Incontinent Nursing Education Reduces Use of Indwelling Urinary Catheters

Overview

Criteria 1 – Leadership/Planning/Human Resources

According to Nurses Improving Care for HealthSystem Elders (*NICHE) (2009 Geriatric Resource Nurse Core Curriculum: New York: Hartford Institute for Geriatric Nursing, New York University College of Nursing*, by the year 2030, older adults will be 20% of the population and nurses will be spending 70% of their time caring for senior patients. The frailty of this population lends them to be more susceptible to iatrogenic events, recurring admissions, and longer lengths of stay. Yet, many nurses have not had formal education in how to address the unique needs of our seniors. Nearly 40% of the inpatient population and 21% of the outpatient population at Alegent Health Immanuel Medical Center is over the age of 64, indicating an age group whose needs will demand our attention.

Chief Nurse Executive Dee Ernesti, RN, MSN, CENP, sought a program to better prepare nurses in caring for the older adult. Dee met with Rehabilitation Services Executive Jill Powers; Operations Leader Deb Welk - Director of Senior Services for Immanuel Health Systems, and a shared employee; Dorothy Ray, RN - Senior Health Nurse Liaison to determine how best to support seniors throughout the care continuum. This team was aware of the significance of the work being done by the nationally recognized *Nurses Improving Care for HealthSystem Elders* (NICHE) program, which seemed to have the broad base of science and knowledge to be applicability to the diverse needs of the Alegent Health Immanuel Medical Center campus.

The NICHE Program is a nurse-led initiative that focuses on prevention of geriatric

syndromes to improve outcomes of older hospitalized adults. Having secured endorsement of Alegent Health IMC executive leadership, the team moved forward. With HR assistance, the job description for Acute Care Senior Services Coordinator was developed using the 'navigator' model and Sharon Estabrook, RN, was hired to coordinate this initiative. Dee invested in Sharon's success by sponsoring her attendance to a Certified Gerontological Nurse preparation class and Sharon became ANCC Board Certified in Gerontological Nursing within 4 months of accepting her new position. A NICHE Leadership Team was formed that included Dorothy Ray, RN-BC with a specialty in long term care; Mary Lou Villafuerte, RN, MSN, APRN-ACNS, and Sharon.

Method and Approach

Criteria 2 – Patient and/or Community Focus

In order to evaluate the needs of nurses, a Geriatric Institutional Assessment Profile (GIAP) was conducted. The GIAP is an evidence-based tool developed and administered for NICHE by New York University. The Alegent Health Research Committee reviewed and approved the survey tool and proposed methodology. IRB approval was not deemed necessary. This survey contained 17 pages of questions regarding access to geriatric knowledge and expertise, attention to patient rights, and communication issues. A total of 182 acute care nurses completed the survey in April of 2008. Most nurses stated that they spent more than half of their time caring for patients over 64 years of age, but lacked access to geriatric knowledge. To address this knowledge deficit, several approaches were taken. The Geriatric Resource Nurse (GRN) Course was developed using the NICHE curriculum. This 3-day course awards

20 CEUs. To date four classes have graduated 140 nurses from acute and long term care settings throughout the Alegent Health system. In addition to the formal classes, mini in-services were held on nursing units and Sharon became available for consult.

In April of 2010, the survey was repeated and 207 nurses participated. The summary of the two NICHE GIAP surveys in regards to the care of the incontinent patient are as follows:

