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SEARCH STRATEGY

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Risk Assessment of Self-Injurious Behavior and Suicide Presentation in the Emergency Department: An Integrative Review: JEN

ABSTRACT (ENGLISH)

Introduction

Globally, there is a lack of clarity regarding the best practice to distinguish patients at the highest risk of suicide. This review explores the use of risk assessment tools in emergency departments to identify patients at high risk of repeat self-harm, suicide attempts, or death by suicide.

Methods

The review question (“Does the use of risk assessment tools in emergency departments identify patients at high risk of repeat self-harm, suicide attempts, or death by suicide?”) focused on exposure and outcome. Studies of any design were included. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines were used. Study characteristics and concepts were extracted, compared, and verified. An integrative approach was used for reporting through narrative synthesis.

Results

Nine studies were identified for inclusion. Two risk assessment tools were found to have good predictive ability for suicide ideation and self-harm. Three had modest prediction of patient disposition, but in one study, the clinical impression of nurses had higher predictive ability. One tool showed modest predictive ability for patients requiring admission.

Discussion

This review found no strong evidence to indicate that any particular risk tool has a superior predictive ability to identify repeat self-harm, suicide attempts, or death by suicide. Best practice lacks clarity to determine patients at highest risk of suicide, but the use of risk assessment tools has been recommended. Nevertheless, such tools should not be used in isolation from clinical judgment and experience to evaluate patients at risk. Education and training to augment risk assessment within the emergency department are recommended.

FULL TEXT

Contribution to Emergency Nursing Practice

••Suicide is preventable; therefore, it is vital that evidence-based tools are used for identification, treatment, and prevention.

••This review indicates no evidence that any particular risk tool has a high predictive ability aimed at indicating future self-harm or suicide. The use of risk assessment tools has been recommended, despite lack of clarity regarding best practice to identify patients at the highest risk of suicide.

••Risk assessment tools should not be used in isolation from clinical judgment and experience to evaluate patient risk for future self-harm and suicide. Staff education and training are paramount for suicide prevention, especially during the coronavirus disease pandemic.

Introduction

Commonly misclassified and underreported, suicide remains highly stigmatized and is still an illegal act in many countries.[1] The World Health Organization (WHO)[1] defines suicide as “the act of deliberately killing oneself” (Supplementary Appendix 1). It is the 15th most common cause of mortality, accounting for 1.4% of deaths across the worldwide population.[1,2] In 2013, the WHO[1] launched their inaugural mental health action plan with the aim of reducing the rate of suicide in all countries by 2020.

Patients who attempt suicide present through an emergency care pathway, of which the emergency department is just one part. The emergency department is time-bound, with competing priorities arising from patient intensity and the need to rapidly determine disposition and move patients.[3] These factors can create barriers to effective holistic assessment and care, which may result in missed opportunities to identify suicidal intentions.[4]

Risk assessment tools should ensure that patients at high risk of death by suicide are identified in emergency departments to reduce mortality by suicide after visit to a health care setting.[5] Despite assessment tools advocated by WHO[1] and The Joint Commission,[6] globally, there is a lack of clarity regarding best practice to identify which patients are at highest risk of suicide. Prevention of suicide typically employs standardized, systematic assessment tools to guide clinicians and supplement clinical evaluation to identify those at highest suicide risk,[7] the aim being to decrease any unnecessary interventions, redirect scarce resources, and expedite care delivery to appropriate treatment.[8]

In 2017, a total of 13 goals for suicide prevention were released by the US Surgeon General and the Actional Alliance forming a national strategy for suicide prevention.[9] One key goal of the national strategy is to reduce access to lethal means.[9] Screening is valuable in the identification of identifying lethal means and could put time and distance between lethal means and individuals who are in crisis, preventing suicide and saving lives.[9]

Yet, suicide mortality has not decreased drastically over the last 25 years, especially compared with other leading causes of death worldwide.[10] In 2012, 804 000 people worldwide died by suicide, compared with 793 823 in 2017—a decrease of only 1.27%.[11] For each one of these deaths from suicides, it is estimated that there are an additional 20 people who have attempted suicide.[1] Disability caused by nonfatal suicide attempts account for 39 million adjusted life years or the loss of 39 million years of full health.[12] Furthermore, approximately 6 close relatives will be bereaved by a family member’s suicide, putting them at greater risk of suicide themselves.[13]

More recently, the COVID-19 pandemic may also lead to a further increase in suicide rates.[14] COVID-19 has already negatively affected psychological and sociological factors for many individuals, which means that the prevention of suicide needs urgent consideration, now even more so than ever.[15]

The National Institute for Health and Care Excellence encourages risk and needs assessment of patients but does not recommend the use of risk assessment tools to determine patient disposition or treatment.[16] In contrast, The Joint Commission[6] requires all patients who are being evaluated or treated for behavioral health conditions to be screened for suicide ideation using a validated screening tool. Despite nearly all practice guidelines stating the need for assessment, evidence suggests that only 60% of people who harm themselves receive a mental health assessment at the point of their presentation in the emergency department.[17] This reiterates missed opportunities as the emergency department represents a conduit for those at risk of suicide and other health care settings where contact with health care providers occurs.[2]

Chock et al[18] determined that each year, 70-80% of patients who present to the emergency department with suicidal intentions die by suicide. Suicidal ideation is present in around 8.7% of ED patients in the United States, but only 6.5% of current screens are positive.[19,20] Around 16-24% of ED patients who present with self-harm will repeat attempts with more lethal methods.[21,22] Nearly 4% of people presenting to hospitals in the United Kingdom die by

suicide in the 5 years after presentation (rates 16-60 times higher than in the general population).[21,22] Suicide is preventable; therefore, it is vital that appropriate, evidenced-based practice is used for the identification, treatment, and concurrently, the prevention of suicide worldwide.[1]

The purpose of this integrative review was to investigate how effectively risk assessment tools identify those at high risk of repeat self-harm, suicide attempts, or death by suicide. Our primary question was, “Does the use of risk assessment tools in emergency departments identify patients at high risk of repeat self-harm, suicide attempts, or death by suicide?’ Additional review questions used to structure review findings were as follows:

1. What tools are currently being used in practice?
2. What outcomes are used to measure the effectiveness of risk assessment tools?
3. Do any specific tools have greater predictive ability for specific outcomes compared with other tools?
4. What risk items are identified within tools?
5. What other factors are reported to aid the identification of patients at risk?

Methods Design

The integrative approach to this review enabled amalgamation of diverse methodologies.[23] Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines were used.[24] The Population, Exposure, and Outcome framework was applied to the primary review question.[25]

Search Strategy Databases

Multiple electronic databases were selected to ensure that elements of the topic were not omitted by limiting the field of practice. Through Ovid, the following were accessed: CINAHL (1937 onwards), Embase (1974 onwards), MEDLINE (1946 onwards), PsychINFO (1967 onwards), PubMed, and Proquest. Reference list searching was carried out on all papers selected for full text reading.

Search Terms and Eligibility Criteria

Medical Subject Heading index was used to identify search terms. Eligibility criteria for inclusion/exclusion were developed using current literature to provide rationale (Table 1).

Critical Appraisal

Relevant checklists from Joanna Briggs Institute were used to critically appraise each piece of literature. The critical appraisal results are available as online supplemental material (Supplementary Appendix 2).[26]

Data Synthesis

Qualitative data synthesis was achieved by grouping the outcome measures and identification of commonalities and connections between studies.[27] Data were tabulated using Microsoft Excel to organize and manage data extracted. Comparisons were made across items according to the characteristics. Owing to the diversity of study methodologies, outcome measures, and heterogeneity of risk items on tools, quantitative results could not be combined.[28]

Results Search Outcomes

This process is demonstrated by the Preferred Reporting Items for Systematic Reviews and Meta-Analysis flow diagram (Figure 1).[24]

Summary of Critical Appraisal

No studies were excluded from critical appraisal. A decision was reached that qualitative data may generate new insights at the point of synthesis.

Study Characteristics

Nine studies were included: 5 American, 2 Canadian, 1 English, and 1 Taiwanese. This review includes 7 multi-site ED studies ranging from 2 to 32 sites, with 2 studies conducted in singular urban hospitals. Sample sizes ranged from 51 to 6442. A plethora of different risk assessment tools were used: most commonly the SAD PERSONS scale (*n* = 5) and the Columbia-Suicide Severity Rating Scale (*n* = 3).

Seven studies provided data for a response rate, and this ranged from 47.7% to 84%. All studies included 2 or more outcome measures, namely, a repeat incidence of self-injurious behavior (*n* = 7), revisit to the emergency department due to self-injurious behavior (*n* = 2), or admission to a psychiatric hospital (*n* = 2) (Table 2).

Data Synthesis

Five studies evaluated single tools, and 4 evaluated multiple synthesized risk assessment tools.[29–37] In total, 15 heterogeneous tools and 23 risk items were identified across the 9 studies. The different types of assessment tools are listed in Table 3.

Reported Predictive Ability and Outcomes of Risk Assessment Tools

To measure the predictive ability, 3 principal review outcomes were identified: self-harm or suicide incidences, admissions to hospital, and patient disposition. Other outcomes were self-harm service quality, suicide risk screening frequency, and adverse events occurring in the ED setting (Table 3).

Only 3 tools were investigated by more than 1 study, which found the Columbia-Suicide Severity Rating Scale (C-SSRS) to have poor predictive value of suicide, self-harm, admission, and adverse events in the emergency department, with modest predictive value for discharges.[20,30] The SAD PERSONS Scale (SPS) was found to be slightly more effective at predicting admissions and discharges than the C-SSRS but does not predict suicide or self-harm.[29,31,32] The Modified SAD PERSONS Scale (MSPS) does not effectively predict self-harm or suicide but, like the C-SSRS, had moderate predictive value for patient disposition.[30,32]

Risk Items

Across the tools, 23 risk items—other factors that could potentially aid in the identification of patients at risk—were heterogeneous, indicating the wide spectrum of risk factors associated with suicide. The risk items most commonly recurring were hopelessness; suicide ideation, attempts, or plans; and drug and alcohol abuse. The SAD PERSONS scale contains 3 risk items (suicidal thoughts, suicide attempt, and suicide plans) that appear to create the foundation for the Beck Scale for Suicidal Ideation (BSSI), Suicide Assessment Five-Step Evaluation and Triage (SAFE-T), and Suicide Risk Screener (SRS).[5,33,38,39] The Psychiatric Emergency Research Collaboration (PERC) screener is composed of questions from the Patient Health Questionnaire-9 (PHQ-9) and the C-SSRS (Supplementary Appendix 3).[34]

Self-Harm or Suicide Incidences

Seven studies included self-harm incidences or suicidal behavior as a risk identification outcome. Self-harm incidences included engaging in self-harm, repeat self-harm, intentional self-harm, or another event of undetermined intention. Suicidal behavior included death by suicide, suicide attempts, or a suicide preparatory event. Many studies did not differentiate between self-harming with intent to die (suicide attempt or suicide) and nonsuicidal self-inflicted injury.

The PERC screener and CSPS reported high sensitivity at predicting suicidal ideation or self-harm.[34,35] The SPS and nonvalidated, locally developed tools had good predictive values for self-harm repetition, but this correlation was not seen when adjustments were made for differences in the case mix.[31] The Beck Hopelessness Scale, Brief Symptom Inventory, Barrett Impulsiveness Scale, and Drug Abuse Screening Test-10 were also found to be significant predictors of self-harm but did not exhibit strong predictive ability when used in isolation.[36]

The CAGE questionnaire and MSPS did not predict self-harm or suicide.[30,34] The studies found that the predictive value of SRS, C-SSRS, and SAFE-T scale (for death by suicide and suicide attempts) was unclear as only a small percentage of individuals who went on to die by suicide were identified by these tools.[30,33,37]

Overall, results show that there is no significant evidence to demonstrate that any of the tools have a strong predictive ability for repeat self-harm or suicide. These results also show that risk assessment tools do not have a strong predictive ability when used without clinical judgment to predict suicide or repeat self-harm and therefore may not have an impact on risk of death by suicide.

Admissions to Psychiatric Services

Only one study directly related the outcome of admissions to demonstrate or evaluate the predictive value of tools. Four studies included a need or request for clinical intervention as a secondary outcome.[29,30,33,34] Secondary outcomes included need for psychiatric admission or subsequent clinical invention of any type. The C-SSRS, PHQ-9, and BSSI poorly predicted any admissions to psychiatric services, with the SPS having better predictive ability for predicting admissions.[29] Use of the SPS therefore may have a positive impact on patient mortality due to suicide.

Patient Disposition

Two studies included patient disposition as their outcomes, highlighting discharge to the patient's home. These studies found that the MSPS, C-SSRS, and SAFE-T are modest at predicting safe discharge.[30] The PHQ-9, BSSI, and C-SSRS had poor prediction of a prolonged stay in psychiatric services (>5 days), with the SPS only having better predictive ability for prolonged stays.[29] The clinical impression (alone) of nurses had high predictive ability of prolonged hospital admissions compared with attending physicians, whose results were not statically significant at predicting these outcomes.[29] Overall, none of the studies demonstrated that these tools had a clear strong predictive ability for patient discharge and therefore are unlikely to affect suicide death rate or repeat self-harm.

Additional Outcome Measures: Service Quality, Screening Frequency, and Adverse Events in the Emergency Department

Throughout the studies, 3 other main outcomes were measured. No difference was seen in service quality score between hospitals that did and did not use tools as a component of risk assessment.[31] The implementation of universal SRS in the emergency department led to a 53% increase in patient screening.[33] Finally, the C-SSRS, PHQ-9, SPS, and BSSI poorly predict adverse events in the ED setting.[29] The implementation of compulsory screening does increase the number of people screened but does not alter the C-SSRS, PHQ-9, SPS, and BSSI's poor predictive ability of adverse outcomes, demonstrating that these tools are not expected to positively affect suicide rates.[29]

Discussion

It is incredibly difficult to ascertain the risk of a future event such as completed suicide; hence risk of repeated self-harm is the outcome most frequently measured.[29] Across the tools examined, no significant evidence was found that indicates any particular risk tool had a high predictive ability aimed at indicating future self-harm or suicide. Moreover, the intent behind self-harm is difficult to determine. It can be challenging to classify if a presentation of self-harm does or does not have suicidal intent.[40] Given this, Carroll, Metcalfe and Gunnell[41] and Karasouli et al[22] asserted that previous self-harm is one of the clearest risk factors for assessing risk of completed suicide. These findings are supported by other systematic reviews conducted in the ED setting and other secondary health care settings.[7,42,43] Conversely, in community and outpatient settings, research suggests the PHQ-9 tool to be a strong predictor of suicide attempt or death from suicide.[44,45] It is most likely that in community environments, patients at highest risk of suicide are reassessed, enabling comparison with baseline assessments, permitting the PHQ-9 to be more effective.[3]

Throughout the tools examined, a diverse range of risk items were identified. Research demonstrates that there were originally only 3 risk factors for suicide recognized.[46] Over time, decreased stigma has led to increased research surrounding mental illness, hence an increase in the number of known risk factors.[47] In practice, the emergency department is a conduit for most initial patient assessments, and consequently, the implementation of briefer tools has prevailed. For example, cognitive assessment of older patients presenting to the emergency department has been focused over time from 30 questions to 4.[48,49] Hence increasing the number of risk factors on assessment tools may inadvertently cause difficulties in the identification of patients at highest risk. Henceforward, if developed, briefer risk tools populated with evidence-based, relevant risk factors could be more effective in identifying patients at high risk of suicide.[32,35,36]

Similarly, studies examined demonstrate that throughout various health organizations, there is a multiplicity of tools being used to assess suicide risk ([Table 3]). Owing to the lack of supporting evidence, it is difficult to establish the most effective tool. Therefore, this review recommends no single tool for use in clinical practice.[31,42,50,51] Moreover, Harris et al[52] also established this situation regarding tools to predict future self-harm or suicide in adolescents. It is generally believed that standardized tools could promote widespread screening across all organizations, thus supporting repeated assessment of patients and safer patient transitions, improving care, and reducing risk of death by suicide.[1,6,53]

Emergency nurses perceive risk assessment tools as useful guides to assess patients, reporting that these tools bring suicide risk factors to the forefront and aid timely and effective referrals.[35] Emergency clinicians state that a completed risk assessment tool may provide supportive evidence of their clinical judgment.[51] Some nursing staff feel that completed risk assessments can be used as a source of useful information by other professionals caring for the patient.[54] Despite this, emergency clinicians report using risk assessment tools as an “aide-memoire” but do not usually use the scoring systems to aid referral.[51] Emergency nurses and providers report finding risk assessment of patients at high risk of suicide as challenging and time consuming.[35,51,54] These staff disclose the need for adequate training to ensure accurate risk assessment of patients at high risk of suicide.[35,51,54]

The Joint Commission advocates only 3 validated suicide risk assessment tools. This includes the SAFE-T with C-SSRS, the Scale for Suicidal Ideations-Worst, and the Beck Scale for Suicide Ideation.[6] Despite this, globally there is still a lack of evidence to suggest best practice to identify which patients are at highest risk of suicide, and therefore it is hard to advocate a single risk assessment tool.[51] Alongside staff attitudes and the high costs of risk assessments (including training on how to use them), organizations are reluctant to implement a tool which is not evidence based.[54]

Despite recommendations and requirements, risk assessment tools still may not effectively identify those at risk of suicide because of the complexity of psychiatric diseases.[2,32,55] This highlights the importance of directing patients to specialist care such as psychiatric liaison teams. Psychiatric liaison teams complete comprehensive assessments and provide clinical education for staff to enhance their clinical knowledge and judgment.[56,57] To assist identification of those patients at risk, Wolf et al[58] identified that education must include recognizing nonverbal behaviors, emergency department presentation patterns, and mismatch between injury and complaints. Consequently, nurses must understand how to use tools to guide their questions to patients carefully; in particular, to be aware of identifying any questions that result in a lack of eye contact or hesitation.[58]

Pessimism regarding follow-up interventions after acute assessment means that staff may not refer patients to the appropriate resources or create safety plans.[50] Thus, it is also important for clinicians to link risk assessment and intervention within the emergency department, which are essentially the clinician’s duty of care.[50,59] Educational interventions should incorporate the importance of the continuity of care between health care providers and effective

communication.[60] Naylor et al[61] argue that clinical leadership training to develop partnerships between the emergency department and mental health care providers should be a focus. Both must regard prevention of suicide as a key service, enabling collaboration between services for suicide prevention.[61] Implementation of training on counseling regarding access to lethal means is also paramount.[62] Only 3 of the 15 risk assessment tools evaluated in this review contained items that focused on access to lethal means.[33,39] Training should focus on misconceptions about prevention of suicide to ensure that training is continued into practice.[62.63] This will facilitate the identification of patients at high risk of suicide and promote the implementation of interventions.

An incidental finding of this review was the importance of appropriate and timely interventions (in emergency department and outpatient settings). This has the potential to lead to the biggest decrease in suicide risk, particularly with regards to access to lethal means.[39,44,62–64] Suggested interventions include a secondary assessment within 6 months of initital assessment, provision of a self-administered safety plan, a year of telephone review calls, and direct treatment options.[32,39] Over time, tools have placed slightly more focus on the importance of an intervention after initial screening and incorporating this into the risk screening and assessment steps. The SAD PERSONS scale, C-SSRS, SAFE-T, and SRS, all include an extensive list of potential interventions for each scoring category.[33,38,64,65] In addition, the CAGE questionnaire and Drug Abuse Screening Test-10 recommend that patients who score highly on the tools require further detailed assessment.[66—68] This can be compared with the Barrett Impulsiveness Scale, Brief Symptom Inventory, Beck Hopelessness Scale, BSSI, PHQ-9, and PERC assessment tools, which do not list any suggestions to consider after initial screening.[34,39,69–73]

Unfortunately, intervention administration is multifaceted and interdependent on environment, leading to barriers for patients to receive an adequate intervention within the ED setting.[4,61] Therefore, most patients deemed to be at the highest risk may not be provided evidence-based interventions.[38] Barriers include insufficient mental health provider staffing, competing emergency department priorities, unavailability of psychiatrist, and patient and family refusal.[21,50] Further research is needed to understand whether and how the use of risk assessment tools for ED patients at high risk of suicide affects their assessment, interventions, disposition, and outcome. Policy relating to expected clinical standards and care pathways are needed to create clinical parity for this group of patients. If developed, this would have the potential to educate health care professionals and connect high-risk patients with targeted support and care beyond the emergency department.

Strengths and Limitations

Time and resource restraints meant that this review includes only studies written in the English language. Although a single reviewer introduces potential researcher bias, regular research supervision was in place throughout.[74] The heterogeneity of study methodologies prevented combination of results to precisely determine what impact risk assessment tools have on suicide risk. In addition, the outcomes of admission and patient disposition (used by some of the studies included) have the potential to be strongly influenced by other contributing factors (i.e., hospital crowding and staffing levels) and therefore have weak validity and reliability.[42] There is potential for publication bias to have occurred, because studies with negative outcomes were not located. The original purpose of this study and time restrictions mean that the diagnostic accuracy of each tool was not assessed in this review. Therefore, the risk of bias within each individual tool was not considered in the methodology. Only risk assessment tools that had been used within the ED setting were reviewed for this review. However, this review includes the most up-to-date and relevant worldwide literature from within the past 8 years.

Implications for Emergency Clinical Practice

Risk assessment tools should not be used in isolation from clinical judgment and experience to evaluate patient risk for future self-harm and suicide. Within the emergency department, education of staff, including staff attitudes toward

suicide, should become a key focus to enable suicide prevention. Training should aid discrimination between impulsive and premeditated suicide attempts as this is paramount to alerting health care staff to the level of suicide risk. In addition, training should focus on continuity of care between health care providers and effective staff communication.

Conclusion

We found insufficient evidence to demonstrate the impact of risk assessment tools to reduce the risk of suicide in high-risk patients who present to the emergency department. Studies indicate that tools may be useful to guide health care professionals' assessment of patients at risk of suicide, but they should not be used in isolation from experienced clinical judgment. No relationship was seen between the proliferation of risk items that a tool includes and its predictive ability. To improve current ED practice in identification of patients at high risk of suicide and self-harm, it is recommended that relevant training of clinicians occurs. Education should raise awareness of confounding factors of suicide. It should also focus on the importance of clinical judgment and recognizing the different types of body language and nonverbal communication expressed in those at risk of suicide. There is a need to develop new and simple tools in the future, which incorporate the known risk factors. Primary research should include diagnostic test accuracy.

