



GeriCarED: Feasibility of a Pilot Program of a Geriatric Personal Care Attendant Addressing Mentation, Mobility and Matters Most in an Emergency Department Observation Unit

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ABSTRACT

The aging of the population has a significant impact on the health care system, as older adults have higher rates of emergency department (ED) visits and hospitalization, different care needs, and are at higher risk of iatrogenic harm in the hospital setting. In addition, there has recently been a rapid growth in ED observation units (EDOUs), to which older adults are frequently admitted. Recognizing the specific needs of older adults, our EDOU implemented an ‘Up by 10’ program which incorporates key components of delirium prevention programs. We took an iterative approach to the implementation of this program, resulting in a pilot program of a GeriCarED personal care attendant (PCA) focusing on the care needs of older adults. In this manuscript we report on a quality improvement study describing the feasibility of this pilot program, the role of the GeriCarED personal care attendant, and the number and type of interventions delivered to older adults. The GeriCarED PCA focused on the care of patients 75 years of age and older, as well as younger patients with cognitive or physical impairments. She systematically rounded on each patient, opening the blinds in the room to let in natural light, identifying assistance needed with activities of daily living, addressing sensory impairment, promoting mobilization, providing activities for cognitive engagement, and assessing for mental status changes. Over the 6 months of this pilot program, she saw a total of 586 patients with a median of 6 patients per day (interquartile range 3). She provided nutritional assistance to 90% of her patients, including cutting up food for 29% of patients and feeding 6% of patients. She mobilized 88% of patients, assisted 75% with washing, provided emotional support for 69% of patients, and identified an acute change in mentation in 2% of patients. Though not designed as an Age-Friendly intervention, this program aligned with the mentation, mobility and what matters components of the 4M framework.

INTRODUCTION

Background

Our population is ageing rapidly and by 2030 21% of the US population will be over the age of 65.¹ This has a significant impact on emergency departments (EDs) and hospitals, as older adults have higher rates of ED visits and hospitalization compared to younger adults.² Simultaneously, there has been a growth in ED observation units (EDOUs), which provide medical care for 24 hours or less.³ EDOUs can reduce crowding by rapidly discharging patients, streamline care through protocolized care processes, and reduce costs.³ In 2017, 39% of EDs reported having a dedicated EDOU with 4 million observation admissions, accounting for 2.9% of all ED visits.⁴ Rates of observation care are higher in

older adults, with 10.5% of ED visits by older adults resulting in an observation admission.⁵ Indeed, individuals over 65 years of age and individuals over 75 years of age comprise 49% and 29% of all admissions to our EDOU, respectively.

Importance

In addition to higher healthcare utilization, older adults have different care needs and are at higher risk of iatrogenic harm from the ED and hospitalization. Older adults admitted to the hospital are at higher risk of cognitive and functional decline and falls, often referred to as post-hospital syndrome.⁶ Longer ED lengths of stay, prolonged hallway time in the ED and lack of mobilization have also been associated with development of delirium among older adults.^{7,8} Two initiatives launched to improve the care provided to older adults are the geriatric ED accreditation program⁹ and the Age-Friendly Health System program, which focuses on the 4Ms of Age-Friendly Care: Mentation, Mobility, Matters Most and Medications.¹⁰ There has been a rapid growth in accredited geriatric EDs,⁹ including geriatric EDOUs¹¹, and accredited Age-Friendly Health Systems.¹²

Goal

Our EDOU implemented an ‘Up by 10’ program (Figure 1) incorporating key components of delirium prevention programs.¹³ The implementation of the Up by 10 program took on an iterative approach, resulting in establishment of a pilot program of a GeriCarED personal care attendant (PCA). In this manuscript we report on a quality improvement (QI) study describing the feasibility of this pilot program, the role of the GeriCarED PCA, and the number and type of interventions delivered.

