



A SURVEY OF DELIRIUM SELF-REPORTED KNOWLEDGE AND PRACTICES AMONG EMERGENCY PHYSICIANS IN THE UNITED STATES

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INTRODUCTION

Delirium, a state of acute brain dysfunction characterized by fluctuating consciousness, inattention, and disorganized thinking, affects 10-30% of older adults in emergency departments (EDs).^{1,2} Despite its prevalence, delirium is not detected in at least two-thirds of ED cases.¹ Delirium, when detected, is associated with adverse outcomes including higher mortality, prolonged hospitalization, inpatient falls, and cognitive decline.¹ Indeed, adults over 65 discharged from the ED with detected delirium have nearly a 5 times greater risk of 30-day mortality than those discharged without delirium.³ Up to 50% of incident delirium in hospitalized older adults can be prevented through non-pharmacologic means.⁴ EDs represent an entry point into the healthcare system for older adults where recognition of delirium is critical.²

Due to the prevalence of delirium among older ED patients and frequency with which it is missed by emergency physicians, delirium screening has been identified as a top quality indicator and priority area for geriatric emergency care.^{2,5,6} Additionally, delirium has been identified as a core geriatric competency for emergency medicine residents,⁷ but geriatric emergency medicine content is underrepresented in undergraduate and postgraduate training curricula as well as in licensing examinations.⁸ Limited literature describes emergency physicians' perceptions and practices in detecting, managing, and preventing delirium. A qualitative study based on focus groups with emergency physicians, nurses, and emergency medical services personnel in Indiana revealed that clinicians did not use uniform diagnostic strategies to detect delirium and perceived needs for increased provider training on delirium.⁹ A survey of Thai emergency physicians similarly demonstrated that less than one quarter routinely screened patients for delirium, and the majority recognized delirium as underdiagnosed in the ED.¹⁰

The goal of this research is to provide a national survey-based preliminary assessment of emergency physicians' knowledge, attitudes, and practices about ED delirium in the United States. This is the first such study to date and provides a unique contribution to literature about emergency physicians' perceptions and institutional prioritization of delirium in emergency settings.

METHODS

Study Design and Setting

An electronic survey asking emergency physicians about their knowledge and perceptions of delirium in older ED patients was developed by study investigators with expertise in geriatric emergency medicine and/or delirium (AL, SKI, CRC, AS, MK). With the goal of reaching a broad set of general emergency physicians, the survey was created for distribution to emergency physician members of the American College of Emergency Physicians (ACEP) Emergency Medicine Practice Research Network (EMPRN). EMPRN survey respondents are full- or part-time attending physicians who are board certified or eligible for board certification in emergency medicine and agree to respond to several short surveys per year.

Selection of Participants

EMPRN invited its 734 members by e-mail to complete the electronic, self-administered and anonymous survey in March 2019 (Survey #19). Following the initial invitation, two e-mail reminders were sent to EMPRN members approximately two weeks apart.

Measurements

The survey consisted of nine close-ended questions with multiple choice or 5-point Likert scale response categories asking physicians about their personal knowledge and institutional prioritization of delirium prevention, detection, and management, delirium protocols enacted in their EDs, and perceived challenges or knowledge gaps relating to delirium in the ED setting (see Appendix A). Four closed-ended multiple-choice demographic questions were included regarding participant age, gender, ethnicity, and region. Specific questions about delirium protocols were logic-based and administered only if a respondent reported the existence of a delirium protocol in their ED work environment. Survey respondents were permitted to omit a response to any question.

Data Analysis

EMPRN provided investigators with raw de-identified survey responses. Frequencies of responses were calculated and descriptive statistics were generated using Microsoft Excel. Missing responses were excluded.

Ethics Approval

The Institutional Review Board of Massachusetts General Brigham deemed this project as quality improvement not requiring study protocol review. ACEP EMPRN members join the network voluntarily and do not provide informed consent for survey participation, but rather complete a form to attest to agreement that submitted data may be used in a de-identified way for research and publication.¹¹

Patient and Public Involvement

Patients and the public were not involved in the design, conduct, reporting, or dissemination plans of this research.