Supplementary Data

Supplementary Appendix 1Supplementary Appendix 2Supplementary Appendix 3

Supplementary

Tool/risk item	Barrett impulsiveness scale	Brief symptom inventory	Drug abuse screening test	SAD PERSONS scale	Cut down, Annoyed, Guilt, Eyeopener questionnaire	Beck hopelessness scale	Beck scale for suicidal ideation	Patient health questionnaire 9	Columbia-suicide severity rating scale	Psychiatric Emergency Research Collaboration Screener	Suicide Assessment Five-Step Evaluation and Triage	Suicide risk screener
Year of introduction	1959	1975	1982	1983	1984	1988	1991	2001	2007	2009	2009	2015
Hopelessness/depression						✓		✓	✓	✓		

Suicidal thoughts				✓			✓	✓	✓		✓	✓
Suicide attempt				✓			✓				✓	✓
Suicide plans				✓			✓		✓		✓	✓
Impulsiveness	✓								✓			
Cognitive instability	✓			✓				✓				✓
Mental health illness		✓							✓			✓
Somatization		✓										
Hostility		✓										
Drug and alcohol abuse			✓	✓	✓							✓
Insomnia								✓	✓			

Family history									✓			
Stressor event									✓			
Change in treatment									✓			
Gender				✓								
Age				✓								
Social isolation				✓					✓			
Physical illness				✓					✓			
Appetite changes												✓
Lack of protective factors											✓	
Agitation											✓	
Self-harm											✓	

Anhedonia										✓		

Supplementary Data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jen.2021.10.002.

Concepts	Search terms	Inclusion	Exclusion
Population	Suicide (MeSH term) Self-murder Self-immolation OR End own life Self-harm AND Death (MeSH term) Mortality (MeSH term) Dying OR Fatality AND Emergency service (MeSH term) ED Emergency Department A and E OR Accident and emergency Casualty A + E A&E Emergency Room ER AND	-Participants over 18 years -Patients presenting to the emergency department at high risk of death by suicide/ repeat self-harm (presenting with many risk factors) -Worldwide studies	-Participants under 18 years -Patients outside of the ED setting -Patients who are not at high risk of suicide/ repeat self-harm (unless controls)

Exposure	Ask suicide screening questions ASQ Beck fast scan Beck scale for suicide ideation Colombia suicide severity rating scale C-SSRS OR Depression scale Health resources (MeSH term) Mass Screening (MeSH term) Patient health questionnaire (MeSH term) Patient safety screener PHQ-9	-Risk assessment tools that identify suicide or self-harm risk	-Tools that do not identify suicide or self-harm risk -Tools that only identify single mental health disorders in isolation
Concepts	Search Terms	Inclusion	Exclusion
Exposure	Prevention resources PSS-3 Risk assessment (MeSH term) Risk assessment tools SAFE-T SBQ-R Scale for suicide ideation Screening tools OR SSI-W Suicide behavior questionnaire revised Suicide risk screen Universal screening Tools Instruments AND		
Outcome	Decline Decrease Minimi*e OR Reduction	-Use of above outcomes highlighted to demonstrate the effectiveness of tools to identify patients at risk	-Does not use outcomes that demonstrated the effectiveness of risk assessment tools -No outcomes shown -Incomplete studies
Types of studies		-Any primary research	-Reviews -Meta-analysis -Discussion papers -Commentaries
Language		-English language	-Not written in the English language

Year		-Studies published after 2010	-Studies published before 2010

Author and year	Country	Total of EDs	Sample size	Response rate	Outcomes measured	Assessments	Key findings	Follow-up	Critical Appraisal score, %
Randall et al[37] 2012	Canada	2	157	Stage 1-67% Stage 2-86.7% Stage 3-82.0%	1. Engaging in self-harm 2. Visit to ED due to self-harm	1. Beck Hopelessness Scale 2. Barrett Impulsiveness Scale 3. Brief Symptom Inventory 4. Drug Abuse Screening Test 5. CAGE questionnaire	The diagnostic use of tools is limited.	3 mo	36%
Allen et al[35] 2015	USA	6	1068	47.70%	1. Prevalence 2. Correlations 3. Subsequent clinical interventions	Psychiatric Emergency Research Collaboration Screener	The tools questions present might capture suicide risk.	None	33%
Wu et al[36] 2014	Taiwan	1	147284 (control)	74.8%	1. Self-harm repetition 2. Change in score	Chinese SAD PERSONS scale	Nurses found this tool to raise awareness of suicide risk.	6 mo	78%
Quinlivan et al[32] 2014	England	32	6442	n/a	1. Repetition of self-harm 2. Self-harm service quality	1. SAD PERSONS scale 2. Nonvalidated, locally developed tool	Tools decreased repeat self-harm and therefore decreased suicide risk, but when data adjusted for case mix differences, association attenuated.	6 mo	55%

Chang and Tan[30] 2015	USA	1	50	n/a	1. Need for psychiatric admission 2. Prolonged stay at a psychiatric facility >5 days 3. Adverse events in the ED	1. Columbia-Suicide Severity Rating scale 2. SAD PERSONS scale 3. Patient Health Questionnaire 9 4. Beck Scale for Suicidal Ideation 5. Clinical Impression	Tools show poor predictive value for adverse outcomes.	2 wk	62.5%
Stuck et al[34] 2014	USA	1	224	n/a	1. Frequency of ED visits vs clinic visits 2. Suicide risk screening frequency 3. The frequency of such visits before and after the 2011 implementation of universal screening	Suicide Risk screener	Unclear whether it helps prevent suicide.	None	75%
Katz et al[33] 2017	Canada	2	5462	60.70%	1. Intentional self-harm 2. Late effects of intentional self-harm 3. Poisoning of undetermined intent 4. Other events of undetermined intent	Modified SAD PERSONS scale	Modified SAD PERSONS scale does not predict suicide risk.	1 y	62.5%
Miller et al[38] 2017	USA	8	1376	84%	1. Suicidal behavior 2. Death by suicide 3. Suicide attempt, interrupted or aborted attempts 4. Suicide preparatory acts	Columbia-Suicide Severity Rating scale	Tools may identify more patients but do not reduce suicide risk.	1 year	78%
Mullinax et al[31] 2018	USA	1	267	n/a	1. Discharge following enrollment visit 2. Death by suicide within 1 month or 1 year of enrollment 3. Patient disposition	1. Modified SAD PERSONS scale 2. Columbia-Suicide Severity Rating Scale 3. Suicide Assessment 5-Step Evaluation and Triage scale	Does not recommend use of tools owing to missed deaths.	1 year	62.5%

Tool	Year introduced	Number of studies included in	Reported predictive value and measured outcome(s)
Barret impulsiveness scale	1959	1	Good predictive value of self-harm but not in isolation
Brief symptom inventory	1975	1	Good predictive value of self-harm but not in isolation
Drug abuse screening test	1982	1	Good predictive value of self-harm but not in isolation
SAD PERSONS scale	1983	3	Poor predictive value for suicide Alternative studies good predictive value for self-harm but only a weak association when adjusting for differences in the case mix Moderate predictive values for admission, discharge Poor prediction for adverse outcomes in the ED
Cut down, Annoyed, Guilt, Eyeopener questionnaire	1984	1	Did not predict self-harm or suicide
Beck Hopelessness Scale	1988	1	Good predictive value of self-harm but not in isolation
Beck scale for suicidal ideation	1991	1	Poor predictive value for admissions, prolonged stay, and adverse events in the ED
Patient health questionnaire 9	2001	1	Poor predictive value for admission, prolonged stay, and adverse events
Columbia-suicide severity rating scale	2007	2	Unclear of predictive value for self-harm or suicide Poor predictive values for admissions and adverse events in the ED Modest predictive value for discharges
Psychiatric Emergency Research Collaboration Screener	2009	1	Good predictive value for suicide ideation
Suicide Assessment Five-Step Evaluation and Triage	2009	1	Unclear of predictive value for self-harm or suicide ideation Modest predictive value for discharge

Suicide risk screening	2015	1	Unclear of predictive value for self-harm or suicide ideation
Chinese SAD PERSONS scale	n/a	1	Good predictive value for self-harm
Modified SAD PERSONS scale	n/a	2	Does not predict self-harm or suicide Moderate predictive value for patient disposition
Nonvalidated locally developed tool	n/a	1	Good predictive value for self-harm but only a weak association when adjusting for differences in the case mix

DETAILS

Subject:	Self injury; Predictive ability; Systematic review; Death &dying; Integrative approach; Mortality; Suicidal ideation; Risk assessment; High risk; Nurses; Emergency services; Best practice; Coronaviruses; Clinical nursing; Attempted; COVID-19; Suicides &suicide attempts; Suicide; Clinical decision making
Location:	United States--US
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The Effect of Music-Moving Toys to Reduce Fear and Anxiety in Preschool Children Undergoing Intravenous Insertion in a Pediatric Emergency Department: A Randomized Clinical Trial: JEN

ProQuest document link

ABSTRACT (ENGLISH)

Introduction

Intravenous catheter insertion is a highly invasive medical procedure that causes fear and anxiety in children. This study aimed to analyze the effect of a toy (with music and movement) distraction method on fear and anxiety in children aged 4 to 6 years.

Methods

This experimental, randomized clinical trial used parallel trial design guided by the Consolidated Standards of Reporting Trials checklist. Using simple randomization, eligible children (age 4-6; N = 60) were assigned to the intervention group (n = 30), who received the toy distraction method, or to the control group (n = 30), who received standard care. The Children's Fear Scale was used to evaluate the fear levels, and Children's State Anxiety Scale was used to evaluate anxiety levels. Physiological parameters (pulse, oxygen saturation) and crying time were monitored by the researcher as indicators of fear and anxiety. The chi-square test, repeated measures analysis of variance, Friedman test, *t* test, the Mann-Whitney *U* test, Wilcoxon test, and the intraclass correlation test were used for data analysis.

Results

There was no statistically significant difference in terms of fear and anxiety scores, physiological parameters, and crying time during the procedure between the children in the intervention and control group.

Discussion
We found that this method of toy distraction was not effective in reducing fear or anxiety during the intravenous catheter insertion procedure. Accordingly, we recommend that this distraction method be performed in different age groups and with larger samples in various painful and stressful practices in the future and that comparison be made with various distraction methods.

FULL TEXT

DETAILS

Subject:	Emergency medical care; Intervention; Chi-Square Test; Test anxiety; Music; Clinical standards; Catheters; Clinical research; Oxygen; Hospitals; Families &family life; Preschool children; Saturation; Emergency services; Automation; Clinical trials; Fear &phobias; Pediatrics; Catheterization; Invasive; Crying; Hypotheses; Distraction; Medical research; Pain; Parameters; Methods; Children &youth; Illnesses; Nursing; Toys; Anxiety
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NCPD Earn Up to 11.5 Contact Hours: JEN

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The Path Ahead and the Promise of the Future: JEN

ABSTRACT (ENGLISH)

Today, I'm the Chief Nursing Officer at the same hospital and about to embark on my year as the ENA President. ENA continues to be here to support you in many ways: advocating for a healthy nursing work environment, creating ENA University for your continuing education and skill development, and offering volunteer opportunities to help you grow within the organization. With that goal in mind, if we each push forward down the path toward our highest hopes and aspirations, the momentum of the emergency nursing community will build toward positive change.

FULL TEXT

It is an incredible honor to be the incoming 2022 ENA President and one I never dreamed would be a reality for me. Often, we don't see what may be possible in our future when we're busy standing in the moment. I'm here now as proof you can create your own path and do anything you desire.

Nearly twenty years ago, I started as a new nurse in the emergency department. Today, I'm the Chief Nursing Officer at the same hospital and about to embark on my year as the ENA President. While anything is possible, it takes grit. It takes persistence. It takes a true belief that something bigger, something better, is always out there if you seek it and work for it.

The last two years have tested us like no other time. We persist with the hope of brighter days and a drive to learn from this experience so that we are better educated, better prepared, and better equipped for the next challenge. To make that happen, and borrowing from my predecessors Mike Hastings and Ron Kraus, we must believe that each of us, as individuals, can make a difference and know that we can elevate ourselves and the people around us.

We have seen and dealt with so much during this pandemic. We are tired, we are all struggling with something, and we are all trying to figure out how to keep moving forward. The forward motion requires us to rekindle the inner fire that drives emergency nurses to be the amazing people you all are. Moving forward means using that take-charge, get-it-done attitude that we all have and applying it to our own careers and lives. Most importantly, moving forward requires a little help, and our willingness to seek it out no matter the circumstances. We all know we can do these things ourselves, but that doesn't mean we have to.

ENA continues to be here to support you in many ways: advocating for a healthy nursing work environment, creating ENA University for your continuing education and skill development, and offering volunteer opportunities to help you grow within the organization. Your emergency nursing peers are also here. This community is built on shared experiences, deep bonds and colleagues who are like family. Use those around you and offer your support to others. We need one another, and our patients need us. ENA is uniquely positioned to help you build these connections.

We all know that 2022 will continue to bring new challenges, and plenty of old ones, to our profession. We should look to what is ahead and use the struggles we have endured over the last two years as motivation to plot a course. This should happen both individually and together, and reinforce what emergency nurses need to be successful, to amplify our voices about what's most important in health care, and to continually demonstrate how this community is the epitome of exceptional.

With that goal in mind, if we each push forward down the path toward our highest hopes and aspirations, the momentum of the emergency nursing community will build toward positive change. It starts for each of us today. Find your inner fire and prove to yourself that persistence pays off. Choose your journey and follow your dreams. Maybe you'll end up somewhere you never would have imagined, too.

DETAILS

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Implementing a Novel Nursing Site Manager Role in the Pediatric Emergency Department for Patient and Staff Safety During the COVID-19 Pandemic: JEN

ABSTRACT (ENGLISH)

1 Much of the worldwide severe acute respiratory syndrome outbreak was hospital based, and health care workers were a significant portion (37%-63%) of suspected cases in affected countries.2 There are limited data on infection and mortality rate from coronavirus disease 2019 (COVID-19) among health care workers in the United States and around the world. Among 6760 adults hospitalized from March 1 to May 21, 2020, 5.9% were health care providers, with nursing-related occupations (36.3%) representing the largest portion of hospitalized providers.3 In the US and Mexico, health care workers represent 1 in every 7 COVID-19 cases.4 Notably, “these two countries account for nearly 85% of all the COVID-19 deaths among health care workers in the [Pan American Health Organization] region.4 This reality, along with the idea that “there can be no patient safety without health worker safety,”5 made it immediately apparent that programs supporting the emergent and unprecedented educational needs of emergency nurses had to be implemented in a rapid, sustainable manner. Key stakeholders involved during the initial development and implementation of the site manager program included hospital-wide biocontainment team leaders, infection control experts, emergency department physician and nursing leadership, and staff nurses, clinical assistants, environmental services, and administrative staff. Because strict isolation was necessary for these patients, site managers enlisted the assistance of child life specialists to help with distraction techniques to decrease the patient’s fears and anxiety.

FULL TEXT

Contribution to Emergency Nursing Practice

••A pandemic response requires agile systems and rapid dissemination of biocontainment policies and procedures. Emergency nurses are uniquely positioned in their front-line role to convene multidisciplinary health care teams for safety and well-being.

••We designed a novel nursing role to ensure safety and disseminate rapidly evolving policy and environmental changes.

••Site managers foster the adaptive capacity and resilience of the multidisciplinary team by serving as real time resources for current evidence-based science, rapidly changing policies, personal protective equipment donning and doffing techniques, use of innovative communication technologies, and identification of staff burnout, severe stress, and compassion fatigue.

••This role may be replicated and individualized to meet the needs of other institutions.

Constituting the majority of the health care workforce, nurses are the front-line defense in response to an infectious disease outbreak and are at high risk for infection themselves. Given their crucial role of emergency nurses in the management of prevailing epidemics, it is imperative that nurses receive adequate support and protection. Epidemics such as the West African Ebola outbreak from 2014 to 2016 have demonstrated the consequences for not protecting health care workers and emergency staff. Lessons learned include severe physical and mental health consequences for health care workers and the community at large. In the Ebola epidemic, “most healthcare worker deaths could have been prevented with simple interventions such as diagnostic testing, proper equipment and training, which makes this loss especially devastating.”[1] Much of the worldwide severe acute respiratory syndrome outbreak was hospital based, and health care workers were a significant portion (37%-63%) of suspected cases in affected countries.[2]

There are limited data on infection and mortality rate from coronavirus disease 2019 (COVID-19) among health care workers in the United States and around the world. Among 6760 adults hospitalized from March 1 to May 21, 2020, 5.9% were health care providers, with nursing-related occupations (36.3%) representing the largest portion of hospitalized providers.[3] In the US and Mexico, health care workers represent 1 in every 7 COVID-19 cases.[4] Notably, “these two countries account for nearly 85% of all the COVID-19 deaths among health care workers in the [Pan American Health Organization] region.[4] This reality, along with the idea that “there can be no patient safety without health worker safety,”[5] made it immediately apparent that programs supporting the emergent and unprecedented educational needs of emergency nurses had to be implemented in a rapid, sustainable manner. Emerging from this call to action, we developed a nursing site manager program.

Our site manager program created a nursing role to support the multifaceted physical and psychological needs of staff during a pandemic. The setting was a 52-bed emergency department with an annual census of 60 000 visits in an urban, quaternary-care, freestanding pediatric hospital. The urgent needs of staff included rapid roll out of personal protective equipment (PPE) education, expertise in current COVID-19 research, adaptability with quickly evolving policies and procedures, and peer-to-peer coaching to support coping and resilience.

The site manager team was intentionally composed of nurses who volunteered to participate, not selected “leaders” or senior staff. The team consisted of 40 nurses whose experience ranged from novice to expert. This demonstrated the value of all nurses regardless of where they were along their career journey. Site managers created and fostered an environment of teamwork and inclusivity, encouraging each individual to share and celebrate their unique strengths and talents. This self-selected team, by nature of its diversity, had balanced skills, complementary abilities, and individual strengths such as emotional intelligence, resilience, adaptability, technical skills, and communication skills. Site managers became a unified team navigating uncharted waters during a time of fear and uncertainty.

Key stakeholders involved during the initial development and implementation of the site manager program included hospital-wide biocontainment team leaders, infection control experts, emergency department physician and nursing leadership, and staff nurses, clinical assistants, environmental services, and administrative staff. The group acknowledged any questions or concerns that arose and addressed them in real time or within 24 hours during the daily COVID-19 leadership meetings.

Site Manager Orientation Program

Site manager orientation included a 2-hour course focused on the knowledge and skills needed to support multidisciplinary staff in the provision of safe, timely care of patients with symptoms concerning for COVID-19. Two departmental nursing leaders implemented this curriculum in collaboration: the global health fellow and the professional development specialist. Course content included modules highlighting infection control basics, PPE donning and doffing practices, and psychological first aid principles ([Table 1]).

Learning methods combined high-yield didactic sessions with hands-on training, including skill practice with PPE donning and doffing, current COVID-19 management, and relevant research findings. Application of public health principles emphasized the rationale behind the adaptations to existing policies, procedures, and the environment of care. Learners achieved competency validation in the ability to don and doff PPE during a demonstration against a skills objective checklist (Centers for Disease Control resources found at website link in the reference list).[6]

Unique to this site manager program was the addition of coping and resiliency education and principles of providing psychological first aid to staff during this unprecedented pandemic. Site managers received education to support the mental health and well-being of their colleagues. This approach involved humane, supportive, and practical interventions for staff suffering trauma and stress in ways that respect their dignity, culture, and abilities. The aim was to support staff resilience and adaptation to prevent or mitigate burnout and compassion fatigue. Site managers

received resources on healthy coping strategies and methods to build resiliency to use and to share with staff. Education focused on identification of those at risk and referral to department leadership or our hospital's Office of Clinician Support for expert services as needed.

At the conclusion of the program, nurses were oriented to the 17-bed cohort area reserved for patients suspected of or confirmed with COVID-19. This orientation included incorporating available resources and discussing potential scenarios to allow for immediate application of the course content and skills. One such scenario was the presentation of a pediatric patient arriving by ambulance whose chief complaint was fever and shortness of breath. Site managers quickly identified these symptoms as potential COVID-19 and initiated airborne, contact, and droplet precautions. They facilitated patient placement into one of the COVID-19 cohort bedspaces and educated accompanying family members on the need for such precautions. Because strict isolation was necessary for these patients, site managers enlisted the assistance of child life specialists to help with distraction techniques to decrease the patient's fears and anxiety.

Evaluation of the effectiveness of the orientation program included a knowledge-based postcohort survey. In this survey, each of the 40 participants (100%) stated this experience expanded their knowledge of COVID-19 and confidence in their clinical practice and assessment skills. Each participant demonstrated to the instructors the ability to safely don and doff PPE. A precourse assessment survey was not conducted because of the rapid, emergent need to implement this role to protect the health and well-being of ED staff.

Site Manager Roles and Responsibilities

Roles and responsibilities were indoctrinated throughout the program and were divided into 3 domains of support: for patients/families, for staff, and for public health systems (Figure 1). By design, site managers did not have a patient assignment so that they could focus on supporting safety. They assisted staff with patient care activities in the COVID-19 cohort area while monitoring for safety protocol compliance and serving as a resource when process-related issues arose.

Site managers' support for patients/families included family education, comfort rounds, assessment, and referral to meet social health needs such as access to nutrition and eviction protection. Our institution's family education materials can be found in the website listed in the corresponding reference.[7] Additional resources are listed in Table 2.

Support for staff notably included safety protocol reinforcement, especially in triage, in the COVID-19 cohort areas and during patient resuscitations. Site managers reinforced patient screening at the point of triage to identify patients suspected of having COVID-19 and to facilitate prompt isolation of these patients. Additional responsibilities involved educating staff, including new residents, specialty consultants, and environmental service staff in safe practices, including PPE donning and doffing to support their safety as vulnerable members of the care team.

The site managers' role during resuscitation and emergency response was to serve as gatekeeper at the entrance to the patient's bedspace to limit the number of personnel in the room to decrease the staff's exposure to COVID-19. They ensured that all responders wore appropriate PPE and facilitated acquiring the needed equipment and supplies because bedspaces were minimally stocked to prevent contamination. Site managers supported staff during critical events by monitoring safety protocol adherence, promoting innovative communication technologies, ensuring availability of appropriate PPE donning and doffing stations, and facilitating team huddles to review team performance.

The site managers' role included fostering the adaptive capacity and resilience of all members of the multidisciplinary team, including environmental service staff, clinical assistants, nurses, physician assistants, nurse practitioners, and attending physicians. Assisting staff to adapt innovative electronic technologies to promote optimal communication with families and minimizing potential exposure proved to be essential during the pandemic.

Similarly, the site managers' role of monitoring and coaching safe PPE practices remained critical to promoting staff resiliency.

