Fall 12-16-2022

Improving Nursing Staff Knowledge for Management of Geriatric Patients with Confusion in the Emergency Department

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N670 Evidence-Based Improvement Project Prospectus

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December 7, 2022

Abstract

Problem: Staff knowledge of effective management of confusion in geriatric patients (>65yo) may be limited and inconsistent with the current goal of establishing a geriatric-friendly Emergency Department (ED) Model of Care. Suboptimal management of this patient population can result in prolonged ED stays, which increases the cost to the hospital and the patient (Han & Wilber, 2013).

Context: An Emergency Department at a large Bay Area urban hospital hopes to obtain Geriatric Emergency Department Accreditation (GEDA) through the American College of Emergency Physicians (ACEP).

Interventions: Create a simplified checklist for nursing staff using mnemonic devices to focus staff on appropriate management strategies for geriatric patients exhibiting confusion that are consistent with the core principles of the GEDA ED Model of Care and Accreditation Criteria. Conduct brief, educational in-services with individual staff that introduce them to the checklist in an "elevator speech" style. Provide a checklist as an ongoing resource for review and consultation in easily accessible areas of the department. Develop and conduct a pre- and post-knowledge quiz.

Measures: Staff self-reported knowledge assessment, pre- and post-educational in-service.

Results: Staff self-reported knowledge showed minor increases from pre- to post-knowledge quiz scores. A larger increase in scoring from pre- to post-quiz was associated with fewer years of bedside nursing experience.

Conclusions: Development and implementation of a mnemonic checklist as an educational tool for ED nursing staff showed some improvement in staff knowledge, as indicated by increased self-reported post-knowledge ratings in a small sample size of six. Further implementation beyond this small test of change is necessary to make broader generalizations surrounding the overall usefulness and practicality of such a tool in a wider clinical setting. If able to duplicate these findings in a larger cohort of staff, this checklist has the potential to affect patient care metrics positively. Reductions in length of stay (LOS) and the occurrence of adverse outcomes through enhanced nursing staff management of geriatric patients exhibiting alterations in cognitive function would be a reasonable expectation.

Keywords: *dementia, assessment, screening, older adult, emergency department, geriatric, cognitive, patient care, quality improvement, CNL, GEDA,*

Personal Leadership Statement

As an experienced bedside nurse employed in an Emergency Department at a Level 1 Trauma Center, I am fortunate to have many quality examples of humanity around me daily. My journey into the nursing profession has helped me to better understand the transformative power of service to those in need and a life lived in the pursuit of these higher ideals. By continuing my education, completing my master's degree, and utilizing the tools I have been given in the Clinical Nurse Leader (CNL) program, I hope to create greater opportunities for usefulness in the struggle to ease suffering and promote wellness in our world. I believe we share an obligation as stewards of tomorrow that implores us to contribute our individual talents toward the growth of goodness. That goodness, combined with hope and the healing power of love, is what ultimately binds us. The topic of this paper is important to me because of my combined personal and professional experiences as it relates to the care of older adults. My microsystem has an ongoing initiative to achieve Geriatric Emergency Department Accreditation (GEDA) through the American College of Emergency Physicians (ACEP). My goal is for this work to contribute, in small part, to that greater objective of improving the quality of care available to our older adult patients.

Problem Description

An Emergency Department at a large Bay Area urban hospital has received grant funding for the purposes of obtaining Geriatric Emergency Department Accreditation (GEDA) through the American College of Emergency Physicians. The ACEP provides an ED Model of Care with requirements for standardized protocols and guidelines for screening, assessment, interventions, medications, and consultations related to care for geriatric patients (ACEP, n.d.). Minimum standards are required of the department, physicians, nurses, and ancillary staff to complete the

GEDA program successfully. Grant funding is currently available for a three-year window with the potential to receive additional funding if specific metrics and objectives are met.

Nursing staff knowledge on appropriate management of geriatric patients exhibiting confusion is inconsistent and may not align with the ACEP ED Model of Care recommendations. The development of appropriate staff-led interdisciplinary teams to address quality improvement (QI), education, staffing needs, equipment, and supplies is ongoing. Current nursing staff knowledge and awareness surrounding this Geriatric Emergency Department initiative varies. Determining a better understanding of baseline knowledge gaps related to ED management of geriatric patients and improving nursing care for patients in this population through continuing education is a critical step toward achieving broader goals. See Appendix A, Gap Analysis.

Specific Project Aim

Increase staff self-reported knowledge score related to care of geriatric adults with confusion on pre- to post-knowledge assessment quiz by 30% by November 25, 2022.

Available Knowledge

PICOT Question

Among ED nursing staff (**P**), how does exposure to education (**I**) compared to no education (**C**) affect their knowledge in caring for geriatric patients with confusion (**O**)?