RESULTS

Characteristics of Study Subjects

One hundred ninety-seven of 734 EMPRN physician members participated in the survey, for an overall response rate of 27%. Survey respondents were from 43 US states. The majority of survey

respondents were white male physicians. Demographics of survey respondents are further outlined in Table 1 and are broadly comparable to demographics of EMPRN participants for the 2019 year, 75% of whom were male, 81% of whom were age 40-69, and 76% of whom were White. There was some variation in Black and Hispanic composition of the survey respondent (0.5% and 1.5%, respectively) vs. broader EMPRN groups (2% and 2.5%, respectively), likely owing to relatively lower representation of these groups in EMPRN as well as smaller sample size of delirium survey respondents. Additionally, while EMPRN participants come from all 50 US states, 43 states were represented by delirium survey respondents. Null responses are excluded from the results presented below.

Table 1. Demographics of Survey Respondents

<i>Characteristic</i>	<i>n</i>
Age (N=195)	
30 to 39	29 (15%)
40 to 49	64 (33%)
50 to 59	51 (26%)
60 to 69	42 (22%)
70 to 79	9 (5%)
Gender (N=195)	
Male	147 (75%)
Female	48 (25%)
Ethnicity/Race (N=193)	
Asian	9 (5%)
White	148 (76%)
Black or African American	1 (0.5%)
Hispanic or Latino	3 (1.5%)
Two or More Races	7 (4%)
Other	25 (13%)
Region (N=195)	
Midwest	50 (26%)
Northeast	33 (17%)
West	45 (23%)
South	67 (34%)

Null responses were excluded from the table.

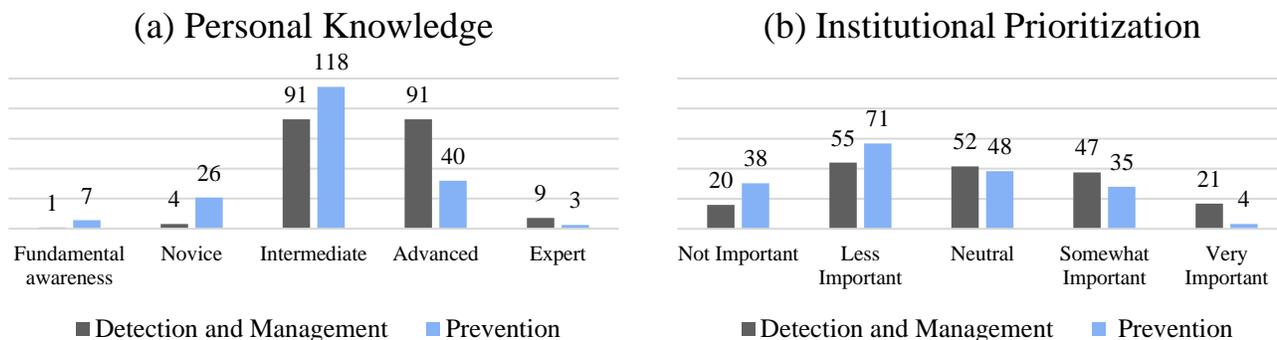
Main Results

Self-Reported Knowledge of Delirium Detection, Management, and Prevention

When asked to rate their own knowledge of detecting and managing delirium on a Likert scale (0=Not applicable, 1=Fundamental awareness, 2=Novice, 3=Intermediate, 4=Advanced, 5=Expert), the majority of respondents reported intermediate (91/196, 46%) or advanced (91/196, 46%) knowledge (Figure 1). Most reported intermediate (118/194, 61%) or advanced (40/194, 21%) knowledge of delirium

prevention on the same Likert scale (Figure 1). With respect to personal concern about discharging a patient with unrecognized delirium home, 60% of providers reported they would be very (27/196, 14%) or somewhat (89/196, 45%) concerned about discharging a patient with delirium, with 40% reporting they would feel less concerned (43/196, 22%), not concerned (8/196, 4%), or neutral (29/196, 15%).