Opportunities were available for site managers to collaborate with our global health team to review and contribute to current pediatric COVID-19 research and public health initiatives. Multidisciplinary activities included literature and case reviews of all patients with COVID-19 evaluated in the department. Site managers reviewed publications to select literature that was timely and relevant to emergency staff and disseminated these to physicians, nurses, and clinical assistants. Case reviews contributed to studies on presentation and emergency care needs of children infected with COVID-19, as there were scant existing data for this patient population.

With the support of institutional leadership, site managers participated in voluntary community outreach activities. For example, site managers supported public health initiatives by educating local emergency medical service colleagues in safe transfer practices and families regarding the importance of participating in contact tracing, physical distancing, and quarantining initiatives. Site managers were also invited to collaborate with local public school nurses in safe practices as they prepared to return to school to care for over 50 000 students. While participating in these activities, site managers came forward with innovative ideas and connected with new mentors beyond the emergency department.

Throughout the initial surge in cases, the site manager team met weekly with COVID-19 leadership. With the transition from the acute response of the pandemic, the meeting frequency decreased to monthly. Meetings included a combination of policy updates and education ([Figure 2]), as well as unstructured time for open discussion. Site managers were encouraged to share all COVID-19-related problems so that departmental and infection control leadership could develop a clear procedure or policy. For example, certain challenges resulted in policy modifications for eyewear-cleaning protocols, reorganization of patient rooms to minimize supply contamination, and re-evaluation of patient transport practices.

Site Manager meetings were recorded and disseminated to the team to promote inclusivity of those working off-shift or unable to attend. During the meetings, nursing leadership addressed questions solicited from the team. Site managers could presubmit their questions in an optional forum if they wished to remain anonymous. These forums provided a clear, direct channel for site managers working at the bedside to escalate concerns up the chain of command and to propose practical solutions. Conversely, these forums served as a channel for the leadership to disseminate information to those on the frontlines, thus supporting a clear top-down/bottom-up communication model. Therefore, site managers actively participated in the multidisciplinary COVID-19 leadership team.

Although the early-hypothesized needs of the department dictated initial roles and responsibilities of the site manager, team members were encouraged to provide suggestions to adapt or edit the role as these demands evolved. For example, 7 months into the pandemic, during a lull when COVID-19 cases were not rising, site managers re-assessed skill competency in PPE donning and doffing for the multidisciplinary team to ensure safe PPE practices. This re-education was in prediction of a second surge in cases to reinforce procedures that promoted continued staff and patient safety.

The site manager role and responsibilities evolved monthly on the basis of the needs of staff as the pandemic progressed. Team members received suggestions from the staff they supported. Therefore, all staff nurses providing direct patient care contributed meaningfully to the evolution of the site managers' role by identifying vulnerabilities in current protocols that required additional support and adaptation. Changing paradigms, the site managers worked for their colleagues and peers. In this light, when nurses and multidisciplinary members of the team received adequate support, patient care appeared more effective, patient-centered, efficient, equitable, and safe.

Ongoing Evaluation and Change

During the COVID-19 pandemic, providing ED staff with extra psychological and physical support through the work of the site manager team has the potential to improve patient care. Staffing the emergency department with 1 volunteer site manager 24/7 helped our department facilitate COVID-19 processes to deliver safer patient care. Since the implementation of our site manager program in March 2020 through April 2021, our emergency department evaluated 10 082 patients for COVID-19. The site managers were a valuable resource to mitigate this additional workload burden while prioritizing safety. Within the first 2 months of implementation of the role, the percentage of patients placed in an ED bed within 30 minutes of arrival increased from 55% to 96%. This helped to decrease potential COVID-19 exposure between patients and families in the ED waiting area. In review of our internal data, we discovered that appropriate implementation of constantly evolving isolation/precautions protocols for COVID-19 patients in the emergency department increased by 91% immediately after the launch of the site manager program. This improvement sustained through the writing of this paper.

With a reduction in our patient census during the pandemic, reallocation of nursing resources allowed us to implement the site manager's role on a permanent basis without any significant budgetary impact. There was no additional stipend for nurses assuming this role. With the expectation that our patient census will increase after the pandemic, the cost to maintain this role has yet to be determined. As the pandemic resolves, expansion of the site manager's role to a permanent clinical nursing leader position is in development.

Our institution adopted process changes that supported the site manager position. For example, the environment of care was modified to create dedicated donning and doffing stations with defined hot, warm, and cold zones. Innovations in technology such as web conferencing platforms and portable tablets enhanced communication between the care team and the patients and families in isolation to minimize staff exposure. Hospital-wide protocols established PPE conservation and N-95 mask reuse. Dedicated storage areas served as departmental pick-up and drop-off zones for reusable masks and eyewear between shifts. Rapid point-of-care testing for COVID-19 in the emergency department expedited patient care and disposition.

Approximately 1 year after the implementation of the site manager role, a multidisciplinary survey assessed the perceived effectiveness of the role ([e-Content]). This survey had a 22% response rate. Of the 65 respondents, 97% of nurses, and 93% of physicians stated that the role was helpful during the COVID-19 pandemic. Open-ended responses from the survey are listed in [Table 3].

Conclusion

With the contributions of every member of the site manager team, our program was a model of shared governance, collaborative decision making, and staff nurse autonomy. We learned that the shared governance framework of the team, as exemplified in the self-designed role and responsibilities, has helped maintain confidence and buy-in for the team's high professional standards. Site managers were able to address the complex, interrelated health needs of patients and families while prioritizing staff safety. They protected and championed safety for all, supporting rapidly evolving science and practice changes while maintaining quality patient care.

Implementation of the site manager's role as we described has assisted our department in the provision of safety for staff, patients, and families. We believe that this role could be adapted to meet the needs of other departments and institutions. In the event of a future pandemic, further study is necessary to determine how the site manager's role would be executed and expanded in multiple settings where both pediatric and adult patients receive care. However, the knowledge and skills gained from this program may serve as a foundation for other clinical nursing leadership roles. As frontline providers and emergency staff, site managers are change agents, brave professionals lighting the way for others, providing solace and safety, and supporting best practice patient care.

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Author Disclosures

Conflicts of interest: none to report.

Appendix Supplementary materials

Image, application 1

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.jen.2021.07.009.

Content	Time	Teaching method
COVID-19 introduction	10 min	Didactic lecture, clinical case study
Infection prevention and control basics	15 min	Didactic lecture, clinical case study
Personal protective equipment indications and use, troubleshooting problems	15 min	Didactic lecture, clinical case study
Personal protective equipment donning and doffing practice	15 min	Skills workshop
Drive-through swab protocols and family education	5 min	Didactic lecture
Special care practices for the emergency department, resource review	15 min	Didactic lecture, clinical case study
Psychological first aid practices	20 min	Didactic lecture
Applying psychological first aid	15 min	Clinical case studies
Orientation to the practice environment	10 min	In-situ orientation, narrative sharing

Patient resources	
FDA: COVID-19 Educational Resources	https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-educational-resources
FDA: Multi-lingual COVID-19 Resources	https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/multilingual-covid-19-resources
FDA: COVID-19 Vaccine Information	https://www.fda.gov/emergency-preparedness-and-response/coronavirus-disease-2019-covid-19/covid-19-vaccines
NIH: Supporting Mental Health During the COVID-19 Pandemic	https://www.nimh.nih.gov/news/science-news/2020/supporting-mental-health-during-the-covid-19-pandemic
Family resources	
CDC: Helping Children Cope	https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/for-parents.html
VA: Strategies for Families to Adapt to the COVID-19 Pandemic	https://www.ptsd.va.gov/covid/covid_family_strategies.asp
CDC: COVID-19 Parental Resources Kit–Childhood	https://www.cdc.gov/coronavirus/2019-ncov/daily-life-coping/parental-resource-kit/childhood.html
NIH: Helping Children and Adolescents Cope with Disasters and Other Traumatic Events	https://www.nimh.nih.gov/health/publications/helping-children-and-adolescents-cope-with-disasters-and-other-traumatic-events/
USDA: COVID-19 Resources for Individuals and Families	https://www.fns.usda.gov/disaster/pandemic/covid-19/resources-individuals-families
Health care provider/nurses' resources	
ENA: COVID-19 Information	https://www.ena.org/practice-resources/covid-19
Aiken: Nurses: How to Help Your Patients Cope with COVID-19	https://online.usca.edu/articles/rnbsn/help-patients-cope-covid-19.aspx

AACN: Clinical Resources	https://www.aacn.org/clinical-resources/
ANA: COVID-19 Resource Center	https://www.nursingworld.org/practice-policy/work-environment/health-safety/disaster-preparedness/coronavirus/
HHS: COVID-19 Resources for Healthcare Professionals	https://combatcovid.hhs.gov/hcp/resources
WHO: COVID-19 Resources and Guidance	https://healthcluster.who.int/resources/covid-19-resources-and-guidance

	Staff Response
Registered Nurse	I find the role hugely helpful. With the inability to leave the room without doffing, the Site Manager is instrumental in obtaining supplies, relaying messages, providing an extra pair of hands. It is also helpful that this person is globally aware of everything happening on the team in order to lend support, offer rooms to triage, etc.
	Site Managers have the broader view of the flow and facilitate safe and efficient care.
	Better flow and resources and safety when a Site Manager is part of the team.
	Great resource, has global view of the team.
	Site managers are a great “go-to” for all COVID-related questions.
	Able to help the team RN feel supported during times of high volume and heavy COVID burden.
	It is useful in managing patient flow and having another set of RN hands. Alleviates some of the rooming from the charge nurse.
Physician	Maintaining COVID infection prevention and control practices has added new tasks that need to be covered during clinical shifts. The environment needs to be maintained and the extra hands to support patient care are so helpful.
	Helpful that they [site managers] know the latest rules.
	It is helpful to have someone knowledgeable about the COVID-related policies as they change.

	Provides expertise re: COVID placement, protocols, etc.
	Help with current policies. Help with in-room tasks. Help with training of new staff and trainees.
	Can help facilitate care for patients when nurses are busy with sick patients. Can help keep a finger on the pulse for sicker patients in the pod.
	Aware of the larger picture of what's going on with the team, very helpful in being the clean person and getting supplies for people gowned up.

DETAILS

Subject:	Severe acute respiratory syndrome; Personal protective equipment; Hospitalized; Workers; Leadership; Emergency services; Staff nurses; Teams; Infections; COVID-19; Health care; Distraction; Epidemics; Specialists; Occupations; Pandemics; Medical personnel; Mortality rates; Educational needs; Coronaviruses; Clinical nursing; Pediatrics; Disease control
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Emergency Nurses Association Position Statement: Medication Management and Reconciliation in the Emergency Setting: JEN

ABSTRACT (ENGLISH)

The three phases of the reconciliation process are imperative to ensure effective medication management and obtaining an as complete and accurate medication history is the first step.2 Medication management and reconciliation in the emergency setting is a collaborative effort between nurses, physicians, pharmacists, and patients to reduce risk for patients in health care settings and at home.1,2,4,8,9,13–15 This process requires that health care providers, including emergency nurses, communicate clearly with patients and their caregivers about the importance of maintaining an accurate medication list.4,13,16 An accurate medication list includes all medications including prescriptions, over-the-counter medications, supplements, herbals, medicinal marijuana, known allergies and last dose. Emergency nurses play an important role in empowering patients to understand the role they play in the medication management process as well as helping them to understanding the potential risks of drug/drug or drug/food interactions.3,13,16,20,36 Emergency nurses can educate patients and/or their caregivers on the importance of maintaining and keeping with them an accurate medication history including, dosage and frequency of all prescriptions, over-the-counter drugs, supplements, medicinal herbs, and other substances.16,20,36 Additionally, emergency nurses are in a position to advocate for best practices in the medication management process to ensure patient safety.ENA Position It is the position of the Emergency Nurses Association that: Triage is intended to rapidly identify life-threatening or high-risk situations. [...]collection of comprehensive medication history can be delayed and

performed after the patient is stable. When first announced, there was little direction as to the who, what, when, where, and how to complete the process, which led to, and continues to create, confusion among emergency nurses and other health care providers.18,37 As initially defined by TJC, the process of medication reconciliation was intended to reduce discrepancies and prevent medication errors but was complex, laborious, and did not necessarily result in accurate information.18,19 Because of difficulty in implementation the lack of proven strategies for success TJC, in 2011, suspended the original NPSG and incorporated medication reconciliation into NPSG number 3.1 This safety goal acknowledges the challenges of reconciliation yet still requires a “good faith effort” to obtain a medication history (the first step) on arrival and then comparing it with those medications that are prescribed (the reconciliation stage).

FULL TEXT

Description

Medication reconciliation remains a patient safety issue worldwide. In the United States, The Joint Commission (TJC) began pivoting focus from medication reconciliation toward overall medication management when introducing the seven foundations for safe quality transitions of care in 2013.[1] Medication management as one of the foundations broadly includes activities such as verification, prescribing, administration and monitoring used in conjunction with the current National Patient Safety Goals (NPSG) on medication reconciliation. Medication management is intended to safeguard patients from medication errors and adverse drug events (ADEs) during transitions between care settings, including emergency departments, urgent cares centers, other ambulatory emergency settings or other types of care settings.[1–12] Medication management is more than just an accurate medication history or reconciliation. The three phases of the reconciliation process are imperative to ensure effective medication management and obtaining an as complete and accurate medication history is the first step.[2] Medication management and reconciliation in the emergency setting is a collaborative effort between nurses, physicians, pharmacists, and patients to reduce risk for patients in health care settings and at home.[1,2,4,8,9,13–15] This process requires that health care providers, including emergency nurses, communicate clearly with patients and their caregivers about the importance of maintaining an accurate medication list.[4,13,16] An accurate medication list includes all medications including prescriptions, over-the-counter medications, supplements, herbals, medicinal marijuana, known allergies and last dose.

For patients who present to emergency care settings, an accurate medication history is imperative for patient safety and to enable appropriate evaluation and treatment. However, in the often busy and chaotic emergency setting where time is essential, obtaining accurate and complete medication history can be an arduous process. With medication information coming from multiple sources (patient, family, caregivers, multiple pharmacies, etc) and other conflicting or competing patient care issues, errors in the communication of significant information at key transition points are possible and can be problematic.[4,12,13,17–20]

Most patients who present to an emergency department enter through the hospital’s triage area. Triage is a process to rapidly sort patients based on patient acuity and resources needed.[21,22] Triage is intended to identify life-threatening or high-risk situations that require immediate intervention to save lives. When triaging patients, the emergency nurse obtains a brief assessment along with any other relevant medical history and may obtain a focused medication history pertinent to the chief complaint. A more comprehensive medication history (the first phase of the reconciliation process) should be obtained after the initial triage process and stabilizing care prior to admission or other disposition.

Evidence demonstrates that collecting a medication history during triage is more likely to result in errors in the patient record than pharmacy-led acquisitions of medication information.[19,23–25] In two studies, omission of medications or doses were the most frequent errors attributed to nurses completing the medication history.[23,24] These findings are due in part to time constraints. Evidence shows that completing an accurate and complete medication history can take 20 to 79 minutes.[5,23,26,27] The time constraints lead to debate about whether the emergency care setting is the appropriate place to obtain a detailed medication history.[18]

Many studies and authoritative bodies in the United States as well as internationally indicate that pharmacists or pharmacy technicians are best suited to compile the medication history and subsequently complete the reconciliation process.[1,4–6,11,12,15,19,23,24,26–33] Position statements from multiple prominent health care associations are substantiated by research findings. When pharmacists or pharmacy technicians are available in the emergency setting, their participation in medication management not only improves the medication reconciliation process but effectively improves patient safety and reduces medication errors in the hospital setting.[15,28–31,34,35] Despite these findings, there are still significant challenges to establishing a dedicated pharmacy staff present in the emergency setting to participate in the medication management process.

In addition to time constraints, there are numerous barriers experienced by emergency nurses in collecting medication histories, including high patient volumes and patient care activities. Not only is the emergency care setting not the most opportune time to collect an accurate medication history, but emergency nurses should not perform the actual reconciliation phase as this is completed by the licensed independent provider (LIP). Emergency nurses can actively contribute to the medication management process through their performance of assessments, interventions, reevaluations, patient education, and discharge. Emergency nurses play an important role in empowering patients to understand the role they play in the medication management process as well as helping them to understanding the potential risks of drug/drug or drug/food interactions.[3,13,16,20,36] Emergency nurses can educate patients and/or their caregivers on the importance of maintaining and keeping with them an accurate medication history including, dosage and frequency of all prescriptions, over-the-counter drugs, supplements, medicinal herbs, and other substances.[16,20,36] Additionally, emergency nurses are in a position to advocate for best practices in the medication management process to ensure patient safety.

ENA Position

It is the position of the Emergency Nurses Association that:

1. Medication management is a collaborative partnership between multiple health care disciplines including nurses, physicians, and pharmacists.

2. Ideally, pharmacists or pharmacy technicians are the preferred clinicians to complete the medication history and medication reconciliation.

3. Emergency nurses can support medication management by collaborating with prescribers and facilitating two-way communication regarding any medication changes, additions, or deletions to the patient's current medication regime to patients, families, caregivers and/or transferring facilities especially elderly polypharmacy and other high-risk patients.

4. Emergency nurses can support medication management by collaborating with providers to ensure that daily medications are ordered and being administered to admission patient being held in the department.

5. Emergency nurses obtain an accurate and complete medication list if possible after the initial triage process.

6. Triage is intended to rapidly identify life-threatening or high-risk situations. Thus, collection of comprehensive medication history can be delayed and performed after the patient is stable.

7. Emergency nurses educate patients, their families, and caregivers on the importance of keeping an accurate medication list with them at all times.

8. Emergency nurses participate in policy and guideline development to assure optimal medication management processes are developed.

9. Emergency nurses collaborate with pharmacists and facility leadership to advocate for pharmacy-led medication management as best practice.

Background

Medication reconciliation is a complex multi-pronged process. TJC NPSG number 8 to "accurately and completely reconcile medications across the continuum of care," [7] has evolved since first introduced in 2005. When first announced, there was little direction as to the who, what, when, where, and how to complete the process, which led to, and continues to create, confusion among emergency nurses and other health care providers.[18,37] As initially defined by TJC, the process of medication reconciliation was intended to reduce discrepancies and prevent medication errors but was complex, laborious, and did not necessarily result in accurate information.[18,19] Because of difficulty in implementation the lack of proven strategies for success TJC, in 2011, suspended the original NPSG and incorporated medication reconciliation into NPSG number 3.[1] This safety goal acknowledges the challenges of reconciliation yet still requires a "good faith effort" to obtain a medication history (the first step) on arrival and then comparing it with those medications that are prescribed (the reconciliation stage). This is done to identify and resolve discrepancies and to improve the safe use of medications across the continuum of care.[1–3,14]

Factors such as unreliable patient provided information, inaccurate information from outside sources, and ineffective communication among health care providers have been identified as barriers to collecting accurate medication histories.[20,22,37,38] According to the Institute for Healthcare Improvement[39,40] and the Institute for Safe Medication Practices[41] inaccurate medication histories may cause up to 50% of all medication errors and as much as 20% of the ADEs seen in the hospital setting. Furthermore, numerous studies have found that medication histories collected by nurses or health care personnel other than pharmacy staff were less accurate,[24,38] had higher rates of discrepancies, [23,32] and higher rates of omissions[27] compared to pharmacy staff-led history collection. Preventing medication errors, ADEs, or other harm to patients resulting from an inaccurate medication history should always be the primary goal of medication management regardless of what specialty completes the task.

Emergency department medication reconciliation and management in the United States and internationally is complex. Policies aimed at both are impacted by various factors including the country of origin, the accrediting body used by each hospital, and the various regulatory agencies definitions of what medication reconciliation or medication management entails, all have influence over policies and protocols in the emergency department. International Pharmaceutical Federation[31] lists 6 different definitions of medication reconciliation. Regardless of these factors accurate medication history, management, and reconciliation depends on emergency nurses around the world to understand their individual facility, country, and regulatory agency guidelines, policies, and procedures. Overall, medication management is a collaborative, cooperative partnership between multiple health care disciplines, including nurses, physicians, and pharmacists, to ensure medication safety through effective communication. It is essential that information given to a patient, family, caregiver, transferring, or receiving facility include changes, additions, or deletions to the patient's current medication regime. Emergency nurses need to continue advocating for patient safety measures that protect the patient and enable the nurse to be actively engaged in processes without unnecessary barriers.

Resources

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World Health Organization. Medication safety in transitions of care. https://www.who.int/patientsafety/medication-safety/TransitionOfCare.pdf?ua=1

DETAILS

Subject:	Risk reduction; Emergency medical care; Home health care; Collaboration; Life threatening; Healthy food; Communication; Physicians; Drug stores; Nurses; Emergency services; Caregivers; Reconciliation; Best practice; Prescription drugs; Medical errors; Herbs; Patient safety; Delayed; Marijuana; Health care; Personal safety; Triage; High risk; Discrepancies; Critical incidents; Medical personnel; Patient education; Pharmacists; Confusion; Dosage; Nurse patient relationships

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Commentary on “Remote Advance Care Planning in the Emergency Department During COVID-19 Disaster: Program Development and Initial Evaluation”: JEN

ABSTRACT (ENGLISH)

Novel applications of telehealth exploded during the pandemic.1 From virtual acute care visits to virtual triage and home visits and telehealth via ambulances, synchronous and asynchronous telehealth etched a permanent place in the emergency care specialty.2 In this edition of the Journal of Emergency Nursing (JEN), Liberman et al3 explore a pragmatic telehealth program developed to take the heavy, bedside end-of-life discussion away from the front-line staff and offload it to a trained group of nurses via telehealth. The program developed a system by which the bedside team could alert the remote palliative care providers to engage the family in end-of-life decisions.4 These included DNR/DNI, MOLST, health care proxy discussions, and disposition. Considerations on supporting the entire health care workforce included providing work during quarantine, providing offsite work to those health care workers at higher risk of contracting severe COVID-19, and providing a channel to support both the emotional needs of the emergency health care workers at the bedside and the need to work for those sidelined; this program was ideal.

FULL TEXT

Novel applications of telehealth exploded during the pandemic.[1] From virtual acute care visits to virtual triage and home visits and telehealth via ambulances, synchronous and asynchronous telehealth etched a permanent place in the emergency care specialty.[2] In this edition of the *Journal of Emergency Nursing (JEN*), Liberman et al[3] explore a pragmatic telehealth program developed to take the heavy, bedside end-of-life discussion away from the front-line staff and offload it to a trained group of nurses via telehealth. A logic model describing the use of Remote Goals of Care Program (GOC) was developed and implemented.