Search Strategy

A targeted search of scholarly internet databases was utilized to provide peer-reviewed and evidence-based literature to guide this project. CINAHL and Pub Med databases were the primary databases employed to gather relevant supportive data. Keywords included: *dementia, assessment, screening, older adult, emergency department, geriatric, cognitive, patient care, quality improvement, prevalence, CNL, GEDA.* The evidence obtained consisted of multiple

literature reviews, a large cohort study, and a population-based survey. Additional references related to GEDA-specific content were sourced directly from the ACEP website and its supporting documents outlining the framework for the varying levels of GEDA accreditation. See Appendix B, Evaluation Table of the Evidence.

Critique and Summary of Evidence

The ACEP provided guidelines and criteria for GEDA accreditation which assisted greatly in developing the Geriatric Confusion Checklist (GCC). Focus was given to utilizing principles inspired by the identified eight domains of geriatric Emergency Medicine (EM) and the EM Model of Care (Hogan et al., 2010). Recommendations and interventions were designed from ACEP to target improved assessment and management as supported by the peer-reviewed studies' data regarding potentially inappropriate medications (PIMs) for geriatric adult patients. Further care was paid to include data that was presented surrounding the assessment and management of delirium, dementias, and acute alterations in cognitive capacity in geriatric patients in the ED setting (O'Sullivan et al., 2018).

Defining the term "geriatric" and assigning its corresponding age range with universal agreement can prove challenging due to several different perspectives. For the purposes of this project, the CNL student has chosen to consider the geriatric population as any adult 65 years or older, which is consistent with the GEDA criteria for accreditation (ACEP, n.d.). It is important to note, however, that available research of this population can and does incorporate an extended age range that comprises adults 60 years or older. This includes information provided through the Center for Disease Control and Prevention (CDC) and some of these studies were relied on for the purposes of acquiring available knowledge pertaining to care for geriatric patients (Ashman, Schappert & Santo, 2020).

As of 2017, the United States (U.S.) had approximately 71 million adults over the age of 60, representing a 5% increase over the previous three years. Roughly 20% of emergency department (ED) visits throughout the United States each year can be attributed to this population, around 29 million visits, representing a significant economic and public health concern (Ashman, Schappert & Santo, 2020). Alterations in cognitive function are a major chief complaint among this population (Han & Wilber, 2013). Episodic delirium in an Emergency Department setting has been correlated with increased incidence of morbidity and mortality (Pérez-Ros & Martínez-Arnau, 2019). Given the considerable strain on critical resources, a far greater likelihood of hospital admissions and a heightened risk for adverse outcomes among older adult patients, it is essential to reduce the burden on emergency services through the optimization of patient care guidelines and prioritization of high-quality assessment by ED staff (Ukkonen, Jämsen, Zeitlin & Pauniaho, 2019).

Additional emphasis on non-pharmacological interventions for managing behavioral and psychological symptoms of dementia (BPSD) as a first-line approach to de-escalation when dealing with adults experiencing Alzheimer's and related dementias is essential (Martini et al., 2022). Common practices in ED settings for managing challenging behaviors in patients often involve antipsychotic medications or other pharmacological interventions (e.g., antidepressants, anticonvulsants). Research shows that the use of 1st and 2nd generation antipsychotics in geriatric patients is correlated with increased mortality (Fick, 2019). Providing evidence-based education and recommended techniques for safely de-escalating clients with alterations in cognitive status will reinforce safer management guidelines for this population.

Rationale

Lewin's Theory of Planned Change (TPC) is a conceptual model of change management developed in the 1940s by Kurt Lewin, a German American social psychologist. Lewin's model explains that change happens in three distinct stages described as 1. Unfreezing, 2. Moving or transitioning (often referred to as Changing), and 3. Refreezing. The initial stage, Unfreezing, requires the disruption of 'status quo" thinking and attitudes that obstruct the potential for receptiveness to new ideas surrounding managing a particular framework. This includes describing or demonstrating a problem area, highlighting the inefficiency of the existing protocol as it relates to safety, fiscal responsibility, or customer satisfaction, and mobilizing other parties to see a need for change to occur. The Moving or transitioning stage is when the new idea or framework is implemented, either as a small test of change or a widely adopted methodology. Lastly, the Refreezing stage is where the change initiative becomes galvanized and embedded in everyday practice throughout an organization or individual microsystem. (Shirey, 2013).

Utilizing a simplified model that describes how change must begin with eliminating existing attitudes, policies, and protocols that are impediments to implementing a new approach before change can occur was a guiding context for this work. In this instance, the CNL student performed a portion of the work of unfreezing with each bedside RN who was presented with the Geriatric Confusion Checklist (GCC) after the completion of the pre-knowledge survey. The bulk of the work had been initiated department-wide through the ongoing initiative for GEDA recognition. It was sent out to staff via email and in talking points during the pre-shift huddle. The moving phase was performed by the implementation of the GCC, as it provided education to RN staff to change existing knowledge gaps related to care of geriatric patients experiencing

confusion who present to the ED. The refreezing step is ongoing and has yet to achieve complete integration, but it seldom happens rapidly in large systems such as this hospital.

