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Clinical Nurse Leader Led NICHE Implementation: Impact of NICHE Preparation on Nursing Knowledge of Geriatric Patient Care

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Purpose

The purpose of this project is to improve nurses' knowledge and expertise about geriatric specialty needs in order to ultimately prevent complications and improve geriatric patient outcomes

Project Goal

Currently, the unit only has one Geriatric Resource Nurse (GRN). The goal of this study is to provide evidence-based geriatric education to staff nurses on 5 Tower. Outcomes to be measured will be nurse knowledge and GRN Certificate.

Significance & Background

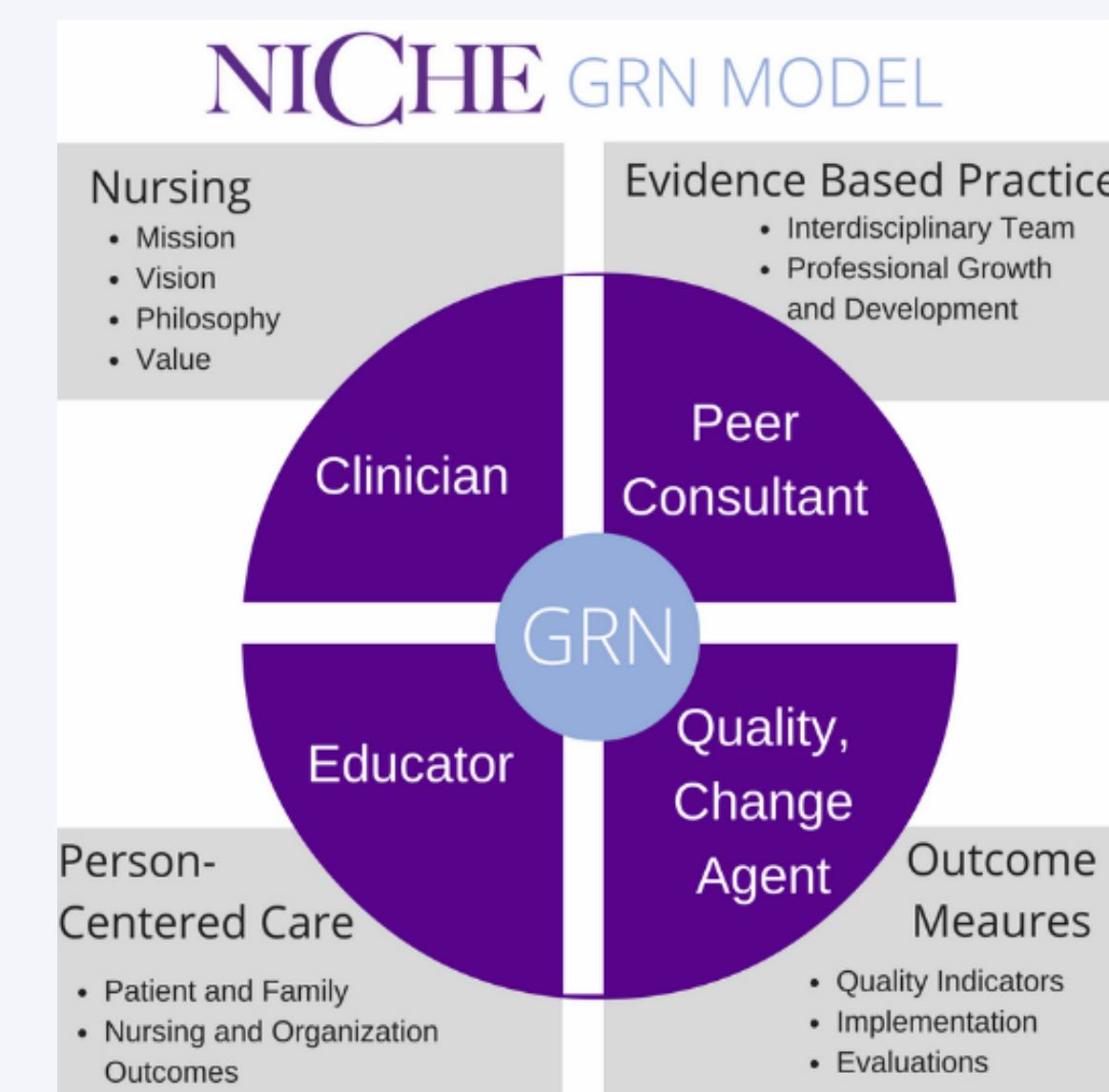
The number of older adults is exponentially high. Factors that influence this are longer life expectancy and aging baby boomers (CDC, 2013). Older hospitalized adults have higher acuity, experience more hospital complications, and have longer lengths of stay, resulting in an increase in health care costs and poor health outcomes (Capezuti, Bolt, Cline, Dickson, Rosenberg, Wagner, Shuluk, & Nigolian, 2012). Their health care utilization is three to five times more than younger patients, which accounted for \$444 billion or 23% of the health care spending in 2008 and 13% of the U.S federal budget (Wier, Pfuntner, & Steiner, 2010).