The emergency department can be loud and crowded and lack the quiet privacy needed to have end-of-life discussions with patients and families. During the COVID-19 pandemic, when visitation policies were restricted, many end-of-life discussions took place via remote platforms.[4] Patients were often scared, alone, and dying of COVID-19 without their closest loved ones to hold their hands at the bedside. Many hospitals had transitioned to a virtual platform to deliver bad news and work through these decisions; however, the authors’ GOC program[3] used a bidirectional platform. This was unique in that both the patient and the bedside clinician were remote. Telehealth programs in the emergency department such as remote stroke care and tele-psychiatry are examples of established one-directional programs—the patient is in person in the bricks-and-mortar emergency department, but the provider is remote. These programs spared the provider the exposure risks from being physically present during the visit during the pandemic. The programs that were bidirectional—both the patient/family and the provider were remote—included acute unscheduled visits and platforms that connected families to remote providers.

Pairing both the need for virtual conversations and job continuity for nurses sidelined during the pandemic, this Remote GOC Program[3] offered a sustainable solution to a major gap in care. The program developed a system by which the bedside team could alert the remote palliative care providers to engage the family in end-of-life decisions.[4] These included DNR/DNI, MOLST, health care proxy discussions, and disposition. The Remote GOC Program[3] was created as a joint endeavor between the division of geriatrics and palliative medicine and emergency medicine. “In

decanting the responsibility of goals of care discussions from the emergency department to a calmer, remote setting," the authors seized a unique moment in time, a time where the most precious conversations regarding end-of-life care could were transitioned to a group of nurses working remotely. While this was a nurse-driven initiative, it spanned disciplines including social work and the division of palliative care and emergency medicine, fueling the success of this program.

The advantages of such a program include offloading the clinical team from having difficult, often prolonged discussions at the bedside. The nurses conducting the interviews were not on site, allowing protection from COVID-19 exposure and conservation of precious personal protective equipment (PPE).[5] The pandemic created extraordinary emotional and physical stress on bedside care teams. Health care workers struggled to communicate with the patients in full PPE, screaming above the whirl of the PAPR hood and N95 masks. Face shields prevented not only droplets from spreading but words from traveling, and conversations were strained at best.[6] Caregivers of patients who were not capable of making end-of-life decisions for themselves attempted to connect to next of kin via iPad. The telehealth platform for end-of-life care was born. Considerations on supporting the entire health care workforce included providing work during quarantine, providing offsite work to those health care workers at higher risk of contracting severe COVID-19, and providing a channel to support both the emotional needs of the emergency health care workers at the bedside and the need to work for those sidelined; this program was ideal.

The authors created a logic model for Remote GOC Program,[3] for other institutions to replicate their implementation. The inputs included the key partnership between emergency medicine and palliative care, nurses who were not onsite, the technology to perform the telehealth visits. Outputs include number of referrals into the program, GOC discussions with families, and any changes in code status. Evidence of the anticipated impact of this program after the pandemic will be continued offloading of the cognitive burden of the bedside clinician and providing meaningful work for nurses sidelined from clinical practice.

The pitfalls of this type of program are typical of many telehealth programs, with a few unique challenges. Families may not have access to the technology needed to conduct the telehealth interview. This lack of access is more prevalent in lower socioeconomic and rural areas.[7] These types of technology barriers may be more profound during a very intense end-of-life discussion compared with a virtual visit for an uncomplicated self-limited medical condition. Glitches in Wi-Fi or software may be extremely intrusive in these sensitive moments. There may also be conflicting advice given to the patient's family by a telehealth nurse who is not the patient's primary in-person bedside nurse. Would the weight given to the information provided to make such difficult decisions be watered down by the nurse being remote? There is something profound about the bedside clinician giving advice regarding advanced directives with the patient in front of them. Would a virtual approach convey the same meaning?

Health care providers, including nurses, are often sidelined from clinical care secondary to injury, illness, exposure, or, recently, COVID-19 quarantine.[8] This unique GOC program[3] paired the nurses who were not able to work clinically to participate in a valuable program. The use of nursing in telehealth has expanded rapidly over the past 5 years. A gap still exists around telenursing and disaster care. This application of telehealth as an avenue for emergency nurses to use their specialized skillsets begins to fill this gap. The telehealth platform for nursing seemed counterintuitive at first, with the goals of bedside nursing to be truly a hands on specialty. There was a delayed launch of the specific telehealth nursing applications.[8] The potential for delivering nursing care such as patient history, triage, individualized patient education, postdischarge counseling, and care coordination is enormous. Nurse-led telehealth initiatives during the pandemic provided a platform for virtual care that limited infection exposures and physical demands and allowed flexibility to work from home. The pandemic disproportionately affected working parents, who had to manage their jobs, their own psychological stressors, and children who were learning at home during lockdown. The use of telehealth to mitigate the occupational psycho-social stressors during the pandemic can be stretched to postpandemic times.[9] Health care is not only complicated, it has now become draining, leading to high rates of burnout and dissatisfaction. Allowing nurses to intermittently perform their duties from home is one possible solution, for some nurses, some of the time.[10] The Remote GOC Program[3] manuscript provides important feasibility evidence that remotely working nurses can engage patients in end-of-life discussions.

During staff shortages, remote nurses can potentially help perform the admission intake for patients boarding the emergency department; they may be able to provide more continuous visual monitoring or patient surveillance care when staffing levels cannot be maintained. Remote nurses might be engaged to have more comprehensive discharge planning meetings with patients and their families. The pandemic taught us that you can be an emergency nurse but do not need to be in an emergency department to deliver specialty care. It is about the skill set and not the location. The paper by Liberman et al[3] illustrates that very nicely. Through their discussion about end of life, they have breathed new life into how we care for patients.

DETAILS

Subject:	Emergency medical care; Domiciliary visits; Health care; Quarantine; Workforce; Telemedicine; Workers; COVID-19; End of life decisions; Triage; Palliative care; Nurses; Pandemics; Emergency services; Medical personnel; Care plans; Teams; Acute services; Advance directives
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Prevalence of Prolonged Length of Stay in an Emergency Department in Urban Denmark: A Retrospective Health Records Repository Review: JEN

ABSTRACT (ENGLISH)

Introduction

Prolonged length of stay in emergency departments is associated with increased hospitalization, hospital-acquired pressure ulcers, medication errors, and mortality. In acute admissions in Denmark in 2018, 67% of patients experienced waiting time from arrival to examination. This study aimed to estimate the prevalence of prolonged length of stay (≥6 hours) and identify risk factors related to input, throughput, and output components.

Methods

A retrospective health records repository review included 4743 patients admitted to a single urban emergency department in Denmark in January 2019. Data collected from the electronic health record system repository included demographic and organizational characteristics and were analyzed using descriptive statistics and logistic regression.

Results

Among patients admitted in the study period, 31% had a prolonged length of stay of ≥6 hours. Prolonged length of emergency department stay was associated with being female (male odds ratio [OR], 0.86; 95% confidence interval [CI], 0.75-0.98), treatment by medical service (OR, 4.25, 95% CI, 3.63-4.98) vs surgical or injury, triage acuity of 2-Orange (OR, 1.45; 95% CI, 1.18-1.78) or 3-Yellow (OR, 1.47; 95% CI, 1.23-1.75) on a 5-level scale, evening (OR, 1.44; 95% CI, 1.24-1.66) or night (OR, 2.36; 95% CI, 1.91-2.91) arrival, ages 56 to 80 (OR, 1.79; 95% CI, 1.52-2.11) and >81 (OR, 2.40; 95% CI, 1.99-2.88) years, and hospital admission (OR, 1.19; 95% CI, 1.04-1.38) vs discharge from the emergency department to home.

Discussion

Female, elderly, and medical patients were each identified as at-risk characteristics for ≥6-hour length of stay in the emergency department. Acute care patient pathways in the emergency department, particularly for evening and night, with guideline-based care and system level improvements in patient flow are warranted. Further research with larger populations is needed to identify and support interventions to decrease prolonged length of stay.

FULL TEXT

DETAILS

Subject:	Emergency medical care; Patient safety; Drugs; Risk factors; Patients; Mortality; Ulcers; Triage; Older people; Emergency services; Critical incidents; Length of stay; Acute services; Health records; Hospitalization; Injuries; Medical errors; Demography; Pressure ulcers
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Experience of Violence and Factors Influencing Response to Violence Among Emergency Nurses in South Korea: Perspectives on Stress-Coping Theory: JEN

ABSTRACT (ENGLISH)

Introduction

This cross-sectional study aimed to explore the experiences of workplace violence involving emergency nurses and to identify the factors influencing the response to violence on the basis of the stress-coping theory formulated by Lazarus and Folkman.

Methods

Using a cross-sectional design, a structured questionnaire was administered to measure the experience of violence, perceived stress, coping actions after violence, resilience (Connor-Davidson Resilience Scale), and responses to violence. The participants were 131 nurses who were working in the emergency departments in 9 of 11 general hospitals in 2 cities in South Korea. The collected data were analyzed using descriptive statistics, *t* tests, analyses of variance, Pearson correlations, and hierarchical multiple regression analyses.

Results

The most frequent type of violence was verbal violence, and the main offender involved in all types of violence was the patient. The methods for coping with violence were mainly passive, and emotional responses were the most frequently reported response to violence. In the final model (explanatory power = 41.5%), with response to violence as the dependent variable, the effects of the experience of violence disappeared, and only the effects of perceived stress and resilience remained.

Discussion

The results of this study suggest that internal factors such as perceived stress and resilience have a more meaningful effect on the response to violence than the experience of violence itself. The findings are expected to serve as assessment data for preparing interventions and policies around prevention of, and effective coping regarding, workplace violence toward emergency nurses.

FULL TEXT

DETAILS

Subject:	Occupational stress; Emergency medical care; Hospitals; Job satisfaction; Prevention programs; Perceptions; Workplace violence; Coping; Emotional responses; Stress response; Adjustment; Workplaces; Nurses; Emergency services; Nursing; Stress; Resilience; Post traumatic stress disorder
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A Framework for Standardizing Emergency Nursing Education and Training Across a Regional Health Care System: Programming, Planning, and Development via International Collaboration: JEN

ABSTRACT (ENGLISH)

Introduction

The challenges related to providing continuing education and competence management for emergency nurses are not unique to any one organization, health system, or geographic location. These shared challenges, along with a desire to ensure high-quality practice of emergency nursing, were the catalyst for an international collaboration between emergency nurse leaders in Region Zealand, Denmark, and nurse leaders and educators from a large academic medical center in Boston, Massachusetts. The goal of the collaboration was to design a competency-based education framework to support high-quality emergency nursing care in Region Zealand. The core objectives of the collaboration included the following: (1) elevation of nursing practice, (2) development of a sustainable continuing education framework, and (3) standardization of training and nursing practice across the 4 emergency departments in Region Zealand.

Methods

To accomplish the core objectives, a multi-phased strategic approach was implemented. The initial phase, the needs assessment, included semi-structured interviews, a self-evaluation of skills of all regional emergency nurses, and a survey regarding nursing competency completed by emergency nurse leadership. Two hundred ninety emergency nurses completed the self-evaluation. The survey results were utilized to inform the strategic planning and design of a regional competency-based education framework.

Results

In 18 months, and through an international collaboration, emergency nursing education, training, and evaluation tools were developed and integrated into the 4 regional emergency departments. Initial feedback indicates that the education has had a positive impact. The annual competency day program has continued through 2021 and is now fully institutionalized within the regional emergency nursing continuing education program. Furthermore, use of this innovative education framework has expanded beyond the emergency department to other regional nursing specialties.

Discussion and Conclusion

Through this unique collaboration with regional and international participants, a sustainable, regional emergency nursing education program was developed that has elevated and standardized the practice of emergency nurses in Region Zealand, Denmark. This program development can serve as a model for region-wide or health care system–wide collaborations in other countries.

FULL TEXT

Introduction

The complexity of care and demand placed on emergency care practitioners continues to increase globally. Emergency nurses, like other health care providers, face many challenges to remain current and competent in the skills and knowledge required to manage increasingly complex patient populations.[1] A qualified emergency nurse is expected to be competent in the management of emergent, urgent, and nonurgent patients across the health and age continuum.[2] Maintenance of competence in an evolving practice requires the astute emergency nurse to engage in lifelong learning, knowledge acquisition, and skills refinement.[2] In 2011, the Institute of Medicine released a report, *Future of Nursing: Leading Change, Advancing Health*, recommending that all nurses adopt a framework of continuous lifelong learning and ongoing competence evaluation.[3] The Institute of Medicine report also highlighted an urgency for health care organizations and administrators to foster an environment and a culture that is supportive of the nursing professional's lifelong learning needs.[3]

Despite growing evidence supporting the need for continuing education and competence evaluation, nurse education is often cited as being inadequate relative to the evolving complexity of patient care.[4] Globally, in both rural and community settings, these effects are frequently compounded by restricted finances and limited resources.[5] The challenges related to continuing education and competence management in nursing are not unique to any one organization, health system, or geographic location. These shared challenges, in addition to concerns related to its impact on the quality and practice of emergency nursing, were the catalyst for an international collaboration between emergency nurse leaders in Region Zealand, Denmark, and nurse leaders and educators from Harvard Medical Faculty Physicians at Beth Israel Deaconess Medical Center in Boston, Massachusetts.

Setting

Denmark is located in northern Europe and has a population of approximately 5.8 million. Located in the southeast of Denmark is Region Sjaelland (Region Zealand), a region with 821 000 inhabitants and an area of 7273 km.[26] Region Zealand has 7 hospitals, 4 of which have emergency departments: Zealand University Hospital in Køge, Nykøbing Falster Hospital, Holbæk Hospital, and Slagelse Hospital (Figure 1).[7] The emergency departments are distributed throughout the region and form the center of emergency care delivery in Zealand. Because it is a publicly funded system, health care services are available to all residents.

Zealand Nursing Education: Background

In Region Zealand, emergency nurse education, training, and scope of practice are primarily determined by local leaders. In addition to local programs, education of regional emergency nurses has historically consisted primarily of the completion of a theory-based national education program designed to address the training and competence needs. However, over time, leaders found that the program length, cost, and associated staffing logistics created significant barriers to individual completion, rendering it impractical as the primary source of training and competence assessment for emergency nurses (the national program continues in parallel to this project).

In addition, in 2015, Zealand emergency nursing leaders and regional health care administrators identified several internal inconsistencies in regional training and education leading to significant variability in practice and quality of care. Nurse leaders also reported that general staff satisfaction and retention were negatively impacted by these practice and education inconsistencies.

The Project

To address these identified issues, regional leadership engaged in a unique international collaboration, leveraging an existing relationship with the Department of Emergency Medicine at Beth Israel Deaconess Medical Center. The primary goal of the collaboration was to elevate and standardize emergency nursing practice across Region Zealand. Central to achieving the goal was the development of a sustainable regional education framework, which focused on strategies to align and standardize educational priorities, delivery methods, and tools through the use of existing regional staff and resources. A logic model describing the project is found in Table 1.[8]

Project Funding

The regional health care system of Region Zealand provided strategic funding for the initial development of the program. This funding covered, among other things, the costs of the international collaboration, including consultancy services from the United States partner, the first train-the-trainer course, and travel expenses for Danish and US participants to attend the various program planning initiatives. The majority of the program costs, however, including staff time for initial and ongoing program development, ongoing train-the-trainer courses, and the skills stations themselves, were incurred by the individual emergency departments. While it is logical that this project provided an overall regional cost savings through leveraging system resources, such as equipment, program development, and educator training, this saving has not been quantified.

Methodology

A comprehensive plan was designed to achieve the goals of the collaboration and included 5 distinct phases: (1) needs assessment, (2) regional strategic planning, (3) curriculum/tools development, (4) staff development (train-the-trainers course), and (5) project launch/implementation. These phases resulted in the initial project milestones depicted in Figure 2. The collaboration was coordinated and overseen by a designated regional steering committee consisting of nurse leaders and educators from the 4 emergency departments, an administrative program director from the regional health system, and US nurse educators. Throughout the project planning and implementation phase, the steering committee met monthly to review progress and make key project decisions. The 5 project phases are described in the sections below.

PHASE I: NEEDS ASSESSMENT

Needs assessments, specifically in the context of international emergency specialty collaborations, provide clarity on the development of specific achievable education objectives and have been determined to be essential to program success.[9,10] To inform educational planning, a needs assessment of regional emergency nursing education was conducted by the US nursing team. The assessment included the use of an electronic self-assessment tool designed to capture both emergency nurses' and leaders' perceptions of practice and competence. In addition, semistructured interviews with nurse leaders at each hospital were conducted via telephone.

The data collected were originally in the interest of the project and program development and were not collected specifically for this paper or study. In addition, none of the authors or individuals who contributed to the project had access to any subject identifiers linked to our surveys. Therefore, our paper does not fall within the category of human subjects research.[11]

The electronic self-assessment tool distributed to regional nurses was a multi-part, self-reported questionnaire. A 5-point scale (0-4) was used to measure nurses' perceived competency experience levels, with proficient being a score of 3 or greater. The 202 skills and assessments represented on the questionnaire were informed by the Emergency Nurse Core Curriculum[12] and modified to reflect the Danish emergency nurses' scope of practice. The questionnaire was distributed electronically to 290 nurses from the 4 regional emergency departments, with an 82.8% response rate (see Supplementary Appendix 1).

The electronic assessment distributed to nurse leadership was a similar multipart questionnaire intended to capture leaders' perceptions of staff competence. Nursing leadership teams from the 4 emergency departments completed the assessment by hospital group. Leaders were instructed to respond on the basis of their knowledge of incident reports, patient feedback, and direct observation experience. Participants were given 5 weeks to complete the survey. The electronic questionnaires were tested, and content validity established, by educators and leaders from each hospital before implementation.

The results of the needs assessment informed the educational program goals and learning objectives, which were developed in subsequent project phases. The nurse self-assessment questionnaire offered the majority of insight, and its results underscored the need for improved education. Relevant supporting results are displayed in Figures 3 and 4. A 42-page needs assessment report was generated to serve as a basis for the subsequent strategic planning phase.

Of note, in the survey, it was not our intention to make direct comparisons between the skills-based training of the newly developed program with the largely theory-based training of the national emergency nurse training program,

but simply to understand what type of education was being received by the emergency nursing staff. The newly developed program includes both theory and skills-based learning.

PHASE II: STRATEGIC PLANNING

After the needs assessment, the second phase of the collaboration began. In this phase, 12 Danish nurse leaders and educators attended a weeklong strategic planning session in Boston, Massachusetts. During this week, leaders utilized the needs assessment report and leveraged new knowledge obtained from on-site education and observations in Boston in order to design a framework and roadmap for the implementation of a regional emergency nurse competency-based education, training, and assessment program.

The strategic planning program was designed and led by US nurse leaders and educators and included didactics, clinical observations, and expert-led discussion related to the following topics: emergency nursing scope and standards of practice, curriculum development, competency assessment, competency validation, and trainer development strategies. In addition, the US project team facilitated strategic discussions regarding program decision-making. These outcomes are described below.

The decision to host the planning session in Boston versus Denmark was twofold: (1) to provide a supportive environment with dedicated time for emergency nurse leaders to build relationships with one another, parallel to the collaborative development of the regional strategic plan, and (2) to provide inspiration and share best practices through direct observation of emergency nursing practice and delivery of competency-based education.

During strategic planning sessions, expert consensus was used to drive decision making, and this was informed by (1) the assessment results, (2) leadership knowledge of critical areas, and (3) the US partner's shared experience. Arriving at consensus among all 4 hospital leadership teams was a priority. Disagreements were analyzed and discussed until consensus was achieved. Decisions, once made, were written on a whiteboard throughout the sessions and finalized with a report at the end of the week for distribution. Strategic discussion led to the development of outcomes detailed in Figure 5 and Table 2.

In addition to the key strategic decisions described above, the group, facilitated by US nurse collaborators and project managers, developed a detailed project plan that includes a project timeline, tasks, roles, and responsibilities. The project plan guided project implementation as the group moved through the subsequent phases of curriculum development, trainer development, and project launch.

PHASE III: CURRICULUM DEVELOPMENT

In September 2015, shortly after the strategic planning workshop in Boston, 15 nurse educators from Region Zealand and 2 US nurse leaders convened for 5 days in Denmark. The goal of was twofold: first, to identify a transferable method for the development and delivery of competency-based emergency nursing education and, second, to apply this new knowledge and process in the development of the 2016 competency-based education program. The deliverable of the weeklong process was a comprehensive evidence-based education toolkit for each of the 5 identified skills stations, in addition to standardized documents to support nurse trainers and leaders in program delivery. See Supplementary Appendix 2 for a toolkit sample and Figure 6 for a brief description of the toolkit contents.

Before the curriculum development session, applicable pre-existing training and educational materials were collated from the 4 hospitals and reviewed for transferability to the 2016 skills stations. US nurse leaders provided educational and academic input to the work process, as well as an updated project plan for competency development in Region Zealand. The curriculum was grounded in internationally recognized standards and theories identified during strategic planning.[13-16] Published research suggests that implementing emergency medicine education programs that adhere to internationally recognized standards will lead to successful education programs.[9, 17-21]

PHASE IV: TRAINER DEVELOPMENT AND TRAIN-THE-TRAINER

After curriculum development and translation of materials, 32 Zealand nurses were selected to be trainers for the 2016 regional "competency day." Trainers were selected on the basis of their adherence to emergency nursing standards of practice, in addition to their ability to evaluate competence and provide peer feedback. In addition, trainers were generally viewed as professional role models or ambassadors of excellence in emergency nursing. A

regional train-the-trainers workshop was then scheduled for November 2015. The workshop was designed to prepare these trainers for program launch through a series of didactic and hands-on training delivered by the US nurse educator team.

The project task force had determined that the train-the-trainers model would be the most efficient and effective model for rapid program implementation. The use of the train-the-trainers model for international emergency medicine projects has been discussed in the literature as being a scalable and instrumental component to program success and long-term sustainability.[22] In fact, train-the-trainers programs have been used to develop physician, nurse, and prehospital emergency medicine education throughout the world in many countries,[23] including China,[24,25] Turkey,[22] India,[22] Italy,[22,26-28] Poland,[29] Armenia,[30] Ethiopia,[31] Costa Rica,[32,33] Rwanda,[34] Ghana,[35] Estonia, Armenia, Kazakhstan, Russia, Moldova, Georgia, Ukraine, Turkmenistan, Uzbekistan, Belarus, Tajikistan, and Albania.[36]

Backed by strong evidence, a train-the-trainers session was scheduled, in which each trainer received 22 hours of training (see Figure 7) as follows: first, a 7-hour training workshop, facilitated by the US nurse educators, was held for the entire regional trainer group. The workshop included a series of lectures and breakout sessions for application and return demonstration, incorporating adult learning theory and best practices for teaching in a flipped classroom setting. Upon completion of this workshop, trainers were presented with individual binders filled with the above described curriculum materials, and regional leadership set expectations on their roles and responsibilities during the upcoming annual training. Printing materials and collating them into binders, which are consistently updated throughout the year, is invaluable to the trainers. During a competency day the curriculum binders enable the trainers to have all of the materials and resources at their fingertips. They are able to use the detailed scripts, scenarios, and detailed clinical rationales to more easily respond to trainee questions. In the event of a trainer's absence, a substitute trainer can more easily step into the role with minimal preparation, using the curriculum binder resource.

