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Feature Article

Nurse/family caregiver intervention for delirium increases delirium knowledge and improves attitudes toward partnership

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ABSTRACT

Delirium is highly prevalent, especially in hospitalized older adults and is a costly, significant predictor of poor outcomes, including mortality and institutionalization. Partnership between family caregivers and staff nurses could be a cost-neutral preventive strategy. The Nurse/Family Caregiver Partnership for Delirium Prevention (NFCPM) is an innovative educational program that concurrently teaches family caregivers and nurses about delirium and partnering in prevention. The purpose of this feasibility study was to examine the effect of the NFCPM on knowledge of delirium, attitudes toward partnership, and satisfaction with the NFCPM. A quasi-experimental pretest-posttest design was used to enroll 28 patients, 28 family caregivers, and 28 staff nurses. The intervention group significantly improved knowledge of delirium and attitudes toward partnership. Key to satisfaction were participation in decision making, communication, and respect. The NFCPM appears feasible for clinical practice and provides an innovative strategy for family and nurses to improve hospital outcomes for older adults.

Delirium is a common and serious problem for hospitalized older adults.[1] Diagnosis is based on clinical history, key features observation, and physical and cognitive assessment.[2,3] Delirium is associated with substantial morbidity and mortality.[4,5] Delirium is frequently preventable,[6] however it is often unrecognized or misdiagnosed.[7,8] Both family caregivers and nurses have been shown to lack understanding of delirium.[9] Due to increasing patient acuity and significant workloads, staff nurses often have limited time to spend at the bedside than is ideal, while family caregivers frequently have work obligations and other family responsibilities. Thus, it is critical to have partnerships to best meet the needs of the patient. An educational intervention on delirium incorporating the needs of both family caregivers and nurses to increase their knowledge of delirium and understanding of their collaborative role in prevention is needed.

Background

Nurses, spend more time at the bedside than physicians, thus playing a crucial role in the recognition and management of delirium.[10] Because nurses have frequent contact with patients, they can better observe fluctuations in attention, level of consciousness, and cognitive functioning. As a result, the observations made by nurses are critical for the early detection of delirium symptoms and for the continuous monitoring of these symptoms that is essential to follow the patient's clinical course. With training and supervision, delirium symptoms can be monitored effectively by nurses.[8,10] Similarly family members are often the primary caregiver for an older adult relative and thus offer valuable knowledge and skill in the subtle changes that often occur in hospitalized older adults.[9]

Previous research demonstrated that the Hospital Elder Life Program (HELP) which uses trained Elder Life Specialists to deliver targeted interventions for delirium prevents the incidence by 40%.[11] The Family-HELP Program which adapted HELP interventions for family implementation also showed promise for delirium prevention.[12,13] Existing models to enhance the quality of relationships between family caregivers and staff nurses have focused on family members through family-based interventions.[14,15] Yet, experts recommend promoting cooperation and communication through concurrent training and support of both family caregivers and staff.[16,17] Thus, educating both family caregivers and nurses on partnership strategies may be key to reducing delirium. The Calgary Family Intervention Model (CFIM)[18] guided this study and proposes that interventions should be related to the problems that the

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patient, family, and nurse have collaborated on. The findings of our current study support the theory's proposition that a collaborative effort between the family caregiver and nurse in a targeted intervention program may be an effective strategy to prevent delirium in the hospitalized older adult.

The purpose of this pilot study was to evaluate the feasibility of the Nurse/Family Caregiver Partnership for Delirium Prevention (NFCPM), a nurse-led intervention that educates both family caregivers and staff nurses on delirium and trains them in partnership strategies for implementing preventive interventions for hospitalized older adults. The specific aims of this pilot study were: 1) to determine the clinical feasibility of the NFCPM intervention as evidenced by our ability to recruit and follow patients, staff nurses, and family caregivers and establish level of family and staff nurse satisfaction and, 2) to assess the effects of the NFCPM intervention on family caregiver and staff nurses' knowledge of delirium and attitudes toward partnership. These findings will be used to establish baseline data for future randomized controlled trials (RCTs) of the intervention.

Methods

A quasi-experimental pretest-posttest design was used to assess the NFCPM outcome effects on family caregivers, staff nurses, and older adults hospitalized on two units at two acute care facilities. To avoid inter-unit staff contamination, the units were differentiated into one intervention unit and one control unit. Random assignment of subjects to the intervention or control units was not feasible because of admission policies. The setting was two acute care academic medical centers, part of a large hospital network in Boston, MA, each having over 700 acute care beds. According to hospital network data for 2012, more than 60% of medical-surgical hospital admissions were aged over 65 years. One acute step-down orthopedic/medical unit was used from each facility. Two sites were needed because each network facility has only one of each type of specialized unit; however, the specialized units are comparable between facilities. Patients on these units are similar in age (60 and older), diagnoses (medical), length of stay (8–10 days), discharge destination (home), and represent a range of ethnic groups. Institutional review board approval and informed consent were obtained.