The aging of the US population has profound implications for nursing practice and health care costs. This means that, regardless of their specialty, healthcare providers must prepare now and in the future for an increased demand in care for older adults (Kagan, 2009).



Problem Identification

5 Tower, a cardiac medical-surgical unit, experienced a shift in its patient population in 2015 after the addition of the telemetry monitors to the unit. Since then, there has been an in-flux of a geriatric population with both medical and surgical comorbidities. 5 Tower served 734 older adults in 2015 ranking the fifth highest unit within the Central Division (CMC-Main and Mercy). Recognizing the special needs of geriatric patients, the Clinical Nurse Leader (CNL) implemented the NICHE GRN model by training staff nurses to better understand the normal signs of aging and contraindications related to caring for the geriatric population, to recognize and identify resources available within the community, and anticipate risks associated with care of the geriatric patient.



Design

Project Design

The pre-survey and post-survey consisted of 25 questions were administered to assess nurse's knowledge before and after completing the NICHE GRN modules. Descriptive statistic and t-test were used to analyze the survey results.

Sample Size

Convenience sample $N = 47$ RNs
Target goal $n = 15$ RNs to receive a GRN certificate.

Duration of this Project

- 12 weeks
- One week to collect pre-test data and one week to collect post-test data
- 10 weeks allotted for RNs to complete modules

Interventions

RN must complete NICHE GRN Modules

Module 1: Why Geriatric Nursing?

Module 2: Age-Related Changes in Health 3

- Module 3a: The Three D's: Depression
- Module 3b: Delirium
- Module 3c: Dementia 4