Figure 1: Physician perception of (a) personal knowledge about delirium detection and management (n=196) and delirium prevention (n=194) and (b) institutional prioritization of delirium detection and management (n=195) and delirium prevention (n=196) in their emergency department. “Not applicable” and null responses were excluded from the figure.



Emergency Department Protocols

Twenty-seven respondents (27/197, 14%) reported that the ED where they work has a protocol to address delirium. Among those reporting delirium protocols at their institutions, most protocols focused on management (20/27, 74%) and detection/screening (19/27, 70%) and to a lesser degree on prevention (8/27, 30%). Respondents with an institutional protocol for delirium screening reported that screening was most often performed by a triage nurse (11/27, 41%) or clinical nurse (9/27, 33%), and less frequently by a physician (6/27, 22%), geriatrics team (3/27, 11%), advanced practice provider (2/27, 7%), or other staff member (2/27, 7%). The majority of respondents reporting an institutional delirium protocol estimated that they and their colleagues adhered to the protocol (20/27, 74%). Among those who did not report adherence (7/27, 26%), suspected reasons for non-adherence among their peers included forgetting to apply the protocol (6/7, 86%), time constraints (4/7, 57%), not being convinced the protocol is necessary (3/7, 43%), limited staff awareness about the protocol (2/7, 29%), and follow-up actions for a positive screen not being clear or feasible (2/7, 29%). Those reporting working in an ED with a delirium protocol were more likely to rank themselves as having advanced or expert knowledge of delirium detection and management (17/27, 63%) compared to the total sample (100/196, 51%). Those with an ED delirium protocol were also more likely to rank their knowledge of delirium prevention as advanced or expert (12/27, 45%) compared to the total sample (43/194, 23%). Those with a delirium protocol were slightly less likely to be somewhat or very concerned about discharging delirious patients home (14/27, 52%) compared to the total sample (116/196, 59%). Notably, within the total sample, 86% (167/195) reported not having a formal way to document delirium if detected. Of those who reported having an ED delirium protocol, 52% (14/27) reported having a formal way to document delirium.

Major Challenges and Delirium Prioritization

When asked about the major challenges in diagnosing, preventing, and managing delirium, the majority of respondents reported environmental factors associated with the ED (159/193, 82%), difficulties identifying delirium in people with dementia (145/193, 75%), and time constraints (124/193, 64%; Table 2).

Most respondents viewed education on delirium for emergency clinicians (132/190, 69%) and nurses (111/190, 58%) as resources that could be helpful to address ED delirium, and nearly half perceived additional geriatrics/psychiatry presence in the ED (88/190, 46%) and pharmacist assistance with medication reconciliation (88/190, 46%) as other useful tools to address ED delirium (Table 2).

Table 2. Provider perception on key challenges and knowledge gaps around delirium in the ED and tools and resources that would be helpful in addressing delirium in the ED. Abbreviations: ED=emergency department; MD=physician; NP=nurse practitioner; PA=physician assistant; RN=registered nurse.

Key issues or knowledge gaps in diagnosing, preventing or managing delirium (N=193)	
<i>Issue Identified</i>	<i>n (%)*</i>
ED environment makes it challenging to implement non-pharmacologic approaches to delirium prevention or management	159 (82%)
Challenge of identifying delirium in patients with dementia	145 (75%)
Clinical time constraints	124 (64%)
Lack of availability of collateral information for patients with dementia	99 (51%)
Lack of knowledge about non-pharmacologic management strategies for delirium	59 (31%)
Under appreciation of the clinical significance of delirium	55 (28%)
Lack of knowledge about delirium prevention measures	57 (30%)
Lack of knowledge or recognition of the hypoactive subtype of delirium	57 (30%)
Lack of knowledge about what medications to order	46 (24%)
Lack of billable code(s) for acute delirium and/or delirium prevention	17 (9%)
Utility of tools or resources for addressing delirium in the emergency department (N=190)	
<i>Tool or resources</i>	<i>n (%)</i>
Education for physicians/NP/PA on delirium	132 (69%)
Education for nurses	111 (58%)
More geriatrics/psychiatry presence in the ED	88 (46%)
Pharmacist help for deliriogenic medications, medication reconciliation	88 (46%)
Education for family members/patients	73 (38%)
Delirium champion (MD, NP, PA or RN based in the ED)	42 (22%)

