Use of a Continence Nurse Specialist in an Extended Care Facility

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Incontinence is a problem seen in over 50% of residents in long-term care facilities (Ouslander, Kane, & Abrass, 1982). It has been well documented that incontinence is a major contributing factor to falls, recurrent urinary tract infections, depression, and skin breakdown. The Federal Government mandates that all skilled nursing facilities evaluate and develop an individualized plan of care for every incontinent patient. The Centers for Medicare and Medicaid Services (CMS) has singled out urinary incontinence (UI) in its regulations, mandating that long-term care facilities appropriately assess and treat this disorder. The CMS requires a multi-faceted and comprehensive assessment as the basis in developing a plan of care that will help the resident attain and maintain the best possible physical, mental, and psychological functioning.

Studies suggest that individuals are reluctant to seek treatment because they believe incontinence is a natural part of aging and they believe there is no successful treatment (Midthun, 2002). Incontinence results in social embarrassment and with-

Avon Health Center (AHC) is much in the norm of long-term care facilities; 66 out of 120 residents are incontinent of urine. In 1999, AHC attempted to address urinary incontinence without success. In Fall of 2002, AHC contracted with an advanced practice registered nurse continence specialist, who provided AHC with the expertise combining urology and gynecology with 20 years of experience. Over a 1-year period, the continence specialist assessed 42 female residents at the facility. Residents identified were those who triggered on the State of Connecticut Facilitator report. The continence specialist assessed, evaluated, and tested each patient. An individualized treatment plan was instituted and re-evaluated quarterly. The outcome to this program shows a decrease in falls, pressure sores, and urinary tract infections.

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Purpose
The aim of this study was to determine if the number of incontinence episodes for an elderly female population could be decreased through an individualized continence program in a Connecticut long-term care center.

Methods
Forty-two female residents who in a long-term care facility who were incontinent or had urgency related to overactive bladder were included in the continence program. Total numbers of incontinent episodes for each participant were recorded 1 week prior to the study. An individualized plan of care for each patient was developed by the continence specialist and the plan of care implemented for at least 1 year.

Findings
After the continence specialist recommended a program of treatment and the program of treatment was implemented for 1 year, the number of UTIs (31 preintervention year; 6 postintervention year) and pressure ulcers (15 preintervention year; 2 postintervention year) were substantially decreased and the number of falls cut by more than 50% (18 preintervention; 7 postintervention).

Conclusion
A nurse continence specialist can be used to help long-term care facilities plan a program that will direct individualized nursing interventions that will improve patient outcomes related to UTI, pressure sore and fall rates, and reduce the costs of care.
drawal from participation in daily functions, which leads to loss of self-esteem, depression, and anxiety. It is not surprising that the National Institute of Aging judges incontinence to be the second leading precipitating cause of institutionalization of the aged. Irrespective of age and disability, a basic assessment of incontinence should be carried out to identify potential reversible causes. The outcome of such an assessment may not be a cure for incontinence, but will usually result in a better quality of life (Specht, Lyons, & Maas, 2002).

Costs of caring for incontinent patients in nursing homes are estimated to be as high as $5.2 billion a year (Frenchman, 2001). This includes time spent by staff in caring for incontinent patients, materials (adult diapers and gloves), and laundry costs. The costs in one study totaled $17.21 per resident per day, or $6,281.65 per year (Frenchman, 2001).

Avon Health Center (AHC), located in Avon, Connecticut, demonstrates an average for long-term care facilities; 66 female residents out of 120 total beds are incontinent of urine. In 1999, AHC attempted to address UI without success. At the time of the resident quarterly assessment, the unit manager, a registered nurse, recorded a 3-day bladder diary. This diary was kept to see if the residents were wet or dry on an hourly basis. This attempt failed drastically, in that not only was AHC unsuccessful with gathering the 3-day bladder diary, but a scheduled toileting plan was impossible to achieve due to a seeming lack of pattern to the residents’ voiding.

AHC’s second attempt came in the summer of 2002. AHC assessed incontinent residents for recurrent urinary tract infections, fecal impaction, and medical causes such as depression, diabetes, and vaginitis. AHC also completed a comprehensive review of each resident’s medications, looking for medication that could contribute to incontinence, such as diuretics, and medications that cause sedation or are classified as hypnotics. This process had potential to succeed, except after identifying potential causes they lacked the ability to make needed changes, based on lack of knowledge of the entire process contributing to UI.

In early Fall 2002, AHC contracted with an advanced practice registered nurse and continence specialist, who provided AHC with the expertise in combining urology and gynecology along with 20 years of experience as an OB-GYN nurse practitioner.