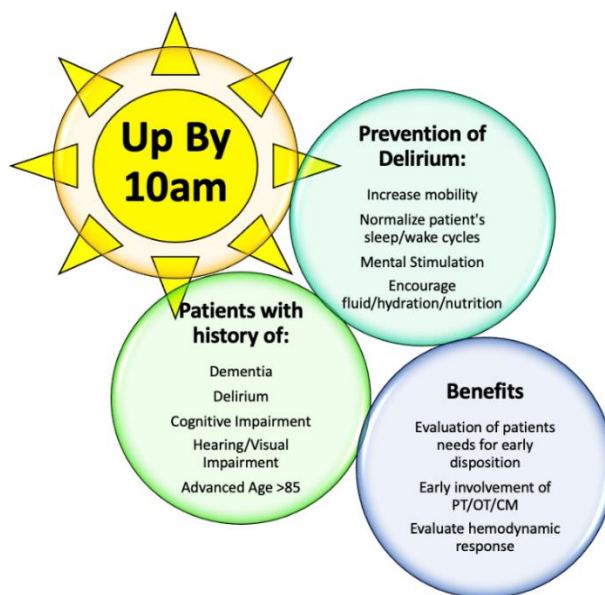
METHODS

Design

The Up by 10 program was launched by the Attending Nurse for our observation unit (AMT) and was inspired by a delirium and fall prevention program on the inpatient units at Concord Hospital in New Hampshire.¹⁴ The program identified patients at risk of delirium, best practices for delirium prevention, and potential benefits (see Figure 1). An iterative approach was taken in implementing the Up by 10 program. The first iteration leveraged existing PCAs, but due to competing demands there was overall low uptake. The second iteration utilized trained volunteer nursing students; however, after the onset of the COVID-19 pandemic, volunteers were no longer allowed in our hospital. In the third iteration, described here, we hired a dedicated PCA to focus on this program, which we termed “GeriCarED PCA.”

This was a QI project to evaluate the GeriCarED PCA pilot program to support the Up by 10 program in our EDOU. We recruited a PCA with prior experience working with older adults and individuals with cognitive impairment. The PCA reported directly to the NICHE-educated Attending Nurse for the EDOU and scheduled to work Monday to Friday from 7 AM to 3 PM. In addition to the standard training for PCAs, she received dedicated training from the Attending Nurse on the care of

Figure 1: Key Components of the “Up By 10” program in the emergency department observation unit



older adults and the Up by 10 program, and individualized mobility training from our physical therapists.

Interventions

At the start of her shift, the GeriCarED PCA printed a list of patients in the EDOU and identified those at increased risk of delirium and functional decline – namely patients 75 years of age and older and individuals with cognitive or physical impairments.^{15,16} She systematically rounded on each patient, introducing herself to her patients, opening the blinds in the room to let in natural light, identifying assistance needed with activities of daily living (ADLs), addressing sensory impairment, promoting mobilization, providing activities for cognitive engagement, and assessing for mental status changes (see Box 1 and Table 1).

Box 1. Sample Daily Schedule for GeriCarED Personal Care Attendant (PCA)

Review track board to determine patient list

- Highlight patients who are:
 - 75 years of age or older
 - Known dementia
 - Physical Impairment
 - Other risk factors for delirium

Round on patients and introduce self

- Check for
 - Nutritional needs
 - Mobility assistance
 - Need for assistive device
 - Assistance needed with activities of daily living

Address safety of environment:

- Place bed in the lowest position
- Ensure a clutter free pathway
- Provide non-slip socks
- Ensure adequate lighting in the room
- Ensure call bells and telephones are within reach
- Use of bed and chair alarms when needed

After first set of rounding

- Assist with out of bed for meals and toileting, where appropriate
- Answer call lights
- Hourly rounding
- Provision of assistive devices and frequent mobilization
- Ensure meal orders placed
- Identify unmet needs
- Address continence and skin care needs
- Offer activities from delirium tool box (games, coloring activities)
- Ensure environment safety, including bed alarms and chair alarms
- Perform additional PCA tasks, including vital signs, drawing laboratory tests and obtaining electrocardiograms

Ongoing communication with nursing staff and leadership

Table 1. Comparison of primary activities detailed in the job descriptions for ED observation and the GeriCarED personal care attendants (PCAs)		
Activity	ED Observation PCA	GeriCarED PCA
Hourly rounding	✓	✓
Respond to call lights	✓	✓
Respond to bed alarms	✓	✓
Offer personal care items	✓	✓
Assessment of environment for safety	✓	✓
Vital sign measurement	✓	✓
Document I/Os	✓	✓
Place patient on cardiac monitor	✓	✓
Obtain ECG	✓	✓
Glucose monitoring	✓	✓
Draw laboratory tests	✓	✓
Assisting patient for discharge	✓	✓
Open blinds to let in natural light	✗	✓
Check on meal provision and assistance with eating	✗	✓
Proactive mobilization	✗	✓
Provision of assistive devices to promote ambulation	✗	✓
Identify hearing impairment and provide amplifiers	✗	✓
Suggest activities for cognitive engagement from geriatric cart	✗	✓

Measurement / Outcomes

Data for this project were prospectively collected and managed using REDCap electronic data capture tools hosted at our institution.¹⁷ For each patient, the PCA documented care she provided using pre-specified data fields. There was also an open text field where she could record other activities or capture additional information. We present summative descriptive data from this program.