*Totals exceed 100% as providers were allowed to select multiple answers.

Null responses were excluded from the table.

Institutional Prioritization about Delirium in the Emergency Department

Respondents varied in perceptions about delirium detection and management as an institutional priority for their ED, with 11% (21/195) reporting it was a very important, 24% (47/195) as somewhat important, 27% (52/195) as neutral, 28% as less important than other priorities (55/195), and 10% (20/195) as not important (Figure 1). Notably, respondents reported that delirium prevention in the ED was a lower priority for their institution, with 36% (71/196) reporting it as less important than other priorities within emergency medicine and 19% (38/196) as not important (Figure 1).

DISCUSSION

This survey-based research with general emergency physicians highlights several important points. First, these responses reveal asynchrony between emergency physicians' self-perceptions and actual research into this topic. While most physicians surveyed perceived having intermediate or advanced knowledge of delirium detection, clinical research consistently demonstrates that ED staff correctly identify delirium only 35% of the time when it is present.¹ Additionally, almost half of respondents reported neutrality or low levels of concern about discharging a patient with unrecognized delirium. This finding is concerning, given higher mortality rates among adults discharged from the ED with detected delirium³ and that unknowingly discharging a patient with delirium may be associated with higher mortality.¹² These incongruities highlight the need for increased training about delirium among emergency clinicians, echoing findings from other studies,^{2,9} and supported as an important strategy by the survey respondents themselves.

Because of the high prevalence of delirium among older ED patients and under-recognition of delirium by emergency physicians, delirium screening has been identified as a top quality indicator and priority for geriatric emergency care.^{2,5,13} Nonetheless, the majority of respondents reported a lack of institutional protocols for detecting and/or managing delirium. While nationwide data are not yet available, a minority of ACEP geriatric-accredited EDs (22%) currently have delirium protocols in place.¹⁴ Further systematic reviews will help identify delirium prevention and management protocols across EDs globally.¹⁹

Of note, ED-specific tools have recently been developed to assist clinicians with the detection, prevention, and management of delirium.^{2,15,16} One of these toolkits, ED-DEL, specifically addresses the mismatch between physician perceptions and real-world clinical practice in delirium detection by offering a change package with strategies on creating awareness and engaging ED clinicians in delirium training and protocol development. Actions recommended to prioritize delirium initiatives within an ED include having a geriatrics champion collaborate with frontline clinicians in delirium initiative development, aligning initiatives with hospital leadership priorities, linking the initiative to geriatric ED accreditation status, and appealing to business/administrative interests such as quality measures or financial penalties that could impact patient safety and reimbursements, respectively.² Currently, little is known about barriers and facilitators to adoption and implementation of the ED-DEL change package and other ED delirium tools. These represent important topics for future research,^{1,15} particularly given our findings regarding perceived non-adherence to protocols. Our findings do offer initial insights into two barriers previously described in ED literature—specifically, clinician time constraints¹⁷ and difficulty identifying delirium among those with dementia¹⁸—which similarly merit further exploration.