After completion of the workshop, each trainer participated in 7.5 hours of skills station practice at their own hospitals and 7.5 hours at a partner hospital. Trainers had the opportunity to trial their skills station by presenting it to 2 US nurse educators for feedback. Present at these practice sessions were colleague trainers from the same hospital and a selected regional partner hospital. The colleagues served in the role of mock trainee during the station practice sessions or served as observers contributing to the poststation feedback sessions.

The trainers also had the opportunity to discuss their roles and responsibilities with the US team and the Zealand hospital leadership during these practice sessions. Leaders highlighted the importance of the trainer role as ambassadors for excellence in emergency nursing practice and as essential leaders in the journey of emergency nursing from "good to great," a previously articulated goal of the educational program. After completion of the train-the-trainer program, leaders and trainers at each hospital focused on a logistical preparation of the annual competency day program, determining schedules and internal education policies.

Outcomes

In January 2016, the Region Zealand emergency nurse education program was launched, and the first competency days were held in each of the 4 emergency departments. During the first month of project launch, each department had 10 to 15 nurses participate in 5 competency-based skill stations, each containing critical concepts and skills related to emergency nursing. Regional emergency nurse competency days launched in January 2016, and by December over 270 regional nurses had successfully completed the training program.

To evaluate the program and measure the impact of education on emergency nurse education, the project group identified 2 tools: (1) postprogram evaluation, and (2) a self-assessment tool (see Supplementary Appendices 3 and 4). The postprogram evaluation tool was distributed to participants at the completion of the competency day to solicit participant feedback on individual trainer performance, individual skills station educational value, and logistical aspects of the day. Relevant improvements were made after each competency session, based on learner feedback, and were agreed upon region-wide, communicated by change management form (see Supplementary Appendix 5). In general, feedback was positive in all 4 hospitals, and educators reported that their staff nurses were working enthusiastically and inquisitively with the material.

Second, participants were asked to complete a modified version of the original needs assessment survey. As discussed above, the original needs assessment survey was designed to measure nurses' perceived competency experience levels for 202 identified emergency nurse skills and competencies. The modified survey was designed to measure nurses' perceived competency specifically related to the skills and competencies validated during the 2016 competency days. This survey was administered at 3 separate intervals: before receiving their prework material, on the day of competency skill training, and 1 week after training.

Results of the first 4 competency days showed a significant increase in nurses' perceived competency with those skills practiced during the 2016 competency day. Averaged across all practiced skills, regional emergency nurses' perceived competency levels showed a percentage increase of 5.29% and 22.85%, respectively ([Figure 8]), and 29.34 overall. A total of 27 of 34 skills showed an increase between the first and second survey, whereas 34 of 34 skills showed an increase in comfort level between the second and third survey. Whereas only the first 4 competency days were evaluated, results indicated an increase in perceived competence due to skills station training.

Competency Day Rollout

One month before each competency day, staff nurses received an email with the prework materials for all 5 stations and were asked to review these materials before competency day. Time was provided within the staff's schedule to study the materials. Leadership regularly communicated with staff regarding the importance of preparing for competency day.

Those staff nurses who were unable to perform the skills on competency day were assisted with station completion by the trainers. Trainers were not involved in any improvement or learning plan discussions with staff nurses. Station trainers made note of staff performance and, at the end of the competency day, leadership met with the trainers to receive feedback and a develop a list of staff members who needed additional follow up. Nurse leaders addressed these issues directly with staff and nurse educators after competency day.

Project Institutionalization and Expansion

The first regional competency days began in January 2016, and annual competency day programs have been launched each year from 2017 to 2021, with plans to continue; the program has been institutionalized within the regional emergency nursing education system. (We define institutionalization as the stage in the organizational change process at which an educational program has taken hold in the host culture's medical system and is described by local organizational members as a fully ingrained part of their medical/nursing education system).[23] In addition, the Zealand nurse educators have recently been consulted by other hospital departments and have served as a reference for the creation of standardized nurse education programs in other specialty areas. The 5 regional internal medicine departments created a similar annual competency day program, therein standardizing internal medicine nurse education, using the ED project as a point of reference. Regional nursing education programs have also been replicated in internal medicine (2017), abdominal surgery (2018), orthopedic surgery (2019), and pediatric departments (2020).

Discussion

The rapidly evolving landscape and required skill set for emergency nurses requires organizations to identify unique and innovative solutions for lifelong learning. The Region Zealand emergency nursing education collaboration demonstrates a unique approach to a common challenge faced by nurses globally. Utilizing a strategic approach, which incorporated regional stakeholders and international partners into a collaborative project leadership structure, Zealand was able to develop a sustainable competency-based education framework designed and implemented to support emergency nurses, trainers, and leaders in the delivery of high-quality evidence-based care.

The education collaboration had 3 core objectives: (1) to elevate nursing practice, (2) to develop a sustainable continuing education framework, and (3) to standardize training and nursing practice across the 4 Zealand emergency departments. It achieved these goals via an international collaboration and a multi-phased strategic approach to project implementation.

The international collaborative strategic approach that guided the program development used best practices to achieve these goals. A literature search of international emergency medicine project literature identified 3

recommended best practices for program success and institutionalization.[23] These 3 best practices are the following: the use of the train-the-trainers model in program design,[22] use of standardized educational content as a basis for curriculum planning,[21] and use of preprogram needs assessments as a basis for program design and implementation.[10] As demonstrated in the sections above, this collaboration incorporated all 3 of these best practices, and the result was project success and institutionalization. It is reasonable to conclude that international collaborations that use the aforementioned best practices may be a beneficial model to facilitate and expedite the development of emergency nursing education programs.

Also critical to achieving the above-noted outcomes was the use of a multi-phased strategic approach to project implementation, which included a needs assessment, curriculum development, train-the-trainer, and supported project launch. In addition, regional alignment and early stakeholder engagement were critical to gaining overall momentum and support for the project.

In terms of benefits of a standardized regional program, through this collaboration, project leadership saw that an initial investment offered by a regional health care system subsequently yielded efficiency and economy. The collaboration between the 4 hospitals allowed them to share resources, thereby reducing the workload of any 1 hospital bearing the burden of developing independent education. Sharing equipment, curriculum, trainers, and educational materials can reduce combined spending and workload; it can also result in high-quality nursing education and lead to program success.

The identification and dissemination of best practices to address nurses' continuing education and competency needs are critical to the advancement of the profession and the patients and communities that the emergency nurses serve. The outcome of this collaboration was the design and implementation of a sustainable competency-based education framework that included key education, training, and evaluation tools to support both emergency nurses and leaders in the pursuit of high-quality care across Zealand. Given the adoption and success of this program, the authors strongly believe in the transferability of this regional project to similar projects in other countries, regions, or health care systems. As already demonstrated with the replication of this model leading to the creation of 4 other regional nursing education programs in Zealand (internal medicine [2017], abdominal surgery [2018], the orthopedic surgery [2019] and the pediatric departments [2020]), the transferability of the described program is high.

The 5-phase approach outlined above provides emergency nursing colleagues, working within a health care system with a generalizable strategic approach to collaborative educational program development, from assessment to implementation. The framework was designed and outlined in detail for easy replication. The authors believe that the process, collaborative and consensus-based in nature, which takes advantage of existing system resources, would function in other environments that share similar challenges related to continuing education and competence management.

Implications for Emergency Clinical Practice

Recommendations for translating the findings of this paper into emergency clinical practice include the following:

- Innovative and collaborative approaches to standardizing emergency nursing education across a health care system or region can result in high-quality nursing education and can lead to program success.
- Investment in training and education for emergency nurses across a region or system ensures that consistent high-quality nursing care is available to all patients.
- Leveraging system or regional resources, such as equipment and trainers, may reduce the overall burden and challenges both fiscally and operationally associated with independent education programs.
- International collaborations that use best practices such as use of standardized, internationally recognized educational content, use of a train-the-trainers model throughout program implementation, and use of a comprehensive preprogram needs assessment may be a beneficial model to facilitate and expedite the

development of emergency nursing education programs.

••The transferability of the described program is high and has been found to be easily replicable. The program model can be used for future regional or system-wide collaborations.

Conclusion

The challenges related to providing continuing education and competence management for emergency nurses are not unique to any 1 organization, health system, or geographic location. These shared challenges, in addition to a desire to ensure high-quality practice of emergency nursing, were the catalyst for an international collaboration to design a competency-based education framework to support high-quality emergency care in Region Zealand. In 18 months and through an international collaboration, emergency nurse education, training, and evaluation tools were developed and integrated into 4 regional emergency departments. The annual competency day program has continued through 2021 and, now fully institutionalized within regional emergency nursing education, has expanded to include education in other regional nursing specialties. Through this unique collaboration with regional and international participants, a sustainable education program was developed that has elevated and standardized the practice of emergency nurses in Region Zealand. This collaboration and project can also be used as a model for future nurse education development projects across multiple departments.

Author Disclosures

Conflicts of interest: none to report.

Appendix Supplementary materials

SUPPLEMENTARY APPENDIX 1 Nurse self assessmentImage, application 1SUPPLEMENTARY APPENDIX 2 Tool-kit sampleImage, application 2SUPPLEMENTARY APPENDIX 3 Post program (modified) self-assessment toolImage, application 3SUPPLEMENTARY APPENDIX 4 Change management formImage, application 4SUPPLEMENTARY APPENDIX 5 Post-program (skills stations) evaluationSubmissions to this column are encouraged and may be submitted at jenonline.org where submission instructions can be found in the Author Instructions.Image, application 5

Supplementary materials

Supplementary material associated with this article can be found, in the online version, at doi:10.1016/j.jen.2021.08.006.

Image, table 1

Image, table 2

DETAILS

Subject:	Continuing education; Emergency medical care; Collaboration; Leadership; Emergency services; Nursing; Quality of care; Competence; Strategic planning; Nurses; International collaboration; Standardization; Medical education; Educational programs; Institutionalized; Sustainability; Health education; Polls &surveys; Self evaluation; Professional practice; Needs analysis
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Considerations for Collaborations: International Nursing Continuing Professional Development: JEN

ABSTRACT (ENGLISH)

Efforts to standardize continuing professional development (CPD) activities will assist in achieving baseline competency in a rapidly changing health care environment, no matter the geographical location. [...]the Nursing Council of Hong Kong defines CPD as "...any post-registration/post-enrollment educational skill or experience updating which is nursing-specific or health care related with an aim to enrich the nurses' contribution to quality health care and help them in their pursuit of professional goals,"4 whereas nursing CPD is defined by the American Nurses Credential Center (ANCC) as an educational activity that builds upon the educational or experiential knowledge of a professional registered nurse.5 The administrative bodies, generally referred to as regulators, of nursing and midwifery professional practice have a strong voice in the regulation of practice and have used this influence to motivate and inspire specific CPD requirements.6 Some studies have called for specific CPD requirements for advanced practice nurses and midwives, especially in pharmacology.7 Regardless of the regulatory body over nursing practice in a particular region, flexibility toward professional development, especially during this pandemic, is necessary.8 Knowing and understanding nurses' professional practice needs and development requires awareness and perspective of the particular health care landscape.Perspective Outside the United States Nursing CPD can mean several different things throughout the world. Under this regulatory body, the Professional Development Committee advises the Nursing Council on many things, including the authorization of CPD providers, their educational activities, and their performance.12 To maintain nursing licensure, nurses must accumulate a minimum of 45 CPD points every 3 years.4 These different regulatory models, of which there are many more, do have some elements in common. Just as significant is the desire for collaboration among nurses, midwives, or other health care providers to develop high-quality nursing education within their country or region.Lessons Learned Through Successful International Collaboration Sigma Theta Tau International Honor Society of Nursing (Sigma), founded in 1922 by 6 nurses at the then Indiana University Training School for Nurses in Indianapolis, IN, is an international nursing organization.

FULL TEXT

In the January 2022 issue of the *Journal of Emergency Nursing*, Calder et al[1] discuss the development of emergency nursing educational activities within Denmark. Efforts to standardize continuing professional development (CPD) activities will assist in achieving baseline competency in a rapidly changing health care environment, no matter the geographical location. The World Health Organization recently called for an increased

expansion of CPD processes.[2] Many countries link CPD to academic progressions and nurse credentialing[3]; however, there are varying definitions. For example, the Nursing Council of Hong Kong defines CPD as "...any post-registration/post-enrollment educational skill or experience updating which is nursing-specific or health care related with an aim to enrich the nurses' contribution to quality health care and help them in their pursuit of professional goals,"[4] whereas nursing CPD is defined by the American Nurses Credential Center (ANCC) as an educational activity that builds upon the educational or experiential knowledge of a professional registered nurse.[5]

The administrative bodies, generally referred to as regulators, of nursing and midwifery professional practice have a strong voice in the regulation of practice and have used this influence to motivate and inspire specific CPD requirements.[6] Some studies have called for specific CPD requirements for advanced practice nurses and midwives, especially in pharmacology.[7] Regardless of the regulatory body over nursing practice in a particular region, flexibility toward professional development, especially during this pandemic, is necessary.[8] Knowing and understanding nurses' professional practice needs and development requires awareness and perspective of the particular health care landscape.

Perspective Outside the United States

Nursing CPD can mean several different things throughout the world. This often depends on the regulatory body for the country, territory, or providence. Some ministries of health, nursing organizations, and nursing and midwifery councils have developed and provided their own regulation around continuing education of health care professionals. Still others rely on other governmental agencies to develop, monitor, and enforce nursing care models.

In the Republic of Ireland, CPD is regulated by the Nursing and Midwifery Board of Ireland (NMBI).[9] Multiple types of organizations can develop CPD activities. The activities require review and approval through the NMBI to be valid and accepted for nursing professional development.[10] The evaluation process is less formal in the Republic of Ireland. Evaluating educational activities is at the discretion of the developer who provides the educational content. Some activities that provide educational content and support for nurses and midwives are not considered professional development and are not approved through the NMBI. These activities may include mentorship, journal clubs, and case reviews. At present, the NMBI does not require nurses and midwives to provide evidence of participation in CPD to maintain their annual registration.[10]

Canadian nurses are not regulated by a national nursing licensure body. They are accountable to the province or territory in which they practice.[11] Canadian nurses and midwives are self-regulated in their professional responsibility, meaning they are not required to obtain a specific number of CPD hours for re-licensure. Each provincial and territorial regulatory body has continuing competency programs that nurses use to demonstrate their competence,[11] such as a portfolio, instead of CPD activities or a specific number of required hours.

In Hong Kong, nursing practice is regulated by the Nursing Council of Hong Kong. Under this regulatory body, the Professional Development Committee advises the Nursing Council on many things, including the authorization of CPD providers, their educational activities, and their performance.[12] To maintain nursing licensure, nurses must accumulate a minimum of 45 CPD points every 3 years.[4]

These different regulatory models, of which there are many more, do have some elements in common. Most notable is management and influence over the educational content that counts toward nursing re-licensure. Just as significant is the desire for collaboration among nurses, midwives, or other health care providers to develop high-quality nursing education within their country or region.

Lessons Learned Through Successful International Collaboration

Sigma Theta Tau International Honor Society of Nursing (Sigma), founded in 1922 by 6 nurses at the then Indiana University Training School for Nurses in Indianapolis, IN, is an international nursing organization. Sigma's mission is to develop nurse leaders anywhere, in order to improve health care everywhere.[13] With more than 135 000 members in more than 110 countries, Sigma has a unique vantage point and much experience collaborating with nurses from around the world.

Sigma has gained valuable insights into international collaboration by developing and delivering educational

programming such as online CPD courses, leadership development programs, webinars, and in-person and virtual conferences. Sigma's history of international collaboration also involves the publications of books and peer-reviewed journals. The in-person and virtual conferences feature multiple educational topics, including research, evidence-informed practices, creating healthy work environments, and many more with the presence of international partners. Sigma has a presence at and works with the United Nations and collaborates with its many international chapters, committees, and task forces.

Collaborative projects result in higher quality and satisfaction when expectations by and for all involved parties are clear. When setting expectations, it is important to establish a timeline that includes cultural considerations for holidays and vacations. In the US, "taking a vacation" does not mean the same thing as in Europe or Australia when someone is "going on holiday." Both are used to describe taking time off from work with a high probability of traveling during that time. However, in the US, the word "holiday" generally refers to a short period of time away from work, 1 or 2 days perhaps, and is generally tied to a national or religious event, frequently involving celebrations and feasts. These days are often bank holidays, originally designated by the government and when banks were closed. If someone is "going on holiday" for a month, they may not be checking their work email or phone. These differences in terminology and expectations should be considered in project timelines.

There are other considerations regarding religious holidays to take into consideration as well. While asking about religious preferences may not be a routine part of leading a project or committee, asking about holidays or observances should be considered. For example, the Muslim faith observes prayer 5 times a day. When scheduling an all-day meeting or orientation, consider asking about ideal times to take a break from working. In 2014, Sigma hosted its annual International Nursing Research Congress in Hong Kong. During this event, Sigma held its onsite Career Center, an opportunity for participants to meet with career advisors to discuss various topics. As privacy was an issue in this particular culture, partitioned screens were needed in between the participants to protect their privacy.

Considerations for general working days and schedules may also need to be considered. For example, in many countries in the Middle East, typical workdays are Sunday through Thursday. Differences in time zones and dates need to be clarified if you are working with countries such as Australia that may be 12 to 16 hours ahead of US time zones. Projects that involve nursing schools with faculty in academia should consider the academic calendar. The traditional academic calendar in the US is August or September through May or June. In New Zealand and Brazil, the academic calendar is generally from March through November or December.

In addition to planning when you will collaborate, it is also important to consider how you will communicate. Discuss the platform that works best for all individuals involved. Although video streaming meetings have become very common, the Wi-Fi capabilities in some areas may not be able to support the speed necessary to have seamless communication. A broken connection combined with English not being someone's first language or accents could contribute to members of a group feeling disengaged. Consider using closed captioning during meetings, setting expectations to utilize a microphone, reducing background noise by utilizing mute functionality when not speaking, and sending documents well in advance, in case translation is needed.

When beginning an international collaboration, it is important to understand even some of the most basic terms and come to an agreement on what terminology should be used. The titles, qualifications, and preparation to become a nurse and the scope of practice can look very different in many cases. In Nigeria, a chief nursing officer may be a clinically practicing nurse with extensive experience, and the term clinical is used rather than bedside. It is also helpful to understand the preparation for working with nurses in various countries. In the US, nurses are prepared as generalists and can then begin caring for individuals wherever they choose to work. This is not the case in other countries. In Finland, nurses specialize in pediatric nursing, acute care nursing, or mental health nursing. Once their training as pediatric nurses has been completed, nurses are only credentialed to care for that population and require additional training for other areas. This is the same for nurses in the United Kingdom, Saudi Arabia, Italy, Indonesia, Chile, and many more.

Scope of practice can vary between countries. Unlike the US, in Australia, nurses are legally able to independently

prescribe and administer vaccinations in most (but not all) jurisdictions. The same is true for childhood immunizations in the United Kingdom. Many other countries, including Denmark, Sweden, Iceland, Kenya, and Columbia, have some level of prescribing authority for nurses. The Advanced Practice Nurse prescribing authority model in the US may be most similar to the models in Singapore, South Korea, and Taiwan.[14]

Conclusion

As our health care environment rapidly changes, so do the continuing educational needs of nurses and midwives. Interdisciplinary and international collaboration is essential during the current pandemic. We recognize and applaud the authors for their work and program development. We see where their efforts could serve as a model for future emergency nursing collaboration among countries. We also hope that our lessons can be passed along to others to make their international partnerships even more successful.

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National Estimates of Workplace Telehealth Use Among Emergency Nurses and All Registered Nurses in the United States: JEN

ABSTRACT (ENGLISH)

Introduction

The goal of this research was to quantify the baseline status of prepandemic workplace emergency nursing telehealth as a key consideration for ongoing telehealth growth and sustainable emergency nursing care model planning. The purpose of this research was to: (1) generate national estimates of prepandemic workplace telehealth use among emergency and other inpatient hospital nurses and (2) map the geographic distribution of prepandemic workplace emergency nurse telehealth use by state of nurse residence.

Methods

We generated national estimates using data from the 2018 National Sample Survey of Registered Nurses. Data were analyzed using jack-knife estimation procedures coherent with the complex sampling design selected as representative of the population and requiring analysis with survey weights.

Results

Weighted estimates of the 161 865 emergency nurses, compared with 1 191 287 other inpatient nurses revealed more reported telehealth in the workplace setting (49% vs 34%) and individual clinical practice telehealth use (36% vs 15%) among emergency nurses. The geographic distribution of individual clinical practice emergency nurse telehealth use indicates greatest adoption per 10 000 state residents in Maine, Alaska, and Missouri with more states in the Midwest demonstrating emergency nurse adoption of telehealth into clinical practice per population than other regions in the United States.

Discussion

By quantifying prepandemic national telehealth use, the results provide corroborating evidence to the potential long-term adoptability and sustainability of telenursing in the emergency nursing specialty. The results also implicate the need to proactively define emergency nursing telehealth care model standards of practice, nurse competencies, and reimbursement.

FULL TEXT

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Is Your Trauma Center Peds Ready?: JEN

ProQuest document link

ABSTRACT (ENGLISH)

Injury remains the leading cause of death for children age 1 to 18 years, yet the initial care of most injured children also takes place in emergency departments primarily designed and equipped to treat adults.5 The results of recent studies have shown that even trauma centers are inconsistent in their level of readiness to care for children.6,7 For example, while the majority of trauma centers have a tool to use for precalculated pediatric drug dosing, many lack other important parameters such as recording pediatric weights in kilograms only and the presence of a quality improvement process that includes pediatric-specific metrics.6 A recently published study of injured children brought to 832 emergency departments in US trauma centers was the first to dig deeper and evaluate the association between pediatric readiness of emergency departments verified as trauma centers (as per the 2013 NPRP nationwide assessment), in-hospital mortality, and in-hospital complications.7 In the study of over 372 000 injured children, receiving initial care in an emergency department that had a pediatric readiness score within the highest quartile of readiness was associated with 42% lower odds of death. The authors concluded that if all the children included in the study had been treated in emergency departments in the highest quartile of readiness, an additional 126 lives (95% confidence interval 97-154 lives) might have been saved in each of the 6 years for which data were collected.7 That is over 700 children’s lives that might have been saved if the trauma centers had all invested the time and resources required to better prepare for stabilizing pediatric emergency care! The presence of a PECC has been identified as the single most important factor that influences the readiness of any emergency department that cares for pediatric patients.10 The 2018 American Academy of Pediatrics Committee on Pediatric Emergency

Medicine and Section on Surgery, American College of Emergency Physicians Pediatric Emergency Medicine Committee, and Emergency Nurses Association Pediatric Committee Joint Policy Statement, “Pediatric Readiness in the Emergency Department,”9 identified the presence of 2 PECCs, one a physician and one a nurse, as central to the readiness of any emergency department that cares for children. “Implementing a Novel Nursing Site Manager Role in the Pediatric Emergency Department for Patient and Staff Safety during the COVID-19 Pandemic,”12 published in this current issue of the Journal of Emergency Nursing (JEN) described the way the Boston Children’s Hospital emergency department pivoted quickly at the onset of the pandemic to meet the specialized needs of their multidisciplinary staff during this time, while ultimately also benefiting their pediatric patients.