This project was undertaken as a QI initiative at Massachusetts General Hospital and as such was not formally supervised by the Institutional Review Board per their policies.

RESULTS

This program ran for 6 months from April 2021 through October 2021, for a total of 102 days, during which the GeriCarED PCA saw a total of 586 patients. The number of patients seen per day ranged from 1 to 10 with a median of 6 patients per day (interquartile range 3). There were 5 days out of 102 days where the GeriCarED PCA only saw 1 patient. On one of those days, she recorded that she was

called upon to be a sitter for one patient; the reason for only seeing one patient on the remaining 4 days was not captured in the database. The GeriCarED PCA also provided care for at least 17 patients under the age of 75, 11 of whom she explicitly noted had cognitive or physical impairments including Parkinson’s disease, dementia, delirium, muscular dystrophy, and hemiplegia from a prior stroke. The GeriCarED PCA highlighted 14 patients requiring additional attention to communication: 13 requiring telephone interpretation and one with Amyotrophic Lateral Sclerosis who communicated by writing.

The PCA provided most patients with nutritional assistance, mobilization, and washing; a quarter of the patients also required assistance with dressing (Figure 2). With respect to nutritional assistance, 29% of patients required assistance with cutting up their food and 6% of patients required assistance with feeding (Table 2). Due to focused attention on nutrition, on one of her first days of this pilot project, the GeriCarED PCA identified an issue where three older adults had not received a lunch tray because an order was not placed: one person arrived too late to place an order, one had dementia and one person did not speak English. This prompted an immediate change in food tray delivery to ensure a default tray would be delivered if an order had not been placed. Mobilization was the second most common activity - most patients were mobilized multiple times during the shift, including walking and assisting to a chair (Table 2). She rounded hourly on almost all patients, providing emotional assistance, activities from our geriatric cart, hearing amplifiers when needed and ensuring the safety of the environment (Table 2). She identified an acute change in mental status in 7 (2.4%) of patients.

Figure 2: Core activities completed by the GeriCarED Personal Care Attendant

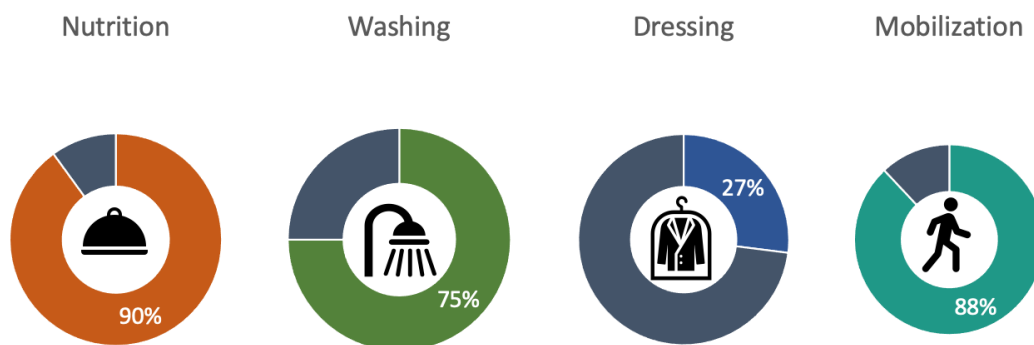


Table 2. Frequency of activities performed by the geriatric personal care attendant.	
	Total N = 586
Nutritional assistance, n (%)	
Meals provided	526 (90%)
Assistance with cutting up food	152 (26%)
Assistance with feeding	33 (5.6%)
Menu Assistance	462 (79%)
Mobilization, n (%)	
Walking	412 (70%)
Position change	392 (67%)
Bed to chair	426 (73%)
Provided assistive device	145 (25%)
Comfort and Care Needs, n (%)	
Answering patient call lights	576 (98%)

Emotional assistance	404 (69%)
Hearing/vision devices provided	7 (1.2%)
Activity kit offered	142 (24%)
Hourly rounding	579 (99%)
Mentation and Cognition, n (%)	
Any changes in mental status noted	14 (2.4%)
Opening blinds to let sunlight in	559 (95%)
Advocated to move patients' rooms for increased surveillance	2 (0.3%)
Safe Environment Check, n (%)	
Ensure safe environment	515 (98%)
Bed alarm	119 (30%)
Chair alarm	104 (13%)
No environmental changes needed	58 (10%)

In addition, the PCA often provided emotional support for the patient and/or family, recording that she provided emotional support for 69% of patients (Table 2). One patient informed her that his wife had been hospitalized in our hospital for a prolonged duration, but due to his physical impairments he had not been able to visit her. The GeriCarED PCA and his nurse brought him to his wife's bedside so that they could spend time together. Another family member reported to the GeriCarED PCA feeling overwhelmed by their family member's recent diagnosis of dementia. She was able to provide this family member with resources from our dementia caregiver collaborative.