Section III. Methods

Context

The microsystem is a large Emergency Department with a total bed count of 59 without including overflow. Within the core of the department, there are six beds dedicated to higher acuity trauma or medical patients and one to moderate acuity. Twenty-two beds are commonly assigned to a rotating patient mix of behavioral, medical, and trauma complications in a separate "pod" with a 3-1 patient-to-RN ratio due to the mix of patient acuity and high incidence of acute behavioral or psychological emergency. All other areas have a formal patient-to-RN ratio of 4-1. Eleven beds are divided between pediatric patients and adult "fast-track" patients who are largely co-managed by Nurse Practitioners (NPs) and a pediatric emergency medicine (PEM) provider. An additional 19 beds are often dedicated to a mix of active, non-admitting ED patients who are in the process of being worked up and admitted boarder patients who are waiting for a bed on a unit. Staffing levels on a given shift vary between 15-30 RNs for 12-hour day shifts from 0700-1900 and a similar number for the corresponding 12-hour night shift from 1900-0700. Based on a combination of national statistics and internal hospital records for the month of August 2022, approximately 75 patients greater than 60 years old present to this Emergency Department per day.

SWOT analysis

Analysis of the strengths, weaknesses, opportunities, and threats (SWOT) specific to this microsystem and their potential impact on this Geriatric Confusion Checklist project revealed numerous positive and negative aspects of the existing environment and role players to be

considered. The identified strengths included a baseline prevalence of staff excellence in performing under stressful conditions. Additionally, outstanding teamwork regularly occurs when critical incidents demand prompt intervention. Staff in this microsystem routinely demonstrate the ability to do more with less, as both equipment and funding are limited by external constraints. The existence of Nurse Educators working at the bedside creates a bridge of understanding between theory and practice that benefit nursing staff and ED patients.

Identified weaknesses included a minimal timeline to develop and implement this quality improvement (QI) project along with competing priorities for clinical staff providing patient care within the microsystem, both making educational initiatives challenging. Additionally, turnover within supervisory roles at this specific microsystem creates leadership changes, which negatively impacts QI opportunities. This reality, combined with high levels of staff attrition and chronic staffing shortages, creates obstacles to retaining key stakeholders at the point of care, which adversely affects opportunities for continuing education. Moreover, staff burnout influences their willingness to adopt new practices and participate in QI work.

Key among opportunities for the CNL project was the ongoing Geriatric Emergency Department Accreditation (GEDA) initiative, which had pre-existing buy-in from management and providers. This was largely due to available grant funding for this broader initiative of GEDA by external auditors. Staff engagement had previously been building with “nurse champions” expressing interest in driving education. Threats existed in the form of limited funding availability, as grants were only guaranteed during the three-year window. Additionally, this microsystem is a highly dynamic clinical practice setting that often pulls manpower towards real-time patient care needs during emergencies, away from focus on process improvement. See Appendix C, SWOT Analysis.

Intervention

The CNL student developed an educational checklist utilizing evidence-based practice (EBP) guidelines sourced from peer-reviewed literature and consistent with the ACEP ED Model of Care suggestions. Additionally, the CNL student created pre- and post-knowledge quizzes to assess efficacy, educated RN staff members using a brief format, and posted information in easily accessible locations throughout the department for future review. To begin, a staff RN would complete the pre-knowledge quiz to establish a baseline score for knowledge in several categories relevant to the assessment and care of older adults with confusion. The CNL student then presented the staff RN with the educational intervention by presenting the Geriatric Confusion Checklist (GCC) (See Appendix D, Geriatric Confusion Checklist) and reviewing it with them. After exposure to the GCC and an opportunity for relevant questions or clarification, the staff RN completed a post-knowledge quiz which reassessed their knowledge scores related to the same categories (See Appendix E and Appendix F, Pre- & Post-Knowledge Quizzes, and results). A Gantt chart was established to assist in the planning and implementation of project objectives within the available timelines. See appendix G, GANTT Chart

Older adults average 18 million visits to US emergency departments annually (Han & Wilber, 2013). The reported prevalence of delirium among older adults visiting the ED varies between 8% and 17% while various studies suggest that some form of cognitive impairment is present in as high as 25% of geriatric patients who present in this setting (Nowroozpoor et al., 2022). The average daily number of ED visits at this hospital in Aug 22 was 171 based on internal records which cannot be accurately cited in this context due to external privacy constraints. Forty-three out of 100 ED visitors are aged 60 years or older, representing 43%.

Considering the total number of patients per day of 171, the number of pts 60 or older would be 74 per day by these standards.