Our survey data also reveal a major challenge of a lack of standardized approaches to documenting delirium when detected. Indeed, clinicians may interchangeably use the clinical impressions of “altered mental status,” “delirium,” or “encephalopathy” due to overlap in presentation, though each diagnosis carries different implications for patient management, quality measures, and hospital reimbursement.^{20,21} Improvement in documentation of delirium represents an important component of ED delirium initiatives, as integration of delirium assessment into the electronic medical record has previously been shown to improve communication within care teams and treatment for patients with positive delirium screening in acute geriatric care.²²

This study faces several limitations. First, surveyed physicians had opted to participate in a national research network, and the survey had a low response rate of 27%, though this is similar to the typical 25-50% response rate reported for other EMPRN surveys.¹¹ Additionally, information was not collected about participants' practice settings (academic vs. community; urban, suburban, vs. rural; adult-only vs. general; geriatric accreditation status; annual volume) or training in geriatric emergency medicine. As such, the generalizability of the results to the broader population of emergency physicians and departments in the United States cannot be fully ascertained. However, an important strength of this study is its focus on general emergency physicians in the United States, whose perspectives on delirium prioritization are not well-characterized, in contrast to those of geriatric emergency physicians.¹³ The survey collected subjective self-reports of individuals' knowledge about delirium, rather than objectively testing respondents' understanding of delirium detection, management, and prevention. Physicians with training and/or expertise in delirium may have been more likely to respond. The survey also asked respondents to report on whether a delirium protocol exists at their institution; it is possible some respondents were unaware of existing protocols at their institutions. Within the EMPRN network, there may have been more than one survey respondent from a single ED, which could also impact information about presence of delirium protocols. As the survey asked respondents to describe institutional prioritization and others' use of ED delirium protocols, results reflect physicians' own perceptions and may not accurately reflect practice. However, survey data offer important insights into physicians' own experiences. Finally, this study focused on attending emergency physicians and does not represent the views of advanced practice providers, nurses, resident physicians, and non-emergency physicians who work in EDs, all of whom play important clinical roles in addressing delirium in different institutional settings. Understanding these stakeholders' perspectives represents an important direction for future research.

CONCLUSION

Surveyed emergency physicians overall self-report high knowledge of delirium detection and management, contrasting with prior research demonstrating low ED delirium detection rates. Self-reported variability of institutional prioritization of delirium does not align with that of geriatric emergency medicine experts and associations. As new tools emerge for ED delirium detection, prevention, and management, strategies will be needed to bridge these gaps and further research will be imperative to understand successful implementation of ED delirium programs.

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CONFLICTS OF INTEREST

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REFERENCES

1. Carpenter CR, Hammouda N, Linton EA, et al. Delirium Prevention, Detection, and Treatment in Emergency Medicine Settings: A Geriatric Emergency Care Applied Research (GEAR) Network Scoping Review and Consensus Statement. *Academic Emergency Medicine*. 2020;28(1):19-35. doi:10.1111/acem.14166
2. Kennedy M, Webb M, Gartaganis S, et al. ED-DEL: Development of a change package and toolkit for delirium in the emergency department. *Journal of the American College of Emergency Physicians Open*. 2021;2(2). doi:10.1002/emp2.12421
3. Israni J, Lesser A, Kent T, Ko K. Delirium as a predictor of mortality in US Medicare beneficiaries discharged from the emergency department: a national claims-level analysis up to 12 months. *BMJ Open*. 2018;8(5):e021258. doi:10.1136/bmjopen-2017-021258
4. Hshieh TT, Yue J, Oh E, et al. Effectiveness of Multicomponent Nonpharmacological Delirium Interventions: A Meta-analysis. *JAMA Intern Med*. 2015;175(4):512. doi:10.1001/jamainternmed.2014.7779