FULL TEXT

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Remote Advance Care Planning in the Emergency Department During COVID-19 Disaster: Program Development and Initial Evaluation: JEN

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ABSTRACT (ENGLISH)

Background

The coronavirus disease 2019 pandemic caused an unprecedented surge of patients presenting to emergency departments and forced hospitals to adapt to provide care to patients safely and effectively. The purpose here was to disseminate a novel program developed under disaster conditions to address advance care planning communications.

Methods

A program development and initial evaluation was conducted for the Remote Goals of Care program, which was created for families to communicate patient goals of care and reduce responsibilities of those in the emergency department.

Results

This program facilitated 64 remote goals of care conversation, with 72% of conversations taking place remotely with families of patients who were unable to participate. These conversations included discussions of patient preferences for care, including code status, presence of caregivers or surrogates, understanding of diagnosis and prognosis, and hospice care. Initially, this program was available 24 hours per day, 7 days per week, with gradual reduction in hours as needs shifted. Seven nurses who were unable to work in corona-positive environments but were able to continue

working remotely were utilized. Lessons learned include the need for speed and agility of response and the benefit of established relationships between traditionally siloed specialties. Additional considerations include available technology for patients and families and expanding the documentation abilities for remote nurses. A logic model was developed to support potential program replication at other sites.

Discussion

Upon initial evaluation, Remote Goals of Care Program was well received and demonstrated promise in decanting the responsibility of goals of care discussions from the emergency department to a calmer, remote setting. In future iterations, additional services and technology adjustments can be made to make this program more accessible to more patients and families. Other facilities may wish to replicate our Remote Goals of Care Program described here.

FULL TEXT

Contribution to Emergency Nursing Practice

••The current literature on innovative delivery of health care indicates a growing need for remote and telehealth options, particularly in the context of the novel coronavirus disease.

••This article contributes an innovative method for utilization of telehealth and remote nursing to engage in goals of care conversations for patients presenting to the emergency department.

••Key implications for emergency nursing practice found in this article are the utilization of remote nurses to engage in goals of care conversations with families of patients presenting to the emergency department. Due to infection-control restrictions, these families were prevented from accompanying patients to the hospital. Further implications include the reassignment of nurses who could not provide in-person patient care due to coronavirus health restrictions.

Introduction Problem Description

In late 2019, first reports of human transmission and circulation of the severe acute respiratory syndrome coronavirus 2 coronavirus disease 2019 (COVID-19) in Wuhan, China, began to make global headlines.[1] By March 1, 2020, New York City reported its first confirmed case of COVID-19 and quickly became an international hot spot.[2] Throughout the spring of 2020, health care systems across New York were forced to adapt usual operations to accommodate a surge of patients with COVID-19 who required hospitalization and, often, critical care services. These adaptations, including reassignment of clinical providers to areas outside their expertise, resulted in the use of traditionally nonclinical spaces for clinical care and, with limitations on supplies, often placed additional stress on providers in addition to the surge.

Those with pre-existing comorbidities, particularly hypertension, cardiovascular disease, diabetes, and chronic obstructive pulmonary disease, are at increased risk for morbidity and mortality from COVID-19.[3,4] In addition to presence of comorbidities, older age has been identified as a significant risk factor for severe disease and mortality.[5] During the COVID-19 surge in New York, many of the patients presenting to the emergency department were older adults and those with chronic comorbidities. It became imperative during the peak of the pandemic to speak with patients and families and clarify goals of care (GOC) as an early intervention to help avoid unwanted use of scarce resources.

Before the onset of the COVID-19 pandemic, GOC and Advance Care Planning (ACP) discussions, often including family and loved ones, were standard of care for patients presenting to the hospital with multiple comorbidities, advanced illness, or advanced age.[6,7] The addition of the COVID-19 pandemic magnified the need for GOC and ACP discussions as ensuring goal-concordant care and avoiding unwanted intervention became a pressing concern for most health care systems.[8] Traditionally, GOC and ACP discussions can be an iterative process involving

multiple discussions and a significant time investment for clinicians, patients, and families. The COVID-19 pandemic placed additional time and resource pressure on the health care providers who would usually be involved in these conversations because of the increasing volume of high acuity patients presenting to the emergency department. This led to some clinicians being utilized in roles where they did not have specialty training, including GOC conversations. In addition to the limited providers available, most patients in the emergency department were not able to have family accompany them to admission because of a no visitation rule that was put in place to protect patients, families, and staff.

Aims

The implications of this new clinical reality required attempts to find alternative routes to conduct these conversations in an innovative manner. Building upon previous strong relationships between the Division of Geriatrics and Palliative Medicine and the Emergency Medicine Service Line, a Remote GOC Program was established to have these vital conversations and facilitate communication with families during the height of the COVID-19 pandemic.[9,10] The goal of this program was to provide a resource for ACP and GOC conversations for patients who may have been unable to have these conversations and who could not have loved ones present to identify their wishes.

Methods Design

A program development and retrospective evaluation design were used. The health system Institutional Review Board approved this study and waived the need for informed consent. Informed consent waiver was approved by the Institutional Review Board because collection and review of patient data was performed via retrospective chart review.

Setting

This work was conducted in the emergency departments across a large health system in the New York metropolitan area. Because of the remote nature of the program, 12 emergency departments were able to participate simultaneously. Typically, these emergency departments serve approximately 650 000 patients per year combined.

Participants

Participants were included by consult referral at the clinical judgment and discretion of the clinician team providing care in the emergency department between April and June of 2020. Of the patients hospitalized with COVID-19 in this health system, at least half were age 63 years or older, 57% had history of hypertension, and 34% had history of diabetes.[11]

Remote GOC Program

In response to this potential communication barrier introduced by the increasingly busy ED environment, redeployed clinicians, and limited family accompaniment, the Remote GOC Program was developed to continue communication with families of patients in the emergency department to understand the goals and needs of the patients. As a pragmatic choice, this program utilized nurses who were unable to work in COVID-positive environments but could continue working remotely via telehealth to supplement the clinical resources within the emergency departments (Table 1). Initially, the program included 7 remote nurses from various specialties, including pain management, medical/surgical, emergency, and operating room nursing. As staffing needs changed in the hospitals, the size of the Remote GOC Program was reduced to accommodate the same. The program began in April 2020 and provided remote GOC support 24 hours per day, 7 days per week, using 7 nurses covering 4.5 full-time equivalent positions. As the first wave of the pandemic began to lessen by June, the remote GOC support was reduced to 16 hours per day, 7 days per week. This phase of the Remote GOC Program utilized 4 nurses to cover 3 full-time equivalents. To support the providers, the registered nurses were given laptops and communication software to remotely guide

conversations with patients' families. The majority of the nurses were not previously trained in end-of-life or GOC conversations, so they were provided training via a prerecorded online course created by the system Geriatrics and Palliative Medicine team. These courses focused on how to have GOC conversations, how to have discussions on end-of-life care and bereavement support, and the importance of advanced directives and health care proxies, particularly in the midst of the COVID-19 pandemic. The materials provided to the remote nurses included context for the workflow within the emergency department, instructions on how to use the secure technology and how to educate families on its use, on-site contact information, and additional resources for ACP support. Owing to the nature of the pandemic surge, the educational materials and workflow were streamlined to allow for quick initiation of the program.

Upon referral for a patient requiring a GOC discussion, the ED team would enter a "Goals of Care" order in the patient's electronic medical record (EMR), including the reason for the conversation ([Figure 1]). As previously described, patients were identified on the basis of the medical judgment of the ED team and their anticipated ACP need. The remote GOC nurses would receive notification of the GOC order and contact the ordering provider to further discuss the purpose of the GOC conversation. Where possible, patients would be involved in the GOC conversations, but there was often limited ability to speak to patients directly, owing to the acuity of their illness and the technology available to patients in the emergency department. If patient communication was limited, nurses contacted family or surrogate decision makers remotely using a Health Insurance Portability and Accountability Act (HIPAA) secure platform or traditional landline phone calls, depending on the preferences and technology available to the families. During these conversations, the nurses discussed the patient's current health and living situation with families, including whether the patient already had some form of advance directive or health care proxy and whether the patient had a caregiver or surrogate. Conversations also included discussion of the patient's current treatment needs, prognosis, diagnosis, whether the family believe the patient would want to complete a Do-Not-Resuscitate (DNR), Do-Not-Intubate (DNI), or Medical Orders for Life Sustaining Treatment (MOLST) form, and whether the patient would be open to hospice services, if medically indicated. After the GOC conversation with patients' families, the remote nurse would contact the ED treating provider to relay the details of the conversations. The remote nurse would also complete the GOC note in the EMR and enter any follow-up needs for the patient, including additional consults, such as social work, case management, palliative care, and hospice services.

Data Collection

Patient information was collected from Allscripts Sunrise Emergency Care, the EMR, in July 2020. Study data were collected and managed using REDCap electronic data capture tools.[12,13] REDCap (Research Electronic Data Capture) is a secure, web-based software platform designed to support data capture for research studies, providing 1) an intuitive interface for validated data capture; 2) audit trails for tracking data manipulation and export procedures; 3) automated export procedures for seamless data downloads to common statistical packages; and 4) procedures for data integration and interoperability with external sources.

Deidentified demographic data were collected from the medical record. Primary outcomes included details of early GOC discussion in emergency departments and disposition after GOC discussions. GOC were defined as Code Status, with options being DNR and/or DNI, and Full Code (cardiopulmonary resuscitation and intubation desired). Other potential topics of discussion during these conversations included appointment of a health care proxy, diagnosis, treatment, prognosis, chaplaincy, and hospice.

Analysis and Evaluation

Owing to the disaster context in which this program was initiated and the retrospective nature of data collection, the study was not designed to provide analysis on statistically significant changes for patient outcomes. To provide

context for the patients who were included in the program, demographic details and descriptive statistics are reported. As changes in health outcomes cannot be reported, this program was evaluated on the basis of the logic model provided in [Table 1].

Results

We included 64 patients for whom a health care professional was consulted to have a remote GOC conversation between April and June 2020. Across the health system, all 64 patient records were reviewed and included for analysis. [Table 2] presents the demographic characteristics and patient information upon presentation to the emergency department. Sixty-three percent of patients who received remote GOC conversations were female, and almost 70% were aged 75 years or older. Just under half of patients (42%) presented from a communal living residence, including skilled-nursing or assisted-living facilities. About half of patients were confirmed or suspected COVID-19 positive, and although there were instances of patient involvement in the remote GOC conversations (8%), most conversations were with family (72%). Before presentation in the emergency department, 48% of patients already had some form of advance directive documentation. Of the patients residing in a skilled-nursing or assisted-living facility, 51% presented to the emergency department with advance directive documentation.

[Table 3] outlines the course and outcomes of the GOC conversations and the topics covered with patient families. Most GOC conversations involved discussion of DNR, DNI, and/or MOLST; fewer conversations involved discussion of the patient's diagnosis, treatment, and prognosis. After discussion of DNR/DNI and MOLST, 34% of patients completed a health care proxy, although a majority of these patients had a previous form of advance directive, and 48% of patients remained Full Code. Only 6% of discussions involved the offering of chaplaincy services, and 20% involved discussion of hospice.

[Table 4] presents the disposition outcomes for the patients who received remote GOC conversations upon presenting to the emergency department. Eighty percent of patients were admitted to the hospital, 8% died while in the emergency department, and 10% were discharged from the emergency department directly to inpatient or home hospice. Of the patients admitted to the hospital from the emergency department, 28% expired before discharge, 28% were discharged to a skilled-nursing or assisted-living facility, and 19% were discharged to inpatient or home hospice ([Figure 2]). Of the patients who died during hospitalization, 55% remained Full Code after the GOC conversation with the remote nurse. Of all patients who had remote GOC conversations, 28% were discharged to hospice either from the hospital or directly from the emergency department.

Discussion

The COVID-19 pandemic forced hospitals and health systems to create innovative solutions to provide high quality patient care while in the midst of an unprecedented crisis. The Remote GOC Program was created to continue vital GOC discussions for patients and families while restrictions on family visitation and provider time and resources were mounting. As the majority of patients were not able to participate in the GOC conversations owing to the acuity of their illness, fast and open communication with families was vitally important. This program relied heavily on the relationship between the Division of Geriatrics and Palliative Medicine and the Emergency Medicine Service Line that was created before the pandemic. This relationship was vital to creating and running the Remote GOC Program quickly, as there was well-established communication and trust between these traditionally siloed groups. Although this was a nursing-driven initiative, this program provided interdisciplinary benefit across nursing, social work, and ED providers. Although small, this initial, disaster-related program highlighted the strengths and opportunities involved in remote GOC conversations.

A major strength of the Remote GOC Program was the collaborative relationship that allowed for quick setup and decision making. This program required innovative use of personnel and technology that was easily accommodated

through collaboration among health care teams. This program was effective in maximizing staffing ability by using nurses who were not able to safely remain in a patient-facing setting in a new capacity. As an estimated 104.2 per 100 000 nurses experience a work-related injury, this style of telenursing may also serve as a potential option for nurses requiring light-duty assignments.[14] This utilization made the redeployed nurses feel valued, and the staff in the emergency department appreciated the additional help during a busy time. This freed providers in the emergency department to perform procedures and attend to the immediate stabilization needs of the patients while the patient's further GOC were established. In addition, the Remote GOC Program was able to decant the time-intensive and delicate aspects of the GOC conversations from the busy ED environment. By allowing these conversations to occur in the nontraditional but much calmer environment of remote telehealth, they could be deeper and more meaningful toward providing goal-concordant care, as evidenced by the noteworthy proportion of discharges to hospice for these patients. Establishing and documentation of health care proxies were also vitally important for patients who were later admitted to the hospital, as this documentation clarified appropriate contacts at a time when families were unable to visit patients in the hospital.

As hospitals and emergency departments begin to transition back to prepandemic operations, this Remote GOC Program can continue to be useful for patients presenting to the emergency department who would benefit by GOC conversations before inpatient admission. Although these conversations can be lengthy, they are important for directing decision making and connection to appropriate resources directly from the emergency department. This style of remote care provision is also transferable to additional specialties and health care needs. Although telenursing has been utilized in rural communities for some years, the global pandemic has sparked innovations in telenursing and patient care in a way that is more universal.[15-18] This shift toward increased access to telehealth services is in line with previous programs that are able to provide robust patient care at home, including programs for dialysis and palliative medicine.[19,20] This Remote GOC Program and other telehealth-based programs will continue to grow as a viable option for emergency departments as reimbursement for telemedicine evolves and expands.[21,22]

This article provides an outline of a Remote GOC Program implemented in New York during the height of the first COVID-19 surge. This program was able to gather ACP information and provide GOC conversations with detail and nuance. This program was especially valuable during the time that families could not accompany patients to the ED setting to provide context for patient wishes. Although this program was pragmatically implemented and was not designed to show statistically significant changes, future studies should examine whether these conversations improved adherence to goal-concordant care. This program is valuable in that it is easily modifiable and transferable to many settings and specialties and utilizes the telehealth format that will likely continue to grow out of the COVID-19 pandemic.

Limitations

Although the Remote GOC Program was a valuable use of resources during the first surge of the COVID-19 pandemic, there were areas of the program that could be improved upon. First, the technology used was sometimes a significant barrier for patients and families. The communication software utilized by the remote nurses was sometimes difficult to navigate for families outside of the hospital, especially for those who did not have a stable internet connection or familiarity with remote communication software. Within the emergency department, having the remote nurse contact the patient was equally difficult. The hectic ED environment was not conducive to video conferencing, and the patients included in this program were mostly older, with less experience with the needed technology and no family to support them. In addition, patients who had sensory difficulties, including hearing loss, vision loss, or cognitive decline, in addition to their reason for presenting to the emergency department, were less

able to participate in conversations. Even when the remote nurses were able to have GOC discussions with families, the staff within the emergency department was still required to contact the families to give status updates regarding the patient during a particularly tense time. ED staff was also required to complete MOLST documentation within the emergency department, as these forms are still completed on paper and require the presence of the patient or family to complete. Although an electronic MOLST process is available in New York State, it is not currently utilized by the health system. Finally, this program description does not include a comparison group. In addition, chaplaincy services were limited because most of the chaplaincy personnel were not on-site during the initial COVID-19 surge. Only a small portion of patients requested chaplaincy services, and their needs were met through the reduced staffing model available. Future studies should assess the benefit and practicality of remote chaplaincy services for patients who are agreeable.

Although the intention of this program was not to determine the efficacy of an intervention, the lack of a comparison group limits the strength for the current work and the ability to utilize inferential statistics. Similarly, owing to the disaster context in which the program was utilized, we were not able to collect the number of patients and families approached who refused or could not participate. Further studies on program implementation can be structured to include comparison groups and population approached for statistical analysis but hopefully not within the context of a global pandemic.

Conclusion

Overall, the Remote GOC Program was well-received and will be utilized again, should the need arise. In future iterations, preparation of the program should be started as early as possible and can be expanded to other services, including Hospital Medicine and select consult services. The earlier start time and expansion of services will allow for an improvement in training on the technology used and documentation needs. Additional time and comfort with the technology will allow the remote nurses to assist patient families in troubleshooting common connection problems before the GOC conversation and be familiar with alternatives if the primary communication method is unavailable. Additional training on documentation and expansion of documentation access for remote nursing staff would also be helpful. GOC conversations can be very delicate and nuanced discussions that are heightened in the midst of an unexpected public health crisis. Detailed documentation of the GOC conversation will allow providers in the hospital to build on these conversations with patients and families as the patient moves through their disease course. Through this program, remote nurse staff were able to identify additional resources through GOC conversations that may not have been easily accessible without this program, such as hospice care and specialized consults.

Author Disclosures

Conflicts of interest: none to report.

Planned work		Intended results		
Inputs	Activities	Outputs	Outcomes	Impact

•ED and geriatric and palliative medicine partnership•Registered nurses who could not work onsite•Laptops, HIPAA compliant communication platform•Patient baseline code status*	•Online training in GOC and end-of-life conversations for remote nurses•Introductory discussions with referring ED providers•Discussions surrounding existing resources (surrogates, caregivers, health care proxies)•Discussions surrounding patient wishes (DNR/DNI, MOLST, chaplaincy, hospice)•Discussions surrounding patient care (diagnosis, prognosis, treatment)	•GOC and end-of-life conversations with patient families•Completed GOC notes in EMR•Number of referrals into the program•Changes in code status*	•Increased recognition of the need for GOC conversations•Increased referrals to remote nurses•Discharge to appropriate level of care from the emergency department (hospice, home)•Discharge to appropriate level of care after admission (hospice, SNF, home)	•Long term increase in GOC and end-of-life conversations•Increase in goal-concordant care

Demographic category	N	%
Sex		
Female	40	63
Male	24	38
Age category (y)		
<65	10	16
65-74	10	16
75-84	11	17
85-94	23	36
≥95	10	16
Race		

Caucasian/White	39	62
African American/Black	11	17
Asian	4	6
Other/Multiracial/Unknown	9	14
Participants in conversation		
Family	46	72
Other	11	17
Patient	4	6
Patient and family	1	2
COVID-19 status at time of ED encounter		
Confirmed COVID-19 negative	31	48
Confirmed COVID-19 positive	26	41
Suspected COVID-19 positive	1	2
Unknown	5	8
Patient residence prior to ED present		
Community home	37	58
Skilled-nursing facility/Rehab	23	36
Assisted-living facility/Group home	4	6
Prior advance directive		
Yes	31	48
No	28	44

Activity	N	%
Completed health care proxy	22	34
Have a surrogate	16	25
Have a caregiver	9	14
Discussion of:		
DNR	45	70
DNI	45	70
MOLST	42	66
Treatment	21	33
Diagnosis	20	31
Prognosis	15	23
Hospice	13	20
Chaplaincy	4	6
Remained full code	31	48

Disposition	N	%
ED disposition		
Admission to hospital	51	80
Expired	5	8
Inpatient hospice	5	8
Home	2	3
Home with hospice	1	2

Hospital disposition		
Expired	18	28
Assisted-living facility	4	6
Skilled-nursing facility/Rehab	14	22
Home	7	11
Inpatient hospice	7	11
Home with hospice	5	8

DETAILS

Subject:	Emergency medical care; Medical prognosis; Hospitals; Medical diagnosis; Patients; COVID-19; Hospice care; Palliative care; Nurses; Pandemics; Emergency services; Caregivers; Care plans; Technology; Coronaviruses; Treatment preferences; Telemedicine; Objectives; Advance directives
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Over-the-Counter Medication Prescribing in a Pediatric Emergency Department: Health Records Review: JEN

ABSTRACT (ENGLISH)

Objective

The purpose of this project was to describe patterns in over-the-counter medication prescribing for nonacute patients with Medicaid in a pediatric emergency department. Differences were also tested in visit time and charges between patients with and without over-the-counter medication prescriptions.

Methods

Retrospective chart review of children with Missouri Medicaid presenting to a single site between January 1, 2018 and December 31, 2018 was conducted. Low-acuity patients with common diagnoses were included. Over-the-counter medications prescribed, the cost of prescriptions, the time spent in the emergency department, provider care time, patient age, and the month of visit were extracted. Data were analyzed with descriptive statistics and *t* tests.

Results

Approximately 37% of children were prescribed over-the-counter medications, most commonly antipyretics. When comparing visits in which an over-the-counter medication was prescribed to visits without an over-the-counter medication prescription, we found no significant difference in the associated charges, total time in the department,

and provider care time.

Conclusion

Over-the-counter medications were prescribed for more than one-third of children cared for in the pediatric emergency department for low-acuity presentations. These visits may represent a substantial area for Medicaid access barriers, system redesign, and cost savings.