In her role as continence specialist, the nurse assessed 42 residents over a 1-year period in the Avon Health Center; the first patients to be examined were residents who triggered on the State of Connecticut Facilitator (SCF) report. The SCF report is a summary of the quality of care that is provided at each skilled nursing facility. When a resident triggers on this report, it shows that there is an area of improvement that must be addressed. One quality indicator is incontinence. Also evaluated in conjunction with incontinence were incidents of falls, recurrent urinary tract infections, and pressure sores. The continence specialist assessed, evaluated, and tested each patient individually. An individualized treatment plan was instituted and re-evaluated quarterly, and medical staff were kept abreast of the plan and updated quarterly. Testing included a urine analysis from a straight catheter sample, a bedside simple cystometrogram, an internal vaginal examination, and a bladder scan to check for post-void residual.

Extensive inservicing of staff (registered nurses [RN], licensed practical nurses, and certified nursing assistants [CNA]) was initiated, and quarterly updates were given. The inservices gave a complete overview of the incontinence program and a comprehensive review of the urinary system and how and why incontinence can occur. Families were offered lectures on the topic of incontinence in frail seniors.

The continence specialist began by obtaining permission from the patient’s primary care provider as well as consents from the patient or responsible party. A complete history and physical examination ensued that included a urinalysis to rule out infection or hematuria, a pelvic exam to assess the condition of the vaginal tissue, checking for prolapse of internal organs, and ruling out fissures or masses. A cystometrogram was preformed to assess bladder capacity and stability of the detrusor muscle function. Finally evaluation of the pelvic floor via a pelvic examination was performed to determine if exercises could be taught to strengthen internal structures.

Treatment plans included prescribing anticholinergics that lead to increased bladder capacity and decreased urgency. Topical estrogen (Estring®) was inserted vaginally to help rejuvenate tissue and shift pH to an acidic state. Acid in the vagina prevents the growth of unwanted organisms; the pH of the vaginal canal should be between 3.5 to 4.5 (Maloney, 2002). As women age, vaginal pH levels elevate, contributing to the need for intervention (Maloney, 2002). Patients who were deemed capable of identifying their pelvic muscles, many of who had dementia, also received biofeedback, which was taught and reinforced daily by RNs during the passage of medications and CNAs on their daily patient assignments to strengthen pelvic floor muscles. Dietary changes included eliminating caffeine, a known bladder irritant, and increasing daily fluid and fiber intakes. Prompted toileting based on individual bladder diaries helped decrease episodes of incontinence.

**Literature Review**

A study by Specht et al. (2002) establishes the relationship between dementia and incontinence in long-term care facilities. They provide information on how to assess commonalities among many patients and how they rate
in the following areas: fluid intake, mobility, activity, mental status, and physical health. They also describe how incontinence aids and scheduled toileting were commonly used with success. Despite dementia, patients responded favorably and continence increased.

Frenchman’s study (2001) supports Specht et al. (2002) in that urinary incontinence is a substantial concern to long-term care facilities. Frenchman delves into a breakdown of the specific costs (materials and labor) to large facilities in their responding to UI. Frenchman (2001) lists dementia as a common issue facing many patients with incontinence. Cerebrovascular accident or stroke is also cited as a leading issue going hand in hand with incontinence.

Purpose of the Study
Urinary incontinence in the elderly decreases self-esteem and physical activity because of the embarrassment of incontinence. Urinary incontinence is also a common cause of falls resulting in hospitalization and long-term care placement. A UI program was designed to help keep the elderly population drier and less prone to falls, urinary tract infections, and pressure sores. The purpose of this program was to decrease the number of incontinent episodes in the elderly female population at Avon Health Center in Avon, Connecticut.

Patient Study Data
Patient confidentiality was maintained in compliance with Health Insurance Portability and Accountability Act. The director of nursing services selected the residents who triggered on the facility facilitator report who were at low risk. Residents who had fallen or who had several urinary tract infections (UTIs) were asked if they would like to be seen by the urinary incontinence specialist. If the resident was not able to speak for themselves, the conservator, Power of Attorney, and/or responsible party was asked and consent was given. The attending physician also provided an order to be seen by the specialist.

Sample
This urinary incontinence program was instituted in 2002 and has had over 70 residents evaluated and treated. Currently, there are 33 residents enrolled in the program and 27 of them are included in this research study. All residents reside at Avon Health Center and all have been incontinent of urine and/or have urgency related to an overactive bladder. The residents selected for this study were either chosen by trigger on Avon’s facilitator report, had increased falls related to incontinence, or had numerous UTIs. Each resident in the study had a physician order and signed consent. Exclusionary criteria included male patients, patients whose families refused consent, and terminal patients.

Data Collection
One week prior to the start of the program, the total number of incontinent episodes for each participant was recorded; some women had been residents at the facility for more than 2 years. There were 930 total episodes in the 27 participants group, resulting in an average of 34 per resident. The study began in 2002 and the post-current episodes of incontinence were recorded in the quarter beginning April 2004 and ending June 30, 2004. Some residents were in the program for 2 years, while others had been in the program for 3 months. The post-incontinent episodes at the end of this quarter were 1,032; these are 102 episodes of increased incontinence. Initially, the average was 80, and it is now 82. As a resident ages, so does his or her body. There is no way to predict the future; however, the only common element that had changed with these residents was the aging process. Dementia was the primary diagnosis and with dementia it is not uncommon to forget how to use the bathroom, feed yourself, and even ambulate. Therefore, the aging process is the only explanation for a 10% increase.