5. American College of Emergency Physicians, American Geriatrics Society, Emergency Nurses Association, Society for Academic Emergency Medicine. Geriatric Emergency Department Guidelines. *Annals of Emergency Medicine*. 2014;63(5):e7-e25. doi:10.1016/j.annemergmed.2014.02.008
6. Schuster S, Singler K, Lim S, Machner M, Döbler K, Dormann H. Quality indicators for a geriatric emergency care (GeriQ-ED) – an evidence-based delphi consensus approach to improve the care of geriatric patients in the emergency department. *Scandinavian Journal of Trauma, Resuscitation and Emergency Medicine*. 2020;28(1):68. doi:10.1186/s13049-020-00756-3
7. Hogan TM, Losman ED, Carpenter CR, et al. Development of Geriatric Competencies for Emergency Medicine Residents Using an Expert Consensus Process. *Academic Emergency Medicine*. 2010;17(3):316-324. doi:10.1111/j.1553-2712.2010.00684.x
8. Ringer T, Dougherty M, McQuown C, et al. White Paper—Geriatric Emergency Medicine Education: Current State, Challenges, and Recommendations to Enhance the Emergency Care of Older Adults. *AEM Education and Training*. 2018;2(S1):S5-S16. doi:10.1002/aet2.10205
9. LaMantia MA, Messina FC, Jhanji S, et al. Emergency Medical Service, Nursing, and Physician Providers' Perspectives on Delirium Identification and Management. *Dementia (London)*. 2017;16(3):329-343. doi:10.1177/1471301215591896
10. Sri-on J, Tirrell GP, Wuthisuthimethawee P, Liu SW. Knowledge and practices of Thai emergency physicians regarding the care of delirious elderly patients. *International Journal of Emergency Medicine*. 2014;7(1):38. doi:10.1186/s12245-014-0038-z
11. ACEP [American College of Emergency Physicians] Now. Support EM Research: Join the Emergency Medicine Practice Research Network. *ACEP Now*. <https://www.acepnow.com/article/support-em-research-join-the-emergency-medicine-practice-research-network/>. Published September 19, 2018. Accessed February 27, 2021.
12. Kakuma R, Fort GGD, Arsenault L, et al. Delirium in Older Emergency Department Patients Discharged Home: Effect on Survival. *Journal of the American Geriatrics Society*. 2003;51(4):443-450. doi:https://doi.org/10.1046/j.1532-5415.2003.51151.x
13. Terrell KM, Hustey FM, Hwang U, Gerson LW, Wenger NS, Miller DK. Quality Indicators for Geriatric Emergency Care. *Academic Emergency Medicine*. 2009;16(5):441-449. doi:https://doi.org/10.1111/j.1553-2712.2009.00382.x
14. Kennedy M, Lesser A, Israni J, et al. Reach and Adoption of a Geriatric Emergency Department Accreditation Program in the United States. *Annals of Emergency Medicine*. 2021;0(0):1-7. doi:10.1016/j.annemergmed.2021.06.013
15. Kennedy M, Hwang U, Han JH. Delirium in the Emergency Department: Moving From Tool-Based Research to System-Wide Change. *Journal of the American Geriatrics Society*. 2020;68(5):956-958. doi:https://doi.org/10.1111/jgs.16437
16. Shenvi C, Kennedy M, Austin CA, Wilson MP, Gerardi M, Schneider S. Managing Delirium and Agitation in the Older Emergency Department Patient: The ADEPT Tool. *Annals of Emergency Medicine*. 2020;75(2):136-145. doi:10.1016/j.annemergmed.2019.07.023
17. Elder NM, Bambach KS, Gregory ME, Gulker P, Southerland LT. Are Geriatric Screening Tools Too Time Consuming for the Emergency Department? A Workflow Time Study. *Journal of Geriatric Emergency Medicine*. 2021;2(6):1-5.
18. El Hussein MT, Hirst S, Stares R. Delirium in Emergency Departments: Is it Recognized? *Journal of Emergency Nursing*. Published online March 2021:S0099176721000118. doi:10.1016/j.jen.2021.01.009