Alegent Health Immanuel Medical Center GIAP Results

Comparison Geriatric Institutional Assessment Profile 2008 and 2010

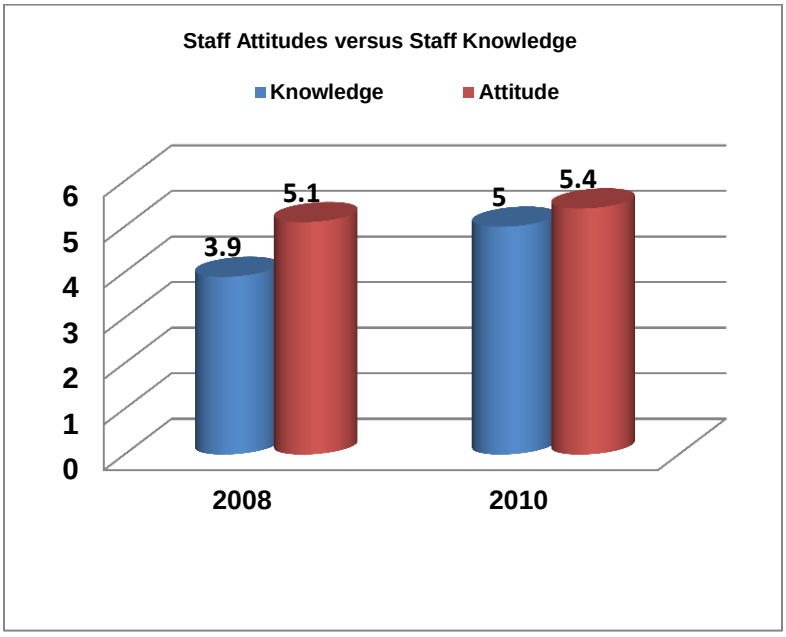
Alegent Health Immanuel Medical Center: 2008 (n=182) 4.8 2010 (n=207) 5.4
All other hospitals: 2008 (n=34359) 4.5 2010 (n=43605) 4.4

Geriatric Institutional Profile 2008 and 2010 Comparison Staff Attitudes Verses Staff Knowledge					
Measure	**Administered**	**N**	**Mean**	**Standard Deviation**	**Significant Change**
Attitudes about Incontinence Management	2008 2010	182 207	25.3 26.6	10.38 8.78	Improved
Conflict about Incontinent Management	2008 2010	182 207	1.5 1.4	1.63 1.60	Improved
Knowledge about Incontinent Care	2008 2010	182 207	3.9 5.0	2.48 2.37	Improved
Total Geriatric Care Knowledge Scores	2008 2010	182 207	4.8 5.4	2.15 1.80	Improved

Range values: 0-10, 1 is worst, 10 is best. Significant difference p<.05. Alegent Health Immanuel Medical Center scores are significantly higher than all hospitals surveyed in both surveys.

In 2008, staff attitudes regarding care of the incontinent patient were higher than their knowledge of incontinence. This indicated that staff confidence was unjustified and staff needed additional assistance in recognizing clinical care needs. After the educational interventions, the 2010 survey reflected an improvement in knowledge and now the staff knowledge verses attitude scores are proportionate.

The figure below graphically demonstrates this improvement.



Once nurse knowledge toward care of the elderly patient had been addressed and an ongoing plan for education developed, 'Incontinence' was chosen as the geriatric syndrome on which to focus. The endeavor now narrowed to specifically concentrate on improving nurse knowledge regarding incontinence and centered on the reduction of inappropriate use of indwelling urinary catheters as part of a comprehensive program to reduce catheter use and, consequently, to cut CAUTIs. Because catheter placement is a common solution to incontinence in the older acute care patient and 40% of all hospital acquired infections are associated with indwelling urinary catheters, this venture was awarded high importance. The goal now was to eliminate inappropriate use of the catheters, reducing iatrogenic events and the associated high hospital costs. The following factors were considered:

1. A Bard study in 2007 showed that 26% of patients at Alegent Health Immanuel Medical Center had a short term indwelling bladder catheter in place, yet only 62%

of these were considered appropriate utilizing the 2008 Center for Disease Control (CDC) Catheter Associated Urinary Tract Infections (CAUTI) Guidelines

2. Each day an indwelling bladder catheter is in place the risk of a catheter associated urinary tract infection increases by 5-10% according to the above guidelines. Urinary Tract infections account for 40% of infections in the acute care setting and all healthcare-associated UTIs are caused by catheters
3. CAUTI's increase morbidity, mortality, hospital cost, and length of stay (LOS)
4. Center for Medicare Services (CMS) no longer reimburses for CAUTI's