Sample

Older adult patients were linked to a family caregiver and staff nurse thus considered a triad. The sample included 14 triads for the intervention and control groups made of the older adult patient, family caregiver, and staff nurse. To achieve a convenience sample of 84 subjects, we enrolled 42 intervention subjects (triad of 14 family caregivers of 14 older adults and their 14 primary nurses) and 42 control subjects (triad of 14 family caregivers of 14 older adults and their 14 primary nurses).

Potentially eligible older adult patients were age 65 or older, admitted to one of the study units, able to read, write, and communicate in English, and able to provide consent. The PI completed assessments for eligibility which included medical record review and assessment of older adult patients for delirium at baseline using the Confusion Assessment Method (CAM)[19] and dementia using the Modified Blessed dementia scale (MBDS).[20] The CAM has been validated against geriatric psychiatrists' ratings using DSM-III-R criteria and has sensitivity between 94% and 100% and specificity between 90% and 95%.[19,21] The MBDS has been validated using receiver operating characteristics analysis with the area under the curve and 95% confidence interval of 0.95 and 0.90–0.98 respectively and sensitivity of 84% and specificity of 82%.[22] Older adult patients were excluded if delirium or dementia was present at baseline as documented by a positive CAM test for delirium or by a positive score on the MBDS. Eligible older adults were then asked to identify the family caregiver with whom they have the closest relationship. The family caregiver was contacted and if consent was given, enrolled within 48 h. Enrolled family caregivers were a consenting spouse, blood relative, or significant other, able to read, write, and communicate in English, and able to visit daily for intervention participation. Eligible staff nurses were the primary nurse assigned to care for the older adult of the enrolled family caregiver. Primary nurses worked the day shift and followed the same patients from admission to discharge. The PI consented all enrolled subjects. In order for family caregivers to be screened, the patient had to consent first and for staff nurses to be screened, both the patient and family caregiver had to have consented to participate. For this process we maintained treatment fidelity by using a standard training protocol delivered in two 60 min sessions for study staff who screened subjects for eligibility for the NFCPM intervention with a 1 month refresher and weekly rounds by the unit nurse champion to support adherence.

Intervention

All enrolled staff nurses and family caregivers on the intervention unit received the NFCPM intervention, in addition to usual care. All staff nurses and family caregivers on the control unit received usual care consisting of standard hospital services provided by physicians, nurses, and support staff in the other general-medicine units. The multicomponent intervention, the NFCPM, consists of three components: 1) Delirium Education Module, 2) Staff Nurse/Family Caregiver Partnership Module, and 3) the Unit Nurse Champion (UNC). The Nurse/Family Caregiver Partnership Module focused on strategies for effective communication and environmental control, two themes previously identified as major facilitators of family-centered care.[13]

The Delirium Education Module and Nurse/Family Caregiver Partnership Module were delivered as a 15 min educational intervention to both family caregivers and staff nurses on day 3 through day 7 (5 days) of the older adult's hospitalization by a nurse researcher trained by the PI. Subjects chose daily one of three delivery modes: 1) verbal review of a binder; 2) review of a brochure; or 3) viewing a video. A five day intervention was chosen to examine if repeated exposure to the intervention would 1) affect chosen mode of delivery and 2) improve scores over time. Nurses spent 15 min at the start of their shift and family caregivers spent 15 min upon arriving for their visit with the nurse researcher reviewing the NFCPM content. The time commitment over the five days was 75 min.

The Delirium Education Module includes a brief definition of delirium and information on risk factors, symptoms, treatment, and preventive interventions. The Nurse/Family Caregiver Partnership Module focuses on: a) techniques to establish effective communication using "interactional communication strategies," which demonstrate the profound difference between communicating *to* patients and families and communicating *with* them, thus humanizing even the most routine interactions with patients and families, and b) how to implement environmental control strategies such as a non hurried environment.[23,24] The UNC was a staff nurse on the intervention unit trained by the PI as an expert in the NFCPM including the Delirium Education and Staff nurse/Family Caregiver Modules. The training involved four one-hour sessions with the PI – two focused on the Delirium Education Module and two on the Staff Nurse/Partnership Module. During data collection, the UNC and the PI met monthly to reinforce the NFCPM content. The UNC was trained role to provide peer support, support other