At the time of the initial evaluation of each resident, a cystometrogram (CMG) was performed which confirmed overactive bladder. The CMG was repeated after the resident had begun medication treatment for the overactive bladder diagnosis and had been on the medication for at least 3 months. The residents held a total of 6,080 cc of urine in their bladders. At the end of this quarter the residents increased their bladder capacity by 985 cc collectively. This represents a 16% increase in bladder capacity. Therefore this leads us to believe that the residents, despite being more incontinent when age is considered, are probably dryer than they would have been if they were not in the urinary incontinence program. The initial testing, followup testing, and assessment was done by the same clinician.

Results
The outcomes to this program were tabulated from the information documented in the medical record. Numbers of UTIs and pressure sores were determined for each resident up to 1 year prior to intervention by the urinary incontinence specialist. For residents who had not been in the facility for an entire year, the total was tabulated for their entire stay at the facility. The post-intervention period for the most recent quarter was from April 1, 2004 through June 30, 2004.

UTI incidence decreased substantially since the start of this program. One year prior to the start of this urinary incontinence program, among the 27 residents, 31 UTIs were documented from a urine culture and sensitivity test. Post-intervention, there have been only 6 UTIs from the same group of residents. It is believed that the Estrings resulted in an increase in the elasticity of the vaginal tissue, preventing bacteria from entering the urethra.
Keeping patients informed of their progress is key to the success of the treatment.

There was a measurable strengthening of the pelvic floor muscles noticed in the residents who received biofeedback from residents who didn’t receive biofeedback based on electrical myogram evaluation. Patients treated with biofeedback were also better able to notice the signal to void.

Falls decreased by more than 50%. At the beginning of the program falls were totaled for 1 year prior to the start of the intervention program; there were 18 falls among the 27 residents. After the start of the urinary incontinence program, these same 27 residents had fallen only 7 times.

Like falls and UTIs, pressure sores also declined significantly. One year prior to the intervention there was a total of 15 pressure sores documented; it is important to note that these pressure sores were located at any pressure point on the body and that some of these residents were admitted to the facility with these sores. Post-intervention, pressure sores reduced to only two.

The number of urinary incontinence episodes rose for the study’s participants; this is believed to be due to their age. Although urinary episodes rose, it is possible that the increase was less than would have been seen without the intervention program. Incontinence goes hand in hand with dementia, a diagnosis that becomes more common as patients become older, which may account for the increase in urinary incontinence episodes.

**Study Limitations**

Although the reliability of this study comes from the residents’ medical records and the accuracy of the documentation, there is a chance that the validity is skewed. However, the validity is equally skewed when comparing the pre results to the post results as the staff who documented in the records were constant. Although there are 33 residents currently in the incontinence program, the results are based only on the 27 residents whose data are complete. The small sample size also limits the generalizability of the study, particularly beyond our institution.

The fact that some of the residents benefitted from the program for as little as 3 months, while others were enrolled in the program for as long as 2 years, also limits the validity of the study. However, the results still indicate the continence program has been successful.

**Nursing Implications**

Nurses can be confident that there is viable treatment for urinary incontinence to recommend to their patients. Prompting patients and their caregivers to make the decision to welcome treatment could mean the difference in eliminating incontinence or not and might contribute to their quality of life. Patients do not have to live with incontinence or, at the very least, much can be done to improve their comfort and well-being.

Many women treated for incontinence will require persistence and patience. Nurses must be encouraging to the patients and track their progress daily. Demonstrating that a patient’s efforts have resulted in increased quality of life will have a motivating result to keep her open to treatment and on the regimen. Keeping patients informed of their progress is key to the success of the treatment.

**Conclusions**

The outcomes after 1-year period showed decreases in all parameters tested. It is important to know all 42 patients were female, average age was 80, and 55% held a diagnosis of dementia.

By delving into all aspects of an individual plan of care (medications, diagnoses, and activities of daily living) and with the guidance of a nurse continence specialist, a successful multi-dimensional urinary continence program was established. The UTI rates dropped from 5% to 1%, based on information provided by laboratory culture and sensitivity report obtained via urethral straight catheterization sampling (Midthun, 2004; 2002). Pressure sore rates dropped from 80% to 45% based on the State of Connecticut facilitator report and the average number of falls decreased by 30 per month. Overall the 42 residents are 100 more times drier per week.

Despite the fact that past endeavors into understanding and controlling urinary incontinence were less successful, Avon Health Center is on the road to becoming a drier long-term care facility.

**References**


**Additional Readings**