Using the FOCUS-PDSA Performance Improvement Model, a team was organized in April 2009, to address incontinence nursing issues. Interdisciplinary Team membership included the following:

Incontinence Team: Healthy Happy Bladders		
Name	**Department**	**Role**
Sheri Brunow RN-C, BSN	Cardiac Unit	Staff Nurse
Deb Cornell RN	Heritage Geriatric Psychiatric Unit	Staff Nurse
Sharon Estabrook RN-BC	Nursing Systems	Nurse Navigator
Susan Hays RN, BSN	Cardiac Unit	RN
Jennifer Reetz RN, BSN	Medical-Surgical	Staff Nurse
Mary Lou Villafuerte RN-C, MSN	Medical-Surgical	Clinician
Theresa Caliendo	Pharmacy	Team Consultant

Team Objectives were established:

1. Educate staff on types of incontinence
2. Create a protocol for incontinence
3. Identify appropriate uses of indwelling urinary catheters as listed by CDC
4. Decrease inappropriate use of indwelling urinary catheters using a 2007 BARD study as a control group.
5. Review alternatives to indwelling bladder catheters.

These objectives fit nicely into the Alegent Health mission statement to create a caring, compassionate environment, respecting the dignity of every person, caring for the resources entrusted to us, and facilitating interdisciplinary and comprehensive care; along with the strategic priorities of exceeding expectations as per the National Database of Nursing Quality Indicators (NDNQI) measurements.

To clarify current knowledge of the process, team members asked nurses and CNA's:

1. What interventions do you do for incontinence?
2. What changes in incontinence care would you like to see?
3. What types of incontinence to you assess for?
4. What are appropriate uses for indwelling bladder catheters?

The results of this questionnaire validated that the team objectives, followed by an in-service on incontinence care, would meet the needs of the nursing staff.

To assure evidenced based guidelines for incontinence education, the team referenced *Evidence-Based Geriatric Nursing Protocols for Best Practice* (3rd ed.), 2008, by E. Capezuti, M. Mezey and T. Fulmer. From this information, the team created an Incontinence Protocol to be used in education and practice (Attachment A) and also developed a physician order set to be used when a urinary catheter was placed.

The team then developed the educational program "Incontinence in the Elderly" to improve nursing staff's current knowledge regarding types of urinary incontinence (UI) and treatment, to educate nursing staff on the utilization of the new Urinary Incontinence Protocol, and to decrease the inappropriate use of urinary catheters. Leadership approval was received to utilize the Cardiac Care Unit as a test site to evaluate the teaching method before disseminating it throughout the hospital. To assure this

educational program met CDC guidelines, the team consulted with our resident Infection Prevention Specialist Joleen Strosahl, MSN, MHA, CIC.

An educational power point (Attachment B) was created that included research information on the incidences of urinary incontinence, and the physical, psychosocial, and economic consequences associated with incontinence. The program also provided instruction on the new Incontinence Protocol which describes the types of incontinence, disease processes associated with it, and appropriate treatment. In-services were scheduled to accommodate both day and night shifts. In support of this endeavor, the CCU Operations Director, Jodi Volkens, RN, BSN, CCRN set the expectation of 100% staff participation and provided resources for staff to attend. In addition, Sheri developed a tool to assess nurse's knowledge before and after the education to measure its effectiveness. This education was presented to staff Feb. 8 - 14, 2010.

In March, the team presented the outcomes of the education to the Alegent Health Immanuel Medical Center Clinical Practice Council to solicit their support in presenting this education house wide. The presentation was well received by the council, which voted to proceed with the venture house wide. The program was also presented to the Medical Staff Quality meeting to inform physicians of the education and ask for approval of the Urinary Catheter orders (Attachment C). Unfortunately, physicians declined the urinary catheter order set as not essential, while agreeing that it had merit.