DISCUSSION

In this 8-month pilot program, the GeriCarED PCA saw a median of 6 patients per day with a strong focus on mobilization, nutritional assistance, and comfort. Overall, informal feedback from multiple role groups was positive. Numerous patients explicitly expressed appreciation for the care and support they received from the GeriCarED PCA. At discharge, one patient hugged the GeriCarED PCA and stated "no one else wanted me but you. I love you." While EDOU nurses were overall supportive of the program, they did report that it adversely impacted their workload on days when the EDOU was short staffed with PCAs. Prior to implementation of this program, two PCAs were staffed in the EDOU per shift and were assigned to approximately 15 patients each. Though there was overlap in responsibilities, the GeriCarED PCA provided enhanced care to a fewer number of patients than a standard PCA. During the pilot program, the GeriCarED PCA was an additional resource, augmenting the two standard PCAs. But on days when the unit was short staffed, the GeriCarED PCA was not redeployed as a general PCA, resulting in increased workload for the EDOU nurses. Additionally, some of the work performed by the GeriCarED PCA may have been less visible to the EDOU nurses than work performed by general PCAs. For instance, cutting up food and/or feeding patients and providing emotional support. It is also worth noting that the GeriCarED PCA often cared for patients who required extra assistance and attention to their specific needs, for instance for patients with physical and cognitive impairments, or special communication needs. Over the six-month pilot we saw a slow but consistent cultural change in our EDOU with increased focus on mobility, such that standard PCAs on weekends were noted to be pro-actively opening blinds and mobilizing patients. Accordingly, when pilot was complete the decision was to redistribute the core responsibilities of the Up By 10 program – mobilization, nutrition, and exposure to natural light – to the other PCAs in the EDOU.

Though the Up by 10 program was initially based off a delirium and fall prevention program, it also addresses three of the Age-Friendly Health System 4M's- mentation, mobility, and what matters. While this was not intentional in the design of the program, the key components of delirium prevention programs align with the 4Ms. Delirium prevention programs at their core support the mentation

component of the 4Ms, and include early mobility, cognitive engagement, minimizing social isolation through family visits and/or volunteer programs, and avoidance of medications known to precipitate or prolong delirium.¹³ Since the pilot ended, the key components of the Up by 10 program are still ongoing in our EDOU, but the discontinuation of the dedicated GeriCarED PCA role has resulted in less focused attention to emotional support and comfort of older adults in our ED, or what “matters most” to patients.

This program builds on other models of enhanced geriatric emergency care, including accredited geriatric EDs and EDOUs.^{9,11} Many geriatric EDs and EDOUs perform structured screenings for cognitive impairment, fall risk, function and functional decline - assessments that again align with the 4Ms model of age-friendly health care systems.^{18,19} In addition, higher level geriatric EDs and EDOUs often provide specialty consultation services, such as physical therapy, occupational therapy, case management and/or geriatric consultations.^{11,19} Our program is unique, as it utilized a specially trained PCA to focus on geriatric-centric care of patients while they are in the EDOU, rather than providing recommendations about post-EDOU care. With respect to cost of implementation, our novel GeriCarED PCA program may be less cost prohibitive to institutions looking to improve geriatric care in their ED or EDOU. However, costs of enhanced geriatric assessments and consultations may also be offset through consultation charges²⁰ and overall decrease costs of care.²¹

The major limitations of this pilot project were the absence of a control group and ability to quantitatively assess for impact on patient outcomes, such as objective measurements of incident delirium, functional decline, or patient experience. This study provides preliminary data that can inform future QI research into this model of care and its impact on patient-oriented outcomes and utilization.

CONCLUSION

In summary, we describe a novel program of a geriatric focused PCA to increase engagement with an Up by 10 delirium prevention program in the EDOU, and highlighting the special needs of geriatric patients in our observation unit. Future research is needed to quantify the effect of this model of care on patient experience, delirium prevention, and functional decline.

KEYWORDS

Emergency Service, Hospital, Geriatrics, Clinical Observation Units, Delirium, Age-Friendly Health System

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CONFLICTS OF INTEREST

The authors have no conflicts to report.

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