When considering return on investment (ROI) for the GCC project, reduced length of stay (LOS) for geriatric patients in the department was targeted. Hard statistical data for this specific population in this setting was difficult to come by and must be estimated. Average LOS in EDs is between 4 and 6 hours, with visits for behavioral-health related concerns closer to 20 hours (Lane, Roberts, Currie, Grimminck & Lang, 2022). Based on these figures and those suggested by Nowroozpoor et al, it follows that roughly six patients per day would fall into the category of older adults with symptoms of confusion or delirium, with an approximated visit time of twenty hours per patient. Twenty hours of visit time multiplied by six patients represents 120 daily hours. A reasonable target is for improved patient assessment and management during ED visits to reduce LOS by 20%, or 4 hours. With a per-patient reduction of four hours, daily hourly savings would total 24 hours. Over a 30-day span, that savings would total 720 hours (See Appendix G, Budget Analysis).

Finding accurate, reliable data about cost associated with visiting this hospital is challenging based on a litany of factors. Regional data suggests an average cost of $215 per 15 minutes is billed for patients visiting the ED, representing around $860 per hour. If a projected total savings of 720 hours over a 30-day period is calculated at this hourly rate, the total monthly cost avoidance would be $619,200. This is value is strictly hypothetical and based on the target reduction in LOS of 20% but remains a reasonable goal. Based on hospital-specific compensation data, an average RN hourly salary was calculated to be $108.74. The total improvement cost (TIC) was estimated to be roughly $200 for education time and materials, however, this data was reliant on the low number of participants involved in the project and the

CNL student being the educator. Further calculations would be required to establish true total implementation costs for a department-wide implementation of the educational intervention and would obviously increase based on a total number of staff involved.

Study of the Intervention

The primary outcome of this project was to demonstrate an increase of knowledge scores by 30% from pre- to post-knowledge quiz responses.

Ethical Considerations

This project supports the Jesuit Tradition of Cura Personalis, or care of the whole person, a core value of the University of San Francisco (USF). This project has been approved as a quality improvement project by faculty using QI review guidelines and does not require IRB approval. (See Appendix I, IRB Non-Research Determination Form.) This project supports ANA Provision 7, which states that "The nurse, in all roles and settings, advances the profession through research and scholarly inquiry, professional standards development, and the generation of both nursing and health policy.

Outcome Measure Results

A total of six RNs who were working in clinical practice in the ED were selected and available to participate at the time of project implementation. A summary of the process was presented to each participant prior to full engagement. Participants were given pre-knowledge surveys with privacy and a low level of anonymity by assigning numbers rather than names to corresponding pre- and post-quizzes. The maximum score for each quiz was 40 points, with no single individual scoring 100% on self-reported confidence as it related to knowledge of the relevant topics for either baseline or post-exposure to the checklist. Scores for pre-knowledge quizzes ranged from 18 to 30 with an average score of 24.6. Scores for post-knowledge quizzes

ranged from 24 to 32, with an average score of 30 The average increase in knowledge scoring was 5.33 points.

Summary

Findings

In this instance, only six RN staff were available to participate in the implementation of the CNL-developed Geriatric Confusion Checklist and accompanying pre-/post-knowledge quizzes due to competing priorities in the microsystem. RN quiz responses are indicated with a colored number and transcribed in appendices E and F to show the distribution of scoring before and after exposure to the checklist. A blank pre-knowledge and post-knowledge quiz form was provided to each RN for the purposes of data collection. Score distribution showed a cumulative knowledge score of 148 points based on responses to the pre-knowledge quiz and a score of 180 points on the post-knowledge quiz. This represents a 32-point total increase in cumulative knowledge scoring, which was a 21.6% improvement in overall knowledge and short of the specific project aim of 30%.

In addition to their quiz responses, participants were asked to provide limited demographic data regarding only their level of experience in clinical practice as an RN. Two of the RNs indicated a level of nursing experience of less than two years; another two RNs indicated experience between five and seven years; the remaining two indicated experience greater than 10 years. Higher baseline knowledge scores were associated with greater clinical experience, and larger increases in post-educational knowledge scores were observed in less experienced nursing staff. The major limitation of this study is that averages were based on a very small sample size, and individual responses would carry less weight over the whole with a

larger cohort of participants. Any correlations drawn from this study are limited and should be suggestive of potential only.

Conclusions

Managing confusion in geriatric patients is a challenging prospect for ED nurses and providers. A mnemonic tool that primes nursing staff with key assessments, considerations, and interventions to reduce the likelihood of adverse outcomes may be a valuable addition to existing frameworks for patients presenting with confusion. While limited sample results showed promise, this project could represent a small test of change. Additional staff participation is warranted to make broader generalizations about the overall usefulness of this tool in clinical practice. The CNL would require an extended participation timeline with existing interdisciplinary teams to further refine and improve upon this tool to best meet the targeted GEDA objectives. Additional study into the fiscal impacts of this tool's use in clinical practice will also be required to make any strong correlative assertions surrounding its value in a cost-benefit analysis. Still, cursory budgetary data suggests the potential for a positive net outcome.