Hospital educators, Anne McPhillips, RN, CCRN; Mary Lou Villafuerte, RN, BSN, CCNS; and Natalie Bellamy, RN, MSN, CPN replicated the in-service house wide.

Criteria 3 – Process Management/Organizational Performance Results

Results of the interventions were measured in 3 ways:

1. Nursing Knowledge

	Pretest	Post test
List three types of Urinary Incontinence:	37%	99%
List three appropriate uses of urinary catheters:	34%	88%

Overall nurse knowledge improvement score = 61%

The program evaluation overall satisfaction rating was 98%

2. In April 2010, 207 nurses repeated the GIAP. Nurses demonstrated significant improvement in geriatric specific knowledge. Results showed less conflict and more knowledge regarding incontinent care.
3. The C. R. Bard, Inc. survey on indwelling catheters conducted in 2007 was repeated on April 22, 2010.

Indwelling Catheter Prevalence Study		
	2007 N=160	2010 N=132
% of Indwelling Catheters	26%	14%
% Appropriate Placement	62%	95%

The outstanding results above demonstrate a 54% improvement in the percentage of indwelling catheters and an outstanding 153% improvement in appropriate use of indwelling catheters.

Because of new knowledge regarding physiological reasons for incontinence, therapeutic solutions, and CDC information regarding the harm of indwelling catheters, the use of indwelling bladder catheters greatly declined. Fewer catheters directly relates to the reduction of CAUTIs and this impacts quality of care and financial resources in a positive manner.

Nursing attitudes toward care of the incontinent patient also improved with increased knowledge as evidenced by the GIAP scores.

The development of the Urinary Protocol helped build interdisciplinary relationships. Nurses from Geriatric Psychiatry, Med/Surg, ICU, and Infection Prevention came together to examine root causes and best practices to better care for the incontinent patient. The positive results led to an "I can make a difference" attitude among staff. There was a renewed emphasis on hourly rounding using the scripting "Let me take you to the bathroom now." Process changes included an indwelling urinary catheter report which prints daily, alerting nurses to patients that have a bladder catheter, why, and how long it has been inserted.

Three challenges were encountered:

- First, the indwelling urinary catheter physician order set was not approved by physicians. This barrier was overcome with the utilization of the daily urinary catheter report mentioned above.
- Second, any new programming to nursing assessment screens were prohibited due to major revisions during this time to our electronic patient medical record being processed by the Medical Informatics Team. Because of this, daily catheter alerts could not be programmed into the patient charts.
- Third, also because of the programming freeze, the team was unable to link the Incontinence protocol to the assessment screens.

Results and Lessons Learned

- The reduction of ageism as nurses now examine why the older adult is incontinent rather than assume they are incontinent because they are old.

- Realization that catheters act as the 5th point restraint. Both the decrease of instances of indwelling bladder catheters and the increase of catheters being placed appropriately enabled patients to be more mobile and able to be toileted and this has contributed to the prevention of functional decline in the elderly patient.
- Education and intervention has helped empower hospital nurses who perform catheterizations to not only ensure ongoing catheter care is of the highest standard, but also to take responsibility to check that there is a clear clinical need for catheterization and once it's in, to think how quickly they can get it out. Nurses have been given support and permission to challenge the need for a patient to have a catheter inserted. The initiative has helped to prevent unnecessary catheterization and is prompting a daily review of patients with a catheter, thereby encouraging early removal.
- Improved quality of life for our patients results in the realization of higher patient satisfaction scores and staff engagement is at an all time high.

The Alegent Health system has embraced the sustainability and portability of this successful initiative and plans are to duplicate it at the four sister Alegent Health Metro Omaha Hospitals.

This process improvement initiative truly embodies the Alegent Health Vision to "Pioneer exceptional quality through compassionate, collaborative health services that measurably improves the lives of those we serve and those who serve"