Module 4: Falls

Module 5: Caregiving

Module 6: Function

Module 7: Decision Making

Module 8: Medications

Module 9: Nutrition, Hydration, and Oral Health

Module 10: Pain

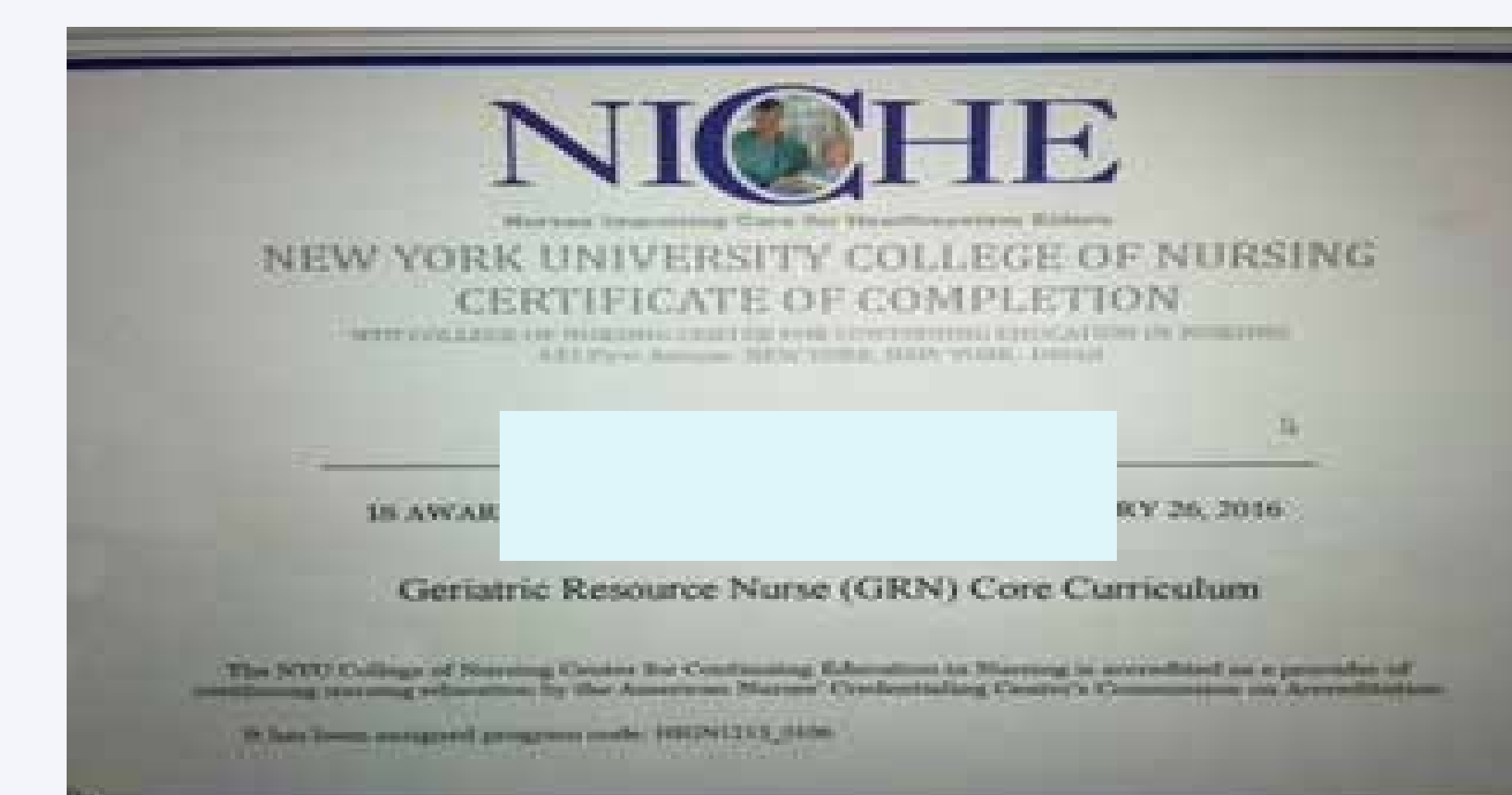
Module 11: Pressure Ulcers and Skin Tears

Module 12: Restraints

Module 13: Sleep

Module 14: Urinary Incontinence

At the end of each module, the participants must take a quiz consisting of 10 – 20 questions and answer 80% of the questions correctly to be awarded contact hours for that module. A total of 20 nursing contact hours will be awarded for completing all 14 of the modules and each participant will earn a title of NICHE GRN.