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Appendix A.

Gap Analysis

Area under consideration:
Improving Nursing Staff Knowledge Scores Related to Management of Geriatric Patients (>65yo) with Confusion in an Emergency Department (ED)

Desired State	Current State	Action Steps
All geriatric adult patients with confusion in ED receive safe and effective management	Lack of universal knowledge among ED nursing staff of safe assessment and interventions strategies for confused geriatric patients	CNL will become familiar with the pathology of delirium in older adult patients CNL will become familiar with appropriate nursing assessments and interventions for geriatric patients Increase nursing staff awareness of need for screening geriatric patients for confusion Assess nursing staff knowledge of safe patient care practices through pre-knowledge quiz Increase nursing staff knowledge of standards of care consistent with Geriatric Emergency Department Accreditation goals Assess nursing staff learning through post-knowledge quiz

Appendix B.

Evidence Citation	Design	Sample	JHNEBP Rating	
			Level Rating	Quality Rating
O'Sullivan, D., Brady, N., Manning, E., O'Shea, E., O'Grady, S., O'Regan, N., & Timmons, S. (2018). Validation of the 6-Item Cognitive Impairment Test and the 4AT test for combined delirium and dementia screening in older Emergency Department attendees. *Age & Ageing*, *47*(1), 61–68.	Diagnostic accuracy study	Adult ED patients ≥70 years in a tertiary care hospital	Level V	Good
Nowroozpoor, A., Dussetschleger, J., Perry, W., Sano, M., Aloysi, A., Belleville, M., Brackett, A., Hirshon, J. M., Hung, W., Moccia, J. M., Ohuabunwa, U., Shah, M. N., & Hwang, U. (2022). Detecting Cognitive Impairment and Dementia in the Emergency Department: A Scoping Review. Journal of the American Medical Directors Association, 23(8), 1314. https://doi.org/10.1016/j.jamda.2022.03.019	Literature review	Adult ED patients	Level V	Low
Ukkonen M, Jämsen E, Zeitlin R, Pauniaho SL. Emergency department visits in older patients: a population-based survey. BMC Emerg Med. 2019 Feb 27;19(1):20. doi: 10.1186/s12873-019-0236-3. PMID: 30813898; PMCID: PMC6391758.	Population based survey	Older Adult ED patients	Level V	Low
Pérez-Ros P, Martínez-Arnau FM. Delirium Assessment in Older People in Emergency Departments. A Literature Review. Diseases. 2019 Jan 30;7(1):14. doi: 10.3390/diseases7010014. PMID: 30704024; PMCID: PMC6473718.	Lit Review	Older Adult ED patients	Level V	Low
Lane, D. J., Roberts, L., Currie, S., Grimminck, R., & Lang, E. (2022). Association of emergency department boarding times on hospital length of stay for patients with psychiatric illness. Emergency Medicine Journal, 39(7), 494–500. https://doi.org/10.1136/emermed-2020-210610	Large Cohort Study	ED Pts w psych illness	Level V	Low

Appendix C.

SWOT Analysis

	Favorable/Helpful	Unfavorable/Harmful
Internal (attributes of the organization)	**Strengths** • Staff excellence in performing under stressful conditions • Outstanding teamwork when critical incidents demand prompt intervention • Staff routinely demonstrate the ability to do more with less • Nurse Educators working at the bedside create a bridge of understanding between theory and practice	**Weaknesses** • Minimal timeline to develop and implement project • Competing priorities for clinical staff providing patient care within the microsystem make educational initiatives challenging • Turnover within supervisory roles create changes in leadership which impacts QI opportunities • High level of staff attrition creates obstacles for retaining key stakeholders at the point of care • Chronic staffing shortages impact opportunities for continuing education • Staff burn out influences willingness to adopt no practices and participate in QI work
External (attributes of the organization)	**Opportunities** • Ongoing Age Friendly ED initiative w management and provider approval and investment • Available grant funding for broader initiative increases key shareholder buy-in • Macrosystem goal of Age Friendly certification by external auditors will require changes in the microsystem to meet • Staff engagement building with "nurse champions" expressing interest in driving education	**Threats** • Funding available through grants only guaranteed during 3-year window • Highly dynamic clinical practice setting often pulls manpower towards real-time patient care needs during emergencies • Inaction can lead to adverse outcomes within older adult ED patient population

Appendix D.