19. Dahlstrom EB, Han JH, Healy H, et al. Delirium prevention and treatment in the emergency department (ED): a systematic review protocol. *BMJ Open*. 2020;10(10):e037915. doi:10.1136/bmjopen-2020-037915
20. Tong D, Epps B. Documentation and billing: Tips for hospitalists | The Hospitalist. Published August 3, 2018. Accessed November 15, 2021. <https://www.the-hospitalist.org/hospitalist/article/171844/mixed-topics/documentation-and-billing-tips-hospitalists/page/0/1>
21. Franks J, Anderson J, Kennedy R, Yun H. Inpatient Diagnosis of Delirium and Encephalopathy: Coding Trends in 2011-2018. *Innov Aging*. 2020;4(Suppl 1):904-905. doi:10.1093/geroni/igaa057.3329
22. Solberg LM, Plummer CE, May KN, Mion LC. A quality improvement program to increase nurses' detection of delirium on an acute medical unit. *Geriatric Nursing*. 2013;34(1):75-79. doi:10.1016/j.gerinurse.2012.12.009

Supplemental Appendix A. Survey Instrument

1. How would you rate your knowledge when it comes to detection and management of delirium?
- Not applicable
 - 1- Fundamental awareness (basic knowledge)
 - 2- Novice (limited experience)
 - 3- Intermediate (practical application)
 - 4- Advanced (applied theory)
 - 5- Expert (recognized authority)

2. How would you rate your knowledge when it comes to delirium prevention?
- Not applicable
 - 1- Fundamental awareness (basic knowledge)
 - 2- Novice (limited experience)
 - 3- Intermediate (practical application)
 - 4- Advanced (applied theory)
 - 5- Expert (recognized authority)

3. Is delirium documented within your medical record with any formal tool or approach?
- Yes
 - No

4. Does your ED have a protocol or program in place for the detection, management and/or prevention of delirium?

No

Yes (triggers two 2nd tier questions)

- a) What programs/protocols do you have (check all that apply)?

protocol for delirium screening/detection (triggers 3rd tier question)

Who does the initial delirium/mental status screening in your ED? (check all that apply)

Triage nurse

Clinical nurse

Physician

Nurse practitioner/physician assistant

Geriatrics team

Other _____

protocol for delirium management

protocol for delirium prevention

- b) Would you say that providers use the protocol(s) (with at least 50% adherence, that is at least half the time)?

Yes

No (triggers 3rd tier question)

Why do you think the providers do not use the protocol(s)? (Check all that apply)

- Time constraints
- Lack awareness that a protocol exists
- Forget a protocol exists
- Aren't convinced the protocol is necessary
- The follow-up action(s) for a positive screen aren't clear/feasible
- (Free text) _____

5. In your opinion, is delirium detection and management considered a top priority area for your ED?

- 1 Very important
- 2 Somewhat Important
- 3 Neutral
- 4 Less important
- 5 Not important

6. In your opinion, is delirium prevention considered a top priority area for your ED?

- 1 Very important
- 2 Somewhat Important
- 3 Neutral
- 4 Less important
- 5 Not important

7. Are you concerned about discharging patients home with unrecognized/undiagnosed delirium?

- 1 Very concerned
- 2 Somewhat concerned
- 3 Neutral
- 4 Less concerned
- 5 Not concerned

8. What do you see as the key issues or knowledge gaps in diagnosing, preventing or managing delirium at your ED (check all that apply)?

- Challenge of identifying delirium in patients with dementia
- Lack of availability of collateral information for patients with dementia
- Lack of knowledge or recognition of the hypoactive subtype of delirium
- Lack of knowledge about what medications to order
- Lack of knowledge about non-pharmacologic management strategies for delirium
- Lack of knowledge about delirium prevention measures
- Lack of billable code(s) for acute delirium and/or delirium prevention
- Clinical time constraints
- ED environment makes it challenging to implement non-pharmacologic approaches to delirium prevention or management (untethering, early mobility, hydration, orientation, sleep, etc.)
- Under appreciation of the clinical significance of delirium

9. We are trying to determine tools or resources you might find helpful to address delirium in the ED. Would you like to see any of the following? (check all that apply)
- Delirium champion (MD, NP, PA or RN based in the ED)
 - More geriatrics/psychiatry presence in the ED
 - Education for nurses
 - Education for physicians/NP/PA on delirium
 - Education for family members/patients
 - Pharmacist help for deliriogenic medications, medication reconciliation