FULL TEXT

Introduction

In most states, patients with Medicaid are required to obtain a prescription written by a health care provider to receive Medicaid-paid over-the-counter (OTC) medications from pharmacies.[1] Missouri, the state where we (the authors) practice, is one such a state. Nonurgent visits to the pediatric emergency department (PED) have long served as a safety net for the uninsured and patients with Medicaid to obtain medical care. Patients have relied on the PED for a multitude of reasons, including limited family resources and limited or minimal access to primary care. OTC and prescription drugs often serve as first-line tools for treating many acute and chronic illnesses, making drug coverage an important part of the recipient's care. Requiring a prescription for patients covered by Medicaid to receive common OTC medications free of charge may represent one part of a parent's motivation to go to the PED. Historically, Medicaid was originally enacted through Title 19 of the Federal Social Security Act in 1965[2] to provide public health insurance coverage to millions of low-income Americans. Medicaid eligibility was expanded to include children in the late 1980s and again in the early 1990s.[3] As part of the law, the federal government covers medication costs by offering matching funds to states to support the financing of medications (both prescription and OTC) for Medicaid programs. State participation is voluntary, and currently all states participate in this federal matching funds program for prescription drugs.[4] States who choose to cover OTC medications in their Medicaid programs are eligible to receive federal Medicaid dollars with the requirement that OTC medications must be *prescribed* by an authorized medical provider to access payment.[1] Children enrolled in Missouri Medicaid currently have no co-payment for OTC medication prescriptions but are limited to a preferred list of covered OTC medications that they can receive free of patient charge.[5]

In Missouri, children represent the largest demographic group served by Missouri Medicaid with one-third of all children in the state enrolled.[6] From March 2020 to March 2021 during the coronavirus disease (COVID-19) pandemic, the state of Missouri experienced a 35.5% rise in Medicaid enrollment, the second highest increased enrollment rate in the country.[7] This number may have been affected in part by unprecedented unemployment rates during the pandemic disaster.

According to the Centers for Disease Control and Prevention (CDC), there were 138 million ED visits in the United States in 2017, 20.4% of which were for children younger than 15 years.[8] One-third of visits for patients aged 15 years or younger were triaged as low-acuity Emergency Severity Index (ESI) 4 and 5, with the most frequent reasons for the visit being fever, cough, abdominal pain, skin rash, and nasal congestion.[8] Much of the nonurgent care provided in the emergency department can result in crowding, increased cost, poor health outcomes, lack of continuity of care, and inadequate access to primary care.[9] Rasooly et al[10] evaluated a national sample of ED visits along with the US Census data between 2001 and 2010 and found an increase of 14.4% of ED visits by children over this period.

Children enrolled in Medicaid use the emergency department more commonly than other insured populations. According to the CDC's 2012 National Center for Health Statistics Report, 25% of children covered by Medicaid used the emergency department, whereas uninsured children used the emergency department at 16% and children covered by private insurance at 13%.[11] In 2012, children with Medicaid coverage were more likely to have visited the emergency department by one more visit over a 12-month period compared with the uninsured and those with private coverage for less serious medical complaints.[11] A study by Samuels-Kalow et al[12] found that among Medicaid-insured children, previous use of the emergency department for lower acuity complaints led to an increased frequency of return ED visits for low-acuity reasons. The growing use of emergency departments for

nonurgent child visits contributes to the overall cost of care.[12]

Identifying and overcoming obstacles for patients covered by Medicaid to obtain common OTC medications without the need for a medical prescription may represent one method to reduce the use of PED use for nonurgent visits. Eliminating the need for an OTC medication prescription may reduce the barriers parents experience when trying to provide timely care for their children. We focused on OTC medication prescribing for patients enrolled in Medicaid in a regional children's hospital PED in Missouri. Our goal was to help identify and quantify OTC prescribing among low-acuity Medicaid-insured patients presenting to PED. We compared PED visits in which an OTC medication was prescribed with those in which they were not prescribed; we examined if there were differences in associated charges, total time in PED, and provider care time.

Methods Setting

The study was conducted at an urban, free-standing, Midwestern academic children's hospital with a tertiary care 39-bed PED with an annual volume of more than 70000 patients per year. Patients are triaged according to ESI criteria.[13] The area of the PED reserved for lower acuity (ESI 4-5) patients is staffed primarily by advanced practice registered nurses. Over the course of 2018, 18% of patients seen in the PED were considered nonurgent (ESI 5), whereas 23% were semiurgent (ESI 4). Of the low-acuity patients presenting to the PED during the study period payor type for patients presenting to the PED, 59% had Medicaid/Medicare, 34% had commercial insurance, 6% were self-pay, and 1% of the patients were on hospital financial assistance.

Study Design and Participants

We conducted a retrospective chart review of PED visits for children insured by Missouri Medicaid, aged 2-17 years, who presented between January 1, 2018 and December 31, 2018 and were assigned an acuity level of 4 (semiurgent) or 5 (nonurgent). We included one or more of the following common discharge diagnoses: fever, upper respiratory infection, nasal congestion, constipation, insect bites, seasonal allergies/allergic rhinitis, and diaper rash (see Supplementary content). These diagnoses were chosen by author consensus as they are historically some of the most frequent reasons patients are seen in PED lower acuity setting (patients with ESI 4 and 5). Constipation was chosen as it tends to be a lower severity cause of abdominal pain versus abdominal pain in general, which can include bowel obstruction or appendicitis. Children with complex chronic conditions, such as cystic fibrosis, malignancy, sickle cell disease, Hirschsprung's disease, as well as patients with surgery in the past 30 days, were excluded. In addition, patients who left the PED against medical advice were excluded because their data were incomplete. The initial data report showed that 5053 participants met initial parameters. A power analysis was not conducted.[14] A sample size of approximately 500 (10% sampling) was deemed too large to provide sufficient precision for any effects that would be clinically and practically meaningful. Because manual review of the data was also necessary, we determined that 500 was a feasible sample size.

A second data report was generated on the randomly selected sample and the following information was obtained from the electronic medical record: if and which OTC medications were prescribed, patient's time in department in total minutes (calculated from time of check-in to discharge); provider care time (noted from the time the provider assigned themselves to the patient until the patient was electronically discharged); and the demographic variables of age, month of visit, and diagnosis (see Supplementary content). Researchers also reviewed the patient's chart to investigate and correct any discrepancies or unclear data. The hospital's financial department provided charge estimates for the visit cost, and pharmacy provided estimated prescription cost.

The Children's Research Institute Children's Mercy Kansas City Institutional Review Board at the hospital approved the study protocol (STUDY00000758).

Statistics

Descriptive statistics were used to describe categorical variables. An independent *t* test was used to compare groups (OTC medication prescribed vs OTC medication not prescribed) for time spent in the PED, provider care time, and charges associated with the visit.

Results Population

Of the 505 randomly selected visit records, 43 were excluded because of electronic medical record screening errors

(8.5%). The remaining 462 (91%) medical records were included in the study group. The most common discharge diagnosis was fever (44.2% of visits), upper respiratory infections (19.3% of visits), and insect bites (10.4% of visits) (Figure 1). Included records were for patients who were aged from 2 to 17 years, with a mean age of 6 years (SD = 3.86). The number of prescriptions for OTC medications was highest during the month of February and lowest during the month of June (Figure 2).

OTC Medication Prescriptions

More than one-third (37.2%) of the study group were prescribed an OTC medication. The 3 most common classes of OTC medications prescribed were antipyretics (54.7%), antihistamines (26.7%), and stool softeners (16.3%) (Figure 3). In addition, we reviewed charges generated for the visits. The mean charge for a PED visit for ESI 4 or 5 was $365.23. When comparing visits in which an OTC medication was prescribed with visits without an OTC medication prescription, we found no significant difference in the associated charges ($t = 0.65$, $P = .52$, 95% CI [-23.14, 45.73]).

Visit Time

The mean time spent in the department was 130.84 minutes if an OTC prescription was provided versus 134.19 minutes if no prescription was given ($t = 0.50$, $P = .62$, 95% CI [-9.80, 16.51]). Direct provider care time spent when a prescription was given was 58.97 minutes compared with 55.47 minutes when no prescription was provided ($t = -0.75$, $P = .46$, 95% CI [-12.75, 5.73]) (Table).

Discussion

More than one-third (37.2%) of our study participants were prescribed an OTC medication. The top 3 OTC medications prescribed were antipyretics, antihistamines, and stool softeners, which is consistent with the most frequent reasons children are seen in the emergency department as described by Rui and Kang.[8] The high frequency of the diagnosis of fever coincides with the approximately 12838493 total claims for generic ibuprofen prescriptions written for patients with Medicaid coverage in 2018.[15] Even though visits in which an OTC medication was prescribed versus visits without an OTC medication prescription did not show a significant difference in associated charges, it is important to consider whether the PED visit could have been avoided entirely if prescriptions for OTC medications were not required. Future studies could help clarify whether a parent's primary reason for bringing their child to the PED was to obtain an OTC medication prescription. Additional (publicly funded) costs relate to the large disparity in charges for OTC medications when filled by a hospital-based pharmacy versus purchased in a retail outlet. For a standard 118-mL bottle of ibuprofen when dispensed from our hospital's pharmacy the Medicaid reimbursement was $22.17 to the pharmacy. Comparatively, the out-of-pocket expense for the same medication at any commercial stores was estimated to be $4.00. For a 188-mL bottle of acetaminophen, the Medicaid reimbursement was $21.18 if dispensed by the hospital pharmacy, and the pay out-of-pocket cost was between $2.88 and $4.00. This has significant implications for the Medicaid program.

There has been increasing interest in ways to reduce avoidable ED use in Medicaid-insured individuals who historically have higher numbers of ED visits.[12] According to Nelson et al,[16] limiting and restricting access to payments for basic medical care (such as OTC medications) may in part explain why many publicly insured patients must seek out nonurgent care centers and emergency departments for their care as opposed to primary care providers. The current requirement necessitating a prescription for the payment for OTC medications can be burdensome, especially for families with no or limited access to transportation and who rely on public transit. Parents may be additionally affected financially owing to missed work, and their Medicaid-insured children would most likely also be absent from day care or school owing to a common virus causing a fever. During this illness, their caregivers must take them to their primary care provider or an urgent care, have a telehealth visit, or be seen in the emergency department to get an antipyretic when they may not have funds to purchase it on their own. This Medicaid requirement for OTC medications places additional burdens on health care systems by increasing the number of patients needing to be served, hence delaying provider accessibility. The state government can play an important role in creating better access to and distribution of OTC medications for children with Medicaid coverage. By reducing patient reliance on prescribing providers to obtain OTC medications, Medicaid may help reduce the potentially avoidable use of the emergency department and primary care visits for such purposes and reduce costs

to the Medicaid program. A few other states have already attempted to find better ways to improve OTC medication access for publicly insured individuals. Recently, during the COVID-19 pandemic, the Ohio Department of Medicaid advised that they will reimburse pharmacies dispensing OTC medications without a prescription to help by "reducing provider burden and opening up access to medications to Medicaid beneficiaries."[17] ArchCare Advantage Health Maintenance Organization Special Needs Plan, a current New York program for Medicare patients provides members with a prepaid OTC card to buy eligible OTC medications and health-related items redeemable at local stores.[18] PeachCare for Kids, the Georgia State Children's Health Insurance Program, allows $12 each month for OTC items with more than 100 items to choose from.[19] Rice Memorial Hospital in Willmar, Minnesota has a dedicated pharmacy-provided vending machine in its emergency department where patients receive a magnetic swipe card from the prescribing provider to access most commonly used drugs.[20] Similar programs could be modeled or modified to help improve access to common OTC medications for pediatric patients enrolled in Medicaid.

Implications for Emergency Clinical Practice

As nursing professionals, we should take an active role in improving health and patient care on a local or national level. As those in the discipline with the most direct patient care contact, nurses provide highly valued ideas, practical and innovative solutions, and especially realistic perspectives to policymakers. Nurses can consider contacting state and federal legislatures and find their local state and federal Medicaid agencies at the corresponding website listed in the reference list.[21]

We encourage emergency nurses to inform their patients enrolled in Medicaid that OTC medications can be obtained by requesting a prescription by their primary care prescribing provider. Nurses can also advocate for medical providers to provide standardized weight-based prescriptions for OTC medications covered by Medicaid for enrolled patients at their well-child or, potentially, specialist visits and to update these prescriptions at each in-person or telehealth visit. Families and caregivers should be encouraged to safely store OTC medications at home for common, non–life-threatening symptoms and educated on how to safely store them. Patients and families would benefit from having these OTC medications easily available at home, especially during busy respiratory seasons or the COVID-19 pandemic.

Future Research

The second phase of our project will focus on surveying parents and guardians with Medicaid coverage who visit the PED regarding their needs and access preferences for obtaining OTC medications. These data, along with what is reported here, will be used as a baseline problem identification and needs assessment for interdisciplinary intervention development and feasibility testing. These interdisciplinary interventions may include pharmacist-led medication supply chains and distribution options. We will also be enlisting our informational technology/medical informatics group to help develop automatic prescription templates that could help provide OTC medication prescriptions at childcare well-visits. Despite our efforts, much more research needs to be done on a larger scale to better evaluate the scope of Medicaid's ability to provide effective and fiscally responsible care to their enrollees.

Limitations

We acknowledge that this study had several limitations. The study was performed at only 1 site and may not have been representative of smaller populations. We were limited in our financial analysis to charges only. Future studies could be devised to calculate true actual costs. The inclusion/exclusion criteria did not represent all Medicaid-covered children who received care at the study site and may have excluded relevant visits with an OTC medication prescription. The visit was the unity of analysis, and it is possible that the same patient may have been to the emergency department on more than 1 occasion. We were unable to test the assumption to whether nonacute patient visits were to obtain an OTC medication prescription owing to the retrospective design.

Conclusion

The article represents a retrospective, descriptive review of patients seen in the emergency department at the study hospital. One-third of the patients enrolled in Medicaid with an ESI of 4 or 5 received a prescription for an OTC medication at the emergency department. Current Medicaid policy requires that a prescription be obtained for an OTC medication for enrolled patients, although these costs appear to be higher than the actual true cost of the

medication. Current OTC medication allocation systems within Medicaid need to be redesigned, thus reducing patient barriers to basic medical care.

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We acknowledge Children's Mercy Kansas City, Patient Care Services Research, in particular Adrienne Olney, for their direction and support throughout our project. We thank Denise Dowd, MD, and the Medical Writing Center at Children's Mercy Kansas City for editing this manuscript.

Author Disclosures

Conflicts of interest: none to report.

This study was approved by the Institutional Review Board of Children's Mercy Hospital, Kansas City, MO.

Supplementary Data

Supplemental

Supplementary Appendix

The diagnosis was pull, by code and then by description. We did not pull by HPI or Discharge Instructions, only if it was active at the time of visit.

Query Summary:

(Diagnosis Code Between J00 AND J06.9) (Acute upper respiratory infections)
OR Diagnosis Description Matches pattern Upper Respiratory%
OR Diagnosis Description Matches pattern %Diaper dermatitis%
OR Diagnosis Description Matches pattern %diaper dermatitis%
OR Diagnosis Description Matches pattern Fever%
OR Diagnosis Description Matches pattern fever%
OR Diagnosis Description Matches pattern Constipation%
OR Diagnosis Description Matches pattern constipation%
OR Diagnosis Description Matches pattern Diaper Rash%
OR Diagnosis Description Matches pattern Nasal congestion%
OR Diagnosis Description Matches pattern Seasonal%
OR Diagnosis Description Matches pattern seasonal%
OR Diagnosis Description Matches pattern allergic rhinitis%
OR Diagnosis Description Matches pattern Insect bite%
OR Diagnosis Description Matches pattern Insect%)

Supplementary Data

Supplementary data related to this article can be found at https://doi.org/10.1016/j.jen.2021.09.003.

Time	Prescription not given (n = 290)	Prescription given (n = 172)	Total sample mean (range)	SD	t value	P value
ED provider care time, min	55.47	58.97	56.77 (0-378)	48.77	−0.75	.46
Total time family in PED, min	134.19	130.84	132.94 (0-493)	69.49	0.50	.62

DETAILS

Subject:	Prescriptions; Health care access; Enrollments; Medical records; Medicaid; Patients; Uninsured people; Visits; Chronic illnesses; Hospitals; Health status; Prescribing; Chart reviews; Emergency services; Fever; Abdomen; Constipation; Pediatrics; Prescription drugs; Insurance coverage; COVID-19; Electronic health records; Insect bites; Cost control; Pandemics; Primary care; Pain; Health records; Coronaviruses; Children
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Stay Positive and Keep the Strength: JEN

ABSTRACT (ENGLISH)

For me, it is like seeing the light at the end of the tunnel as we move along, and as we get closer to it, the tunnel seems to take a turn, rendering the light dimmer and more distant. A positive attitude is essential to be successful. Another quote I find inspirational is from General Colin Powell: “Perpetual optimism is a force multiplier.”

FULL TEXT

In my first President’s Message, I introduced my theme for the year: ELEVATE. I challenged all of us to elevate some aspect of our lives, our careers, our profession, our colleagues, and our community. As we read this message and reflect on the past year, have we met that challenge? A quote from Jim Rohn, “Commit yourself to something bigger than yourself,” helps me to stay focused to elevate. We all experienced the major challenges of 2021, many unexpected, just as in 2020 at the start of the pandemic. The pandemic is certainly still in full swing as I write this message in early September. As we continue to navigate these uncertain times and are hopefully moving to a postpandemic state, we continue to experience both professional and personal disappointments and losses. However difficult it may be to see at times, I believe we have been made stronger. Our strength is demonstrated in being comfortable with being uncomfortable, expecting the unexpected, and being in a constant state of readiness to pivot and adjust plans on a moment’s notice. This is exhausting mentally and physically—it is hard. We need to take the time to recognize the exhaustion, loss, and disappointments and know that circumstances will improve. For me, it is like seeing the light at the end of the tunnel as we move along, and as we get closer to it, the tunnel seems to take a turn, rendering the light dimmer and more distant. So maddening. However, we must recognize that the light is still there.

We all need to continue to support one another in this global pandemic and for years to come. Our specialty of emergency nursing is unique and has trained us to be prepared for the unexpected. We will persevere, we will elevate one another, and we must reach out for help when we need it and provide help to others when they need it. We must make that promise to ourselves and each other. We all must be a transformational leader, keeping ourselves and our communities moving forward during this global crisis. A positive attitude is essential to be successful. Another quote I find inspirational is from General Colin Powell: “Perpetual optimism is a force multiplier.” So stay positive; it will encourage others to be optimistic.

This has not been the presidential year that I had envisioned years ago, but it has been a year that has challenged me in ways I could not have foreseen. I have accepted the challenge and must remain agile. We may not know why things happen to us at the moment they occur, but I believe that there is a reason and that we must have faith, hope, and trust in the journey of life. We cannot live freely and thrive by living in the past. We must move forward—pull up the anchor and turn our sails to catch the wind.

It has been an honor and true pleasure to serve as the president of an association full of amazing professionals whom I truly respect, admire, and call friends. Thank you for the opportunity to serve, and let’s keep challenging one another to ELEVATE!

Stay safe, stay focused, and be the good!

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Catheter Length In-Vein Impacts Ultrasound-Guided Peripheral Intravenous Catheter Survival: JEN

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ABSTRACT (ENGLISH)

Dear Editor: The 2021 Infusion Nursing Standards of Practice was updated to highlight the importance of choosing a longer peripheral intravenous (PIV) catheter when ultrasound (US) guidance is needed.1 A longer PIV increases the likelihood of more catheter length in-vein, which is a key predictor of PIV catheter survival.2-5 Recently, the article “The Effect of Catheter Length Placed Into the Vein on Peripheral Ultrasound-Guided Catheter Survival Time: A Prospective Observational Study” was published in the Journal of Emergency Nursing.6 The results demonstrated that US PIV survival was not related to in-vein length of catheter. Furthermore, we aim to provide a balanced perspective of the current evidence on this important topic.Dissecting the Study We used a published critical appraisal tool to assess the quality of the Miles et al6 manuscript and determined that there were several pertinent methodological weaknesses worthy of additional discussion.7 See Supplementary Appendix for a complete list of categories and evaluation scores. The patient population in this study of 98 patients was highly diverse with roughly equal proportions recruited in the emergency department and the intensive care unit. [...]it is unclear if the most appropriate statistical approach was used for this analysis.

FULL TEXT

Dear Editor:

The 2021 Infusion Nursing Standards of Practice was updated to highlight the importance of choosing a longer peripheral intravenous (PIV) catheter when ultrasound (US) guidance is needed.[1] A longer PIV increases the likelihood of more catheter length in-vein, which is a key predictor of PIV catheter survival.[2-5] Recently, the article “The Effect of Catheter Length Placed Into the Vein on Peripheral Ultrasound-Guided Catheter Survival Time: A Prospective Observational Study” was published in the *Journal of Emergency Nursing*.[6] The results demonstrated

that US PIV survival was not related to in-vein length of catheter. The authors noted a general improvement in US PIV survival at the institution during the study period compared with previous years and concluded that this improvement was due to enhanced clinician experience and proficiency rather than longer catheter length in the vein. This conclusion is in contrast to the existing evidence on this important topic and has significant clinical practice implications. Our intent behind this critical appraisal of the manuscript is to provide clinicians with a deeper understanding of the methodological weaknesses of this publication that may limit the conclusions. Furthermore, we aim to provide a balanced perspective of the current evidence on this important topic.

Dissecting the Study

We used a published critical appraisal tool to assess the quality of the Miles et al[6] manuscript and determined that there were several pertinent methodological weaknesses worthy of additional discussion.[7] See Supplementary Appendix for a complete list of categories and evaluation scores. The main outcome of the study was catheter survival, and data on this outcome were gathered through chart review. The validity of results is highly dependent on the quality of the input data to be meaningful. The authors cited that PIV removal data were not even charted in 9% of cases (26 cases) raising some concern regarding the remaining data set. Given the inherent limitations of chart review data, the conclusions and recommendations should be tempered particularly in the setting of a small sample size.

US PIV longevity is dependent on multiple factors including patient-, vein-, and catheter-related variables. The patient population in this study of 98 patients was highly diverse with roughly equal proportions recruited in the emergency department and the intensive care unit. Although the authors provide some baseline data on demographics and medical history, severity of illness is notably missing from the data collection. This element could have significantly affected PIV survival, and inclusion may have helped reconcile some concerns over the likely heterogeneous study population. Other highly relevant catheter- and vein-related variables such as vein depth and angle of insertion were also missing. Choosing the right catheter length requires accounting for a complex mathematical relationship among the PIV catheter length, angle of insertion, and depth of the vein. Omitting data on these key variables substantially limits our ability to assess if the most appropriate catheter was chosen for each insertion. Furthermore, as the authors used 3 different catheter lengths and 2 gauges in various combinations without providing data on these distributions, the numerous confounders and small sample size made it difficult to interpret the results. Finally, it is unclear if the most appropriate statistical approach was used for this analysis. Given the large volume of censored data, a better approach to understanding the influence of catheter length in-vein on survival may have been to identify a cutoff threshold of catheter length in-vein with subsequent assessment of the impact on survival in a formal survival analysis.