GERIATRIC CONFUSION CHECKLIST

Providing care for an older adult patient (>65yo) in this Emergency Department exhibiting signs of confusion? Consider these concepts as it relates to assessment and interventions

Confused Older Adult? Think…**H.A.L.T.**

H =

- ✓ **Hunger, Hypo/Hyperglycemia –** Finger sticks are quick & a snack may bring them back
- ✓ **Hypoxia –** Poor gas exchange will affect the brain
- ✓ **Hydration –** Na+ concentration can affect mentation. An electrolyte imbalance could be the challenge – consider hypo/hypernatremia, hypo/hypercalcemia
- ✓ **Hold up on the HAC$_1$!!! –** Certain pharm can cause harm!

  *$_1$: HAC = Haldol, Ativan, and Cogentin

  **1st & 2nd generation Antipsychotic medications (e.g., haloperidol[1st], risperidone[2nd], olanzapine[2nd]) increased risk of cerebrovascular accident (stroke), rate of cognitive decline and mortality in persons with dementia. Increased sensitivity to and decreased metabolism of benzodiazepines (e.g., lorazepam), increase risk of cognitive impairment, delirium, falls, fractures, and motor vehicle crashes in older adults (Fick, DM. et al. 2019)*

A =

- ✓ **Assessment of AMS is for the best–** quick checks for cognitive impairment + additional screening for dementia or delirium PRN using recommended tools with appropriate follow up by providers! (NP/MD)
- ✓ **Assistive devices –** A walker or cane can prevent further pain and a standby assist should never be dismissed! When mobilizing older adults w confusion be mindful of fall risk assessment in the moment, not just at triage.
- ✓ **ALZ.ORG –** Alzheimer's Association is a resource for patients and families with a relevant Dx. Providers can submit referrals for pt's for after their visit and ALZA will f/u

L =

- ✓ **Less is more –** Lower stimulation to reduce agitation (alarms, loud conversation, bright lighting, TV's are all modifiable factors than can increase confusion or agitation)

T =

- ✓ **Treatments for pain –** confusion and especially agitation in older adults can be a manifestation of poorly managed pain control (think too much AND not enough Rx)
- ✓ **Toileting needs –** UTI just might be why; they need to pee so set them free! A bedside commode to lighten the load and prevent a fall while down the hall.

Appendix E.

Pre Knowledge-Survey

1. Describe your confidence in your ability to provide high quality nursing care for <u>geriatric patients</u> as it pertains to the following categories PRIOR to exposure to the Geriatric Confusion Checklist.

*****For the purposes of this assessment, "<u>geriatric patients</u>" will be considered anyone >65yo

*Please rate your personal confidence level as it pertains to your **CURRENT ABILITIES & KNOWEDGE BASE** in each of the tasks or concepts below as closely as possible to 1 of the 5 confidence categories*	**Not at all Confident 1pt**	**Less Confident 2pts**	**Neutral 3pts**	**Somewhat Confident 4pts**	**Very Confident 5pts**
a. Safe and accurate assessment of patient mental status			1.	2., 3., 4.	5., 6.
b. Risk categories specific to older adult patients		1.	2., 3., 4.	5.	6.
c. Accurate and timely recognition of confusion in older adult patients			2.	1., 5.	3., 4., 6.
d. Safe de-escalation techniques for older adult patients exhibiting confusion with agitation		1., 2.		3., 4., 5., 6.	
e. Safe pharmacological interventions for older adult patients exhibiting confusion with agitation		1., 2.	3.	5., 6.	4.
f. Additional screening tools for assessing delirium	2.	1., 6.	3. 4., 5.		
g. Additional screening tools for assessing dementia or cognitive impairment	2.	1., 4., 5., 6.	3.		
h. Geriatric Emergency Department Accreditation (GEDA) objectives	1., 2.	3., 4., 5.	6.		
TOTAL SCORE:	**4**	**28**	**33**	**48**	**35**
PRE-KNOWLEDGE CUMULATIVE SCORE FOR ALL RESPONDENTS:					**148**

*Scoring distribution is included here for illustrative purposes and was not present in the surveys provided to participants. Each respondent is represented with a specific color-coded number for purposes of differentiation while maintaining anonymity

Appendix F.

Post Knowledge-Survey

2. Describe your confidence in your ability to provide high quality nursing care for <u>geriatric patients</u> as it pertains to the following categories AFTER exposure to the Geriatric Confusion Checklist

