study.
- The study was conducted in two nursing facilities with small sample size and may not generalize to other nursing facilities.
- Limited body of literature exists on the subject of continuing education on the prevention and management of UTI in post-acute care facilities.

## IMPLICATIONS FOR NURSING PRACTICE

- Consequences from untreated UTI can be life threatening, early identification is critical.
- Nursing education can promote quality of care and reduce hospital readmission.
- Expand education to all staff involved in the care of older adults at risk.
- Information from this program can be used to better understand a knowledge gap in prevention and management of UTI in nursing facilities.
- Findings from this program support the idea that knowledge obtained had a positive impact related to the awareness of how UTIs are prevented.
- This program enhances an opportunity for future training programs in nursing facilities.

## REFERENCES

- Benton, T.J., Nixon-Lewis , B. (2008) The Aging urinary tract and asymptomatic bacteriuria. *Clinical Geriatrics*, 15(2), 1-5
- Freeman-Jobson, J.H., Rogers, J.L., Ward-Smith, P. (2016). Effect of an education presentation on the knowledge and awareness of urinary tract infection among non-licensed and licensed health care workers in long-term care facilities. *Urologic Nursing*. 36(2), 67-71.
- Rantz, M.J., Alexander, G., Galambos, C., Vogelsmeier, A., Popejoy, L., Flesner, M., Lueckenotte, A., Crecelius, C., Zwygart-Stauffacher, M., Koopman, R.J. (2014). Initiative to test a multidisciplinary model with advanced practice nurses to reduce avoidable hospitalizations among nursing facility residents. *Journal of Nursing Care Quality*, 29(1), 1-8