Evaluation

Total number of RNs $n = 20$ RNs

Number of RNs completed the GRN modules in 10 weeks ($n = 11$), 55%

11 RNs received GRN Certificates

Demographic

Education Preparation

Diploma = 5%
ADN = 50%
BSN = 45%
MSN = 0 %

Years of Experience

<1 year = 10.5%
1-5 years = 36.8%
5-10 years = 31.6%
> 10 years = 21.1%

Evaluation

Questions	Agree	Pre-test	Neutral	Disagree	Agree	Post test	Neutral	Disagree
1 Donut Shaped Cushions help equally distribute pressure in the sacral area	60%	10%	30%	54%	0	45%		
2 Braden Scale score of 18 or below indicates that a person is at risk for a pressure ulcer	65%	0%	35%	90.9%	0	9.1%		
3 Differences in Skin Color over bony prominences may indicators of a stage 1 pressure ulcer in patients with darkly pigmented skin	85%	10%	5%	100%	0%	0%		
4 Hand over hand assistance can be an effective approach to improve oral intake in the person with dementia	65%	25%	10%	90.9%	0%	9.1%		
5 A common sign of dysphagia is drooling during the meal	75%	15%	10%	100%	0%	0%		
6 The skin turgor on the forearm is an accurate indicator of hydration in older adults	35%	10%	55%	45.5%	0	54.5%		
7 The hyperactive type of delirium is associated with poorer prognosis than hypoactive type	25%	50%	25%	27.3%	27.3%	45.5%		
8 Key features of delirium are its acute and sudden change in mental status and fluctuating course	85%	10%	5%	90.9%	9.1%	0%		
9 Long-term use of anti-psychotic medication is indicated in most persons with dementia	20%	15%	65%	27.3%	0%	72.7%		
1 Refusal of care in the person with dementia may be a sign of pain or anxiety	85%	10%	5%	90.9%	9.1%	0%		
1 In general, older adults require less sleep as compared to younger person	20%	0%	80%	18.2%	0%	81.8%		
1 Benadryl is a safe alternation to hypnotics in older adults who complain of insomnia	45%	10%	45%	36.4%	0	63.6%		
1 Sedative-hypnotic use is associated with increased risk of falls and confusion in older adults	95%	5%	0%	100%	0%	0%		
1 Pain assessment in older adults should include self-report of pain and observation of nonverbal behaviors	100%	0%	0%	100%	0%	0%		
1 Tricyclic antidepressants (e.g. nortriptyline and desipramine) are generally recommended for neuropathic pain in older adults	25%	45%	30%	27.3%	18.2%	54.5%		
1 It is important to properly secure indwelling catheters after insertion to prevent movement and urethral traction	95%	5%	0%	100%	0%	0%		
1 It is best practice to clean the periurethral area with antiseptics to prevent CAUT while an indwelling urinary catheter is in place	60%	10%	30%	27.3%	18.2%	54.5%		
1 Physical restraints are a risk factor for development of delirium	100%	0%	0%	100%	0%	0%		
1 Physical restraints use can contribute to fall-related injury	80%	10%	10%	90.9%	9.1%	0%		
2 Physical restrains are effective in preventing patient self-extubation	75%	15%	10%	54.5%	9.1%	36.4%		
2 An Evidence-based intervention to prevent fall-related injuries is the use of an adjustable-height low bed	100%	0%	0%	90.9%	0	9.1%		
2 Patient who experience an unwitnessed fall should always be monitored for head injury	100%	0%	0%	100%	0%	0%		
2 Muscle groups can no longer grow and develop in older adults	25%	20%	55%	45.5%	18.2%	36.4%		
2 Sudden loss of physical function is a common sign of acute illness in older adults	90%	10%	0%	81.8%	9.1%	9.1%		
2 Although bedrest is associated with loss of muscles mass and vascular tone the older adult can quickly recover functional loss	15%	15%	70%	9.1%	0%	90.9%		

$T_{stat} (0.38) < t_{critical} (2.01), p_{value} (0.75)$

Discussion

The goal of this project was to increase the number of nurses receiving the NICHE GRN certificate on 5 Tower and evaluate their knowledge on geriatric sensitive care delivery. At the end of the project, a total of 11 nurses (55%) completed the NICHE modules and received the NICHE GRN certificate. The remaining nurses are still in the process of working on the modules. One of the barriers was that nurses were unable to complete the modules during their shift due to constant patient care interruption. Those who completed the modules on time did it at home.

Even though, the result was not statistically significant, nurses who completed the NICHE modules reported that they learned a lot especially the medication management and the different type of deliriums. One of the GRN nurses reported that she identified one the geriatric patients with a new onset of delirium and requested the doctor to order a urinary analysis that confirmed the patient had urinary tract infection (UTI).

What is the next step? 5 Tower is constantly on boarding new graduated nurses. Thus, it is important to continue promoting and recruiting nurses to undergo NICHE training. Additionally, it is important encourage the GRNs to continue advancing their knowledge by obtaining the gerontology ANCC board certification. Furthermore, engaging the GRNs in clinical advancement ladder RN II or RN III where they participate in doing projects will help improve geriatric patient outcomes.

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