*****For the purposes of this assessment, "<u>geriatric patients</u>" will be considered anyone >65yo

Please reassess your personal confidence level as it pertains to your CURRENT ABILITIES & KNOWEDGE BASE in each of the tasks or concepts below as closely as possible to 1 of the 5 confidence categories	**Not at all Confident 1pt**	**Less Confident 2pts**	**Neutral 3pts**	**Somewhat Confident 4pts**	**Very Confident 5pts**
a. Safe and accurate assessment of patient mental status				1., 2., 3., 4.	5., 6.
b. Risk categories specific to older adult patients			1., 2.	4., 5.	6.
c. Accurate and timely recognition of confusion in older adult patients				1., 2., 3., 5.	3., 4., 6.
d. Safe de-escalation techniques for older adult patients exhibiting confusion with agitation				1., 2., 3., 4., 5., 6.	
e. Safe pharmacological interventions for older adult patients exhibiting confusion agitation			1.	2., 3., 6.	4., 5.
f. Additional screening tools for assessing delirium		1., 2.	3., 5., 6.	4.	
g. Additional screening tools for assessing dementia or cognitive impairment		2.	1., 3., 4., 5., 6.		
h. Geriatric Emergency Department Accreditation (GEDA) objectives			1., 3., 4.	2., 5., 6.	
TOTAL SCORE:	**0**	**6**	**42**	**92**	**40**
POST-KNOWLEDGE CUMULATIVE SCORE FOR ALL RESPONDENTS:					**180**

*Scoring distribution is included here for illustrative purposes and was not present in the surveys provided to participants. Each respondent is represented with a specific color-coded number for purposes of differentiation while maintaining anonymity

Appendix G.

Improving Management of Older Adult Patients in an Emergency Department (ED) GANTT Chart

ID #	Phases and Steps	Responsible Party(ies)	Aug 17th	Aug 23rd	Aug 26th	Sept 1st	Sept 2nd	Sept 7th	Sept 15th	Sept 16th	Sept 17th	Sept 21st	Sept 22nd	Sept 29th	Oct 4th	Oct 8th	Oct 11th	Oct 17th	Oct 22nd	Oct 26th	Oct 27th	Nov 3rd	Nov 4th	Nov 5th	Nov 6th	Nov 14th	Nov 15th	Dec 1st	Dec	Dec	Dec	Dec	Dec	Status
1	**Project**																																
1.1	Meet w Professor to discuss semester project goals	CNL																															Ongoing
1.2	Dialogue with preceptor/mentor regarding project	CNL																															Ongoing
1.3	Meet with internal shareholders regarding macro initiative for Geriatric Emergency Department Accreditation	CNL																															Completed
2	**Research**																																
2.1	Database search for peer review literature	CNL																															Completed
2.2	Review of existing assessmnt modalities for Older Adult Patients	CNL																															Completed
3	**Assessment &**																																
3.1	Dialogue with senior RN staff regarding project goals	CNL																															Ongoing
3.2	Dialogue with less experienced RN staff regarding project goals	CNL																															Ongoing
3.3	Dialogue with traveler RN staff regarding project goals	CNL																															Ongoing
3.4	Dialogue with NP staff regarding project goals	CNL																															Ongoing
3.5	Create Pre-Knowedge Assessment Quiz	CNL																															Pending
3.6	Develop educational approach to inform staff on Dementia screening tools	CNL																															Pending
4	**Implementation**																																
4.1	Cunduct Pre-Knowledge Assessment Quiz	CNL																															Pending
4.2	Conduct educaional and informational sessions with key staff related to dementia screening in older adults	CNL																															Pending
4.3	Cunduct Post-Knowledge Assessment Quiz	CNL																															Pending
5	**Results Review**																																
5.1	Assess data from pre and post knowledge quizes	CNL																															Pending
5.2		CNL																															Pending

Appendix H.

Budget Analysis

Improving Management of Older Adults with Confusion to Reduce Length of Stay (LOS) in Emergency Department (ED)				
Improvement Costs	**# Staff**	**Time spent in Hrs**	**Av salary for role +(0.3 for benefits)**	**Total (#staff) x (time) x (salary) =**
CNL	1	50	$0.00	$0
RN	6	0.25	$108.74	$163.11
Educational materials & Supplies:			Laminated Flyers	$30
			Total Improvement Cost (TIC)	$193.11
Project Saving Cost Avoidance (ROI) *GOAL = Reduce LOS by 4hr/pt x 6pts/d	**Total Hours Reduced Per Month (over 30 days)**	**Average Hourly Cost Per pt Visit**	**Monthly Cost Avoidance (MCA) (hours reduced x hourly cost =)**	
= 24hrs	(30x24) = 720	$860	$619,200	
Potential total monthly cost avoidance = MCA-TIC if goal of reducing LOS by 4 hours for a total of 6 pts daily			$619,006.89	
Confused Older Adult? Think… H.A.L.T.				

Appendix I.

CNL Project: Statement of Non-Research Determination Form

Student Name: Kareem Carter

Title of Project:

Improving Nursing Staff Knowledge Related to Management of Geriatric Patients with Confusion in an Emergency Department (ED)

Brief Description of Project:

The ED in a large Bay Area hospital will be working to achieve Geriatric Emergency Department Accreditation (GEDA) through the American College of Emergency Physicians (ACEP)

A) Aim Statement:

To improve nursing staff knowledge by 30% on the management of older adult patients with confusion in the Emergency Department at a large Bay Area hospital by November 25, 2022.

B) Description of Intervention:

Create a Geriatric Confusion Checklist for nursing staff that focuses on recommended interventions to reduce adverse outcomes as outlined in the GEDA initiative. Checklist will provide staff with key strategies and reinforce existing assessment tools focused on categories related to caring for older adult patients with confusion in the ED, i.e., assessment of mental status, falls prevention, pharmacological considerations, and safe de-escalation of acute agitation.

Develop pre- and post-knowledge surveys reflective of the educational content in the Older Adult checklist.

C) How will this intervention change practice?

Valid existing assessment tools allow early identification of predictors of adverse outcomes in older adult patients presenting to the ED. Examples include the KINDER 1 Fall Risk tool, cognitive assessment tools such as the Delirium Triage Screen (DTS) and Brief Confusion Assessment Method (bCAM) and the Braden skin assessment tool for reducing likelihood of hospital acquired pressure ulcers (HAPU). Informing nursing staff at the point of care on how to effectively utilize these tools and implement them into regular practice can allow for enhanced care planning appropriate for the individual context. This can lead to safer management and improved outcomes among patients in the Older Adult population.

Additional emphasis on non-pharmacological interventions for management of behavioral and psychological symptoms of dementia (BPSD) as a first-line approach at de-escalation when dealing with adults Alzheimer's and related dementias is important. Common practices in ED settings for managing difficult behaviors in patients often involve the use of antipsychotic medications or other pharmacological interventions (e.g. antidepressants, anticonvulsants). Research shows that use of 2nd generation antipsychotics in older adults is correlated with increased mortality. Providing evidenced-based education and recommended techniques for safe de-escalation of clients with alterations in cognitive status will reinforce safer management guidelines for this population and reduce length of stay LOS.

D) Outcome measurements:

Nursing staff post-education survey scores.

To qualify as an Evidence-based Change in Practice Project, rather than a Research Project, the

criteria outlined in federal guidelines will be used: (http://answers.hhs.gov/ohrp/categories/1569)

x This project meets the guidelines for an Evidence-based Change in Practice Project as outlined in the Project Checklist (attached). Student may proceed with implementation.

☐This project involves research with human subjects and must be submitted for IRB approval before project activity can commence.

EVIDENCE-BASED CHANGE OF PRACTICE PROJECT CHECKLIST *

Instructions: Answer YES or NO to each of the following statements:

Project Title:	**YES**	**NO**
The aim of the project is to improve the process or delivery of care with established/ accepted standards, or to implement evidence-based change. There is no intention of using the data for research purposes.	**X**	
The specific aim is to improve performance on a specific service or program and **is a part of usual care**. ALL participants will receive standard of care.	**X**	
The project is **NOT** designed to follow a research design, e.g., hypothesis testing or group comparison, randomization, control groups, prospective comparison groups, cross-sectional, case control). The project does **NOT** follow a protocol that overrides clinical decision-making.	**X**	
The project involves implementation of established and tested quality standards and/or systematic monitoring, assessment or evaluation of the organization to ensure that existing quality standards are being met. The project does **NOT** develop paradigms or untested methods or new untested standards.	**X**	
The project involves implementation of care practices and interventions that are consensus-based or evidence-based. The project does **NOT** seek to test an intervention that is beyond current science and experience.	**X**	
The project is conducted by staff where the project will take place and involves staff who are working at an agency that has an agreement with USF SONHP.	**X**	
The project has **NO** funding from federal agencies or research-focused organizations and is not receiving funding for implementation research.	**X**	
The agency or clinical practice unit agrees that this is a project that will be implemented to improve the process or delivery of care, i.e., **not** a personal research project that is dependent upon the voluntary participation of colleagues, students and/ or patients.	**X**	
If there is an intent to, or possibility of publishing your work, you and supervising faculty and the agency oversight committee are comfortable with the following statement in your methods section: *"This project was undertaken as an Evidence-based change of practice project at X hospital or agency and as such was not formally supervised by the Institutional Review Board."*	**X**	

ANSWER KEY: If the answer to **ALL** of these items is yes, the project can be considered an Evidence-based activity that does NOT meet the definition of research. **IRB review is not required. Keep a copy of this checklist in your files.** If the answer to ANY of these questions is **NO**, you must submit for IRB approval.

*Adapted with permission of Elizabeth L. Hohmann, MD, Director and Chair, Partners Human Research Committee, Partners Health System, Boston, MA.

STUDENT NAME: Kareem Carter. Signature: Kareem Carter **DATE: 09/22/2022**

SUPERVISING FACULTY MEMBER NAME:
Francine Serafin-Dickson, DNP, MBA, BSN, CNL

Francine Serafin-Dickson

Signature of Supervising Faculty Member
DATE: 9/27/2