Current Evidence

There is no longer a paucity of evidence on the concept of increasing catheter length in-vein to improve catheter survival. There is a growing body of evidence of high scientific rigor that supports this practice. Several publications over the last few years have shown that catheter length in-vein is a significant predictor of enhanced survival in US-guided insertions.[2-5] In 2018, Pandurangadu et al[3] prospectively investigated the relationship of catheter length in-vein and US PIV survival in a 4.78-cm PIV. The authors found that when 4 found that a longer catheter (6-cm) improved median survival from 1.25 days to 4.04 days. All IVs in this trial were placed in veins at a > 1.20-cm depth magnifying the limitations of the shorter, 4.78-cm catheter. Although the longer 6-cm catheter had increased length, it also had a built-in guidewire. It is possible that the guidewire may have influenced catheter survival, but this confounder was not specifically assessed in this trial. To build on the concept, when a longer 6.35-cm PIV without a guidewire came to market, the authors conducted another larger randomized controlled trial of US PIV survival in 257 patients comparing a 4.78-cm and 6.35-cm PIV catheter for upper arm insertions. Bahl et al[5] published the 2.75-cm rule providing proceduralists with a concrete and actionable evidence-based recommendation on how to choose the appropriate catheter length for US PIV insertions to optimize IV survival. The authors demonstrated that 2.75 cm of catheter in the vein was the ideal cutoff for best IV survival. The 2.75-cm rule is not biased toward any specific catheter type but rather accounts for the depth of the vein and the anticipated angle of insertion to guide the choice

of optimal catheter length for the insertion ([Table]).

Bahl et al[5] observed that most clinicians preferentially choose a shallower approach to the vein with > 50% of placements having an angle of insertion

Summary

The value of longer peripheral catheters cannot be overstated, and the increased length in-vein has been a key variable in helping transform catheter survival outcomes.[2-5] US-guided venous access is no longer a form of bridge or temporary access lasting a mere 24 hours or less but now is a reliable vascular access strategy with most catheters surviving for several days to completion of therapy. The evidence now strongly supports consideration of catheter length in US PIV insertions, and the 2021 Infusion Nursing Standards was also updated to include this recommendation.[1] Clinicians should strongly consider the evidence and current guidelines when making decisions for patients.

Author Disclosures

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Supplementary materials

Supplementary material associated with this article can be found in the online version at doi: https://doi.org/10.1016/j.jen.2021.06.001.

SUPPLEMENTARY APPENDIX

The Critical Appraisal Skills Programme (CASP) checklist for cohort study (last amended in 2018)[7]			
Major components	Response options		
Section A: Are the results of the study valid?			
1. Did the study address a clearly focused issue? Comment: Impact of in-vein catheter length on US IV survival is clear	Yes		
2. Was the cohort recruited in an acceptable way? Comment: Small heterogeneous sample size (ICU/ED); DIVA population not defined; Numerous exclusions		No	
Is it worth continuing?			
3. Was the exposure accurately measured to minimize bias? Comment: Limited description of measurement and unclear if missing data			Can't Tell

4. Was the outcome accurately measured to minimize bias? Comment: Outcome based solely on EMR data; No follow-up or research staff assessments		No	
5. (a) Have the authors identified all important confounding factors? Comment: Numerous confounders missing: i.e. vein depth, angle of insertion, vesicant use, catheter to vein ratio		No	
(b) Have they taken account of the confounding factors in the design and/or analysis? Comment: Cox regression accounts for some confounders but many relevant confounders not included in the analysis		No	
6. (a) Was the follow-up of subjects complete enough? Comment: Exclusive reliance on EMR data is a major weakness		No	
(b) Was the follow-up of subjects long enough?			Can't Tell
Section B: What are the results?			
7. What are the results of this study?	The model with length of catheter length in-vein as the sole predictor was insignificant (X^2=0.03, P=.86), and the full model was as poor (X^2=2.79, P=.95)		
8. How precise are the results?	Unknown precision based on reporting of results. Likely poor precision given limited sample size.		
9. Do you believe the results? Comment: The results are only as useful as the robustness of the model. A model not accounting for differences in depth, diameter, angle, among other covariates is very, very limited. The design and methods are sufficiently flawed to make results unreliable.		No	
Section C: Will the results help locally?			

10. Can the results be applied to the local population? Comment: No, the study population was inadequately defined and highly variable.		No	
11. Do the results of this study fit with other available evidence? Comment: No, a body of high quality evidence concludes the opposite		No	
12. What are the implications of this study for practice? Comment: No other studies support the results in this study; clinicians should carefully weigh why that is the case.			Can't Tell

Maximum vein depth according to angle	Length of catheter (cm)	15° angle of insertion cm	30° angleof insertion cm
45° angleof insertion cm	4.78	.53	1.01
1.44	6.35	.93	1.8

DETAILS

Subject:	Patients; Emergency medical care; Catheters; Clinical trials; Variables; Veins &arteries; Emergency services; Nursing; Ultrasonic imaging; Survival analysis; Catheterization; Bias; Intensive care; Professional practice
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Optimizing Discharge Knowledge and Behaviors: JEN

ABSTRACT (ENGLISH)

Effective instructions provide patients the ability to manage their home care, including obtaining and taking medication, arranging follow-up, and understanding the circumstances under which they should return to the emergency department.1,2 Inadequate or poorly understood instructions are associated with poor adherence to prescribed therapy regimens and related negative outcomes including unscheduled returns and higher rates of hospital admission.3–6 Individual and environmental factors have been implicated in the poor comprehension of and compliance with discharge instructions,1,4–7 including limited health literacy.1,6 Although some research has examined the association between ED discharge instructions and patient satisfaction, limited research examines teach-back's effect on patient satisfaction.8,9 In this issue of the Journal of Emergency Nursing, Hodges et al evaluated teach-back as a method of increasing patient satisfaction with the discharge process. The authors identified patient comprehension outcomes as a subject for future research.10 Optimizing ED discharge instructions requires a thorough consideration of both process and outcome measures.1,11 The Agency for Healthcare

Research and Quality's 2014 Improving the Emergency Department Discharge Process: Environmental Scan Report identifies components for a high-quality ED discharge and factors that contribute to a discharge failure. Individuals with low health literacy are among those considered to be at risk for discharge failure.1 However, the emergency department's chaotic environment, lack of familiarity with providers, limited time for education, and the patient's physical condition among other conditions can make understanding of and ultimately adhering to discharge instructions challenging for many patients.4,5 Research has demonstrated that verbal instructions and a combination of verbal and written instructions provide less than optimal comprehension of discharge instructions, with many patients having <50% recall.5 In addition, many studies of ED discharge do not evaluate postdischarge adherence to instructions.1,5 Optimizing the understanding of instructions and compliance with follow-up care begins with unhurried, unambiguous instructions delivered in lay terms to the patient; as appropriate, a translator should explain in the patient's preferred language.12 When the patient is open to the technique, teach-back is a fundamental part of this process.

FULL TEXT

Instructions given to the patient at discharge are a crucial component of the ED visit. Effective instructions provide patients the ability to manage their home care, including obtaining and taking medication, arranging follow-up, and understanding the circumstances under which they should return to the emergency department.[1,2] Inadequate or poorly understood instructions are associated with poor adherence to prescribed therapy regimens and related negative outcomes including unscheduled returns and higher rates of hospital admission.[3–6] Individual and environmental factors have been implicated in the poor comprehension of and compliance with discharge instructions,[1,4–7] including limited health literacy.[1,6]

Although some research has examined the association between ED discharge instructions and patient satisfaction, limited research examines teach-back's effect on patient satisfaction.[8,9] In this issue of the *Journal of Emergency Nursing*, Hodges et al evaluated teach-back as a method of increasing patient satisfaction with the discharge process. The authors used teach-back to address inadequate health literacy and ensure understanding of instructions. Although some initial improvement in satisfaction was realized, the authors did not achieve their goal. Despite sharing a flow process demonstrating an excellent teach-back method, the authors did not report or measure patient comprehension. The authors identified patient comprehension outcomes as a subject for future research.[10]

Optimizing ED discharge instructions requires a thorough consideration of both process and outcome measures.[1,11] The Agency for Healthcare Research and Quality's 2014 *Improving the Emergency Department Discharge Process: Environmental Scan Report* identifies components for a high-quality ED discharge and factors that contribute to a discharge failure. Among the high-quality discharge categories are communicating with/educating patients, postdischarge support care, and coordination of services and follow-up care.[1] The Agency for Healthcare Research and Quality's report identifies risk factors for discharge failure, outlines the barriers to effective instructions associated with each component, and provides a framework for emergency departments to analyze their discharge process.

Comprehension of and adherence to discharge instructions are important primary outcome measures for ongoing quality improvement, research, and nurse-led scholarship. Individuals with low health literacy are among those considered to be at risk for discharge failure.[1] However, the emergency department's chaotic environment, lack of familiarity with providers, limited time for education, and the patient's physical condition among other conditions can make understanding of and ultimately adhering to discharge instructions challenging for many patients.[4,5] Research has demonstrated that verbal instructions and a combination of verbal and written instructions provide less than optimal comprehension of discharge instructions, with many patients having 5 In addition, many studies of ED discharge do not evaluate postdischarge adherence to instructions.[1,5]

Optimizing the understanding of instructions and compliance with follow-up care begins with unhurried, unambiguous instructions delivered in lay terms to the patient; as appropriate, a translator should explain in the patient's preferred language.[12] When the patient is open to the technique, teach-back is a fundamental part of this

process. The literature is replete with examples of the benefits of teach-back in health care settings and recognizes it as an effective method of validating the patient's understanding of instructions. In the emergency department, time for effective teach-back is cited as a barrier.[13] Few ED studies have examined the effectiveness of teach-back in recalling information at a later time or adherence to instructions.[14]

Adjunctive methods that reinforce verbal and written methods show promise in improving patient initial comprehension and the recall of information after discharge as well as adhering to discharge instructions. Video instructions have improved comprehension in multiple adult and pediatric settings[15–17] with greater benefit seen with more complex diagnoses.[17] When measured, video instructions can increase satisfaction with the discharge process.[15] Financial and time constraints must be considered when producing and using video instructions.

Pictorial discharge instructions, also referred to as pictographs or pictograms, have been used as an adjunctive teaching method with success in the emergency setting.[6,11] Pictorial instructions when supplemented by simple, limited text effectively address inadequate health literacy across populations ([Figure 1]). Although few randomized control trials are available, a recent meta-analysis indicated that pictorial instruction improved comprehension, compliance, and satisfaction with discharge instructions.[11] Time to develop pictographs, including creating relevant artwork, is a potential barrierto their use.

Postdischarge telehealth interventions, such as phone calls after an ED visit are associated with improved adherence, reduction in unscheduled returns, and when measured, increased patient satisfaction.[18–20] In studies where follow-up phone calls were used, most patients initially reported an incomplete or inaccurate understanding of instructions, and many had not adhered to follow-up care.[19,20] Telehealth calls provide an opportunity to teach, provide assistance, and evaluate patient satisfaction with emergency care, allowing for service recovery as needed (G. H. Raup, PhD, RN, CEN and E. J. Winokur, PhD, RN, CEN, unpublished data) ([Figure 2]).

Optimizing discharge knowledge and behaviors for emergency visit aftercare may not be achieved through a singular activity. Although time-intensive, a multifaceted process involving written and verbal instructions, teach-back, adjunctive methods such as pictographs, and follow-up telehealth interventions demonstrates the greatest likelihood of achieving patient understanding, compliance with aftercare, and overall satisfaction including with the discharge process (G. H. Raup, PhD, RN, CEN and E. J. Winokur, PhD, RN, CEN, unpublished data).[1,12]

Satisfaction with discharge instructions should be thought of as a bidirectional process, potentially increasing the occupational satisfaction of nurses as well as patient satisfaction with care. A multipronged approach facilitates nurses' enablement to practice at the top of their license, ensuring a holistic method for delivery of efficacious aftercare instructions. Patients receiving these instructions have the opportunity to increase the knowledge and skills that may subsequently empower them to make optimal decisions about the next phase of their care and potentially improve their satisfaction with the health care journey.

Author Disclosures

Conflicts of interest: none to report.

DETAILS

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Prevalence and Associated Factors of Burnout Risk Among Intensive Care and Emergency Nurses Before and During the Coronavirus Disease 2019 Pandemic: A Cross-Sectional Study in Belgium: JEN

ABSTRACT (ENGLISH)

Introduction

This study aimed to assess (1) the prevalence of burnout risk among nurses working in intensive care units and emergency department before and during the coronavirus disease 2019 pandemic and (2) the individual and work-related associated factors.

Methods

Data were collected as part of a cross-sectional study on intensive care unit and emergency nurses in Belgium using 2 self-administered online questionnaires distributed just before the pandemic (January 2020, N=422) and during the first peak of the pandemic (April 2020, N=1616). Burnout was assessed with the Maslach Burnout Inventory scale.

Results

The overall prevalence of burnout risk was higher among emergency nurses than intensive care unit nurses but was not significantly different after the coronavirus disease 2019 pandemic (from 69.8% to 70.7%, χ^2=0.15, *P*=.68), whereas it increased significantly among intensive care unit nurses (from 51.2% to 66.7%, χ^2=23.64, *P* <.003). During the pandemic, changes in workload and the lack of personal protective equipment were significantly associated with a higher likelihood of burnout risk, whereas social support from colleagues and from superiors and management were associated with a lower likelihood of burnout risk. Several determinants of burnout risk were different between intensive care unit and emergency nurses.

Conclusion

Our findings indicate that nurses in intensive care unit and emergency department were at risk of burnout but their experience during the coronavirus disease 2019 pandemic was quite different. Therefore, it is important to implement specific measures for these 2 groups of nurses to prevent and manage their risk of burnout.

FULL TEXT

DETAILS

Subject:	Emergency medical care; Personal development; Severe acute respiratory syndrome coronavirus 2; Risk factors; Mental disorders; Burnout; Questionnaires; Equipment; Nurses; Emergency services; Workloads; COVID-19; Social support; Pandemics; Epidemics; Working conditions; Severe acute respiratory syndrome; Mental health; Departments; Coronaviruses; Intensive care; Critical care
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The Accuracy of Medication Administration Data in the Emergency Department: Why Does It Matter?: JEN

ABSTRACT (ENGLISH)

[...]unaddressed EHR-related systems issues with medication administration in the emergency department still exist. [...]along with the increasing use of artificial intelligence (AI) in the emergency department, expert clinical involvement in all development and implementation phases of AI is essential and often missing. [...]working groups, such as from the Nursing Knowledge Big Data Science conference, have generated a framework for documentation

burden.7 My colleagues and I are leading8 an initiative funded by the National Library of Medicine that brought relevant stakeholders together in a symposium to reduce documentation burden by 75% in the next 5 years.8 Finally, clinical documentation reduction efforts commonly recommend that EHR companies create more user-friendly documentation structures.

FULL TEXT

In the past decade, emergency departments, like most clinical settings, have seen an explosion in electronic health records (EHRs),[1] which has fueled growth in the use of EHR data for research and operational analysis. In this issue of the *Journal of Emergency Nursing*, de Hond et al[2] publish the results of their study investigating the outcomes of the timely administration of medications in the emergency department. One of their findings is that actual medication times differ from those recorded in the EHR.

As a clinical informatician, my work focuses on the rich supply of EHR usage data to improve the quality of care patient safety and to support clinical decision making. The de Hond et al[2] findings highlight important issues with EHR data. First, the medication time discrepancy points to an opportunity for improvement in EHR usability and design. Second, unaddressed EHR-related systems issues with medication administration in the emergency department still exist. Finally, along with the increasing use of artificial intelligence (AI) in the emergency department, expert clinical involvement in all development and implementation phases of AI is essential and often missing.

The national outcry related to documentation burden and the EHR[3,4] speaks to the need for improved usability of the EHR and the fact that the EHR's design continues to be driven by regulatory and billing forces. The Office of the National Coordinator for Health Information Technology,[5] the Center for Medicare and Medicaid services,[6] and several other federal agencies address documentation burden and EHR usability issues. In addition, working groups, such as from the Nursing Knowledge Big Data Science conference, have generated a framework for documentation burden.[7] My colleagues and I are leading[8] an initiative funded by the National Library of Medicine that brought relevant stakeholders together in a symposium to reduce documentation burden by 75% in the next 5 years.[8] Finally, clinical documentation reduction efforts commonly recommend that EHR companies create more user-friendly documentation structures.

The de Hond et al[2] article accurately points out that early appropriate medication administration is essential to improving patient outcomes in the emergency department. Many systems-level safety implementations (like barcode medication administration) have recently been implemented, partially in response to the National Academy of Medicine's *To Err is Human*[9] report. However, in the fast-paced, high-stakes environment of the emergency department, the continued use of workarounds exposes systems-level obstacles to the regular use of these safety implementations. For example, in a code situation, emergency nurses often must administer medication before a provider can enter the prescription order into the EHR. However, the success of current medication administration safety tools like barcode medication administration[10] relies on physicians quickly entering medication prescription orders, which is not well aligned with emergency department–specific workflow. Systems-level improvements are still needed for the documentation of medication administration.

Along with the revolutionary benefits of AI interventions using EHR data in the emergency department come several pitfalls, including bias in the underlying AI algorithms.[11] If these biases are not addressed, the AI tools will not be trustworthy. We recently reviewed the current state of the science of AI-driven clinical decision support in the inpatient setting.[12] We found that few studies involved clinicians in developing and implementing AI decision support projects. The de Hond et al[2] findings highlight an area in which this lack of clinician involvement would be detrimental for documented versus actual medication administration time. The fact that actual medication administration may be different from the documented medication administration would be evident to clinicians, but not likely anticipated or understood by nonclinicians. AI algorithms built without clinician input and experiential wisdom would unlikely to account for expected versus actual clinical workflow discrepancies.

In summary, de Hond et al[2] highlight several ED EHR usability issues, data quality, and systems issues in tracking medication administration. These findings also have implications about the need for future clinician involvement in AI

solutions. More research is needed to solve these issues to ensure that clinicians continue providing safe and effective care in the emergency department.

Author Disclosures

Conflicts of interest: none to report.

DETAILS

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The Impact of Burnout on Emergency Nurses' Intent to Leave: A Cross-Sectional Survey: JEN

ProQuest document link

ABSTRACT (ENGLISH)

Introduction

Emergency nurses work in one of the busiest and most stressful departments in a hospital and, as such, may experience burnout more often than nurses working in other nursing units. This study examined the relationship among orientation, burnout (emotional exhaustion, depersonalization, and low sense of personal accomplishment), and intent to leave.

Methods

A cross-sectional survey design was used. Emergency nurses who were members of the Emergency Nurses Association were invited to participate in an anonymous survey. The Maslach Burnout Inventory tool was used to explore emotional exhaustion, depersonalization, and sense of personal accomplishment. Emergency nurses' intent to leave was assessed with the Turnover Intention Scale. A logistic regression analysis was used to investigate the odds of intent to leave for those who scored at or above versus below the median on each burnout subscale.

Results

The findings revealed that a formal orientation enhanced emergency nurses' sense of personal accomplishment and was associated with lower intent to leave. The odds of intent to leave were almost 9 times greater for participants with 5 or more years of experience, approximately 13 times greater for those with above-median emotional exhaustion, and more than 6 times lower for those with above-median sense of personal accomplishment.

Discussion

Emotional exhaustion and low sense of personal accomplishment were key factors influencing emergency nurses' intent to leave. Emergency nurse leaders may find that a formal orientation program enhances sense of personal accomplishment and decreases intent to leave. Creating work environments to help emergency nurses find joy in their work may be critical to work–life balance and staff retention.

FULL TEXT

DETAILS

Subject:	Emergency medical care; Fatigue; Regression analysis; Estimates; Employment; Burnout; Questionnaires; Organizational change; Leadership; Nurses; Emergency services; Likert scale; Polls &surveys; Depersonalization; Cost control; Nursing; Education; Patient satisfaction; Retention
Business indexing term:	Subject: Employment Organizational change Burnout Leadership Cost control Retention
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A Predictive Model Development of Hospital Admission during Triage in a Chinese Ear, Nose, and Throat Emergency Department: JEN

ABSTRACT (ENGLISH)

Introduction

Triaging patients into correct severity categories in an emergency department is an advanced skill that depends on a quick assessment after obtaining very little information. The purpose of this study was to assess specific risk factors associated with hospital admissions in the emergency department environment of the specialized Eye, Ear, Nose, and Throat hospital located in Shanghai, China.

Methods

This study was a retrospective cohort study. Patients visiting the emergency department in a tertiary hospital in eastern China from February 2008 to August 2015 were included. Univariate and multivariate analyses were used to identify the risk factors related to hospital admissions. Combining variables calculated from the regression equation of multivariate analysis (binary logistic regression analysis) enabled the risk factors quantification. The receiver operating characteristic analysis was used to identify the most informative cutoff point of the combining predictors.

Results

A total of 188715 patients were enrolled in the study. Of them, 8395 patients (4.4%) required hospital admission. Hour of visit, season, age, sex, chief complaint, anatomical location, and locale of patients were independent risk factors of hospital admission by univariate and multivariate analysis. Combining predictors were calculated from the equation of the multivariate logistic model. The area under the curve of the combining predictors was 0.949, and the 95% confidence interval was 0.947 to 0.951 (P <.001), with a sensitivity of 95.2% and a specificity of 85.6%. A cutoff score of less than –35.1975 was associated with hospital admission.

Discussion

This study provided a method to build a feasible predictive model of hospital admission during triage. Understanding risk factors is an important part of the triage process in order to correctly assign priorities to the patients served. The outcomes of this study would add additional information for the triage nurse to consider in assessing the patient and assigning acuity ratings. The model developed here requires validation in future research.

FULL TEXT

DETAILS

Subject:	Complaints; Emergency medical care; Ophthalmology; Analysis; Risk factors; Demographics; Patient admissions; Risk assessment; Hospitals; Winter; Cohort analysis; Emergency services; Esophagus; Surgical outcomes; Hospitalization; Measurement; Multivariate analysis; Otolaryngology; Surgery; Triage; Variables; Regression analysis; Age groups; Receiver operating characteristic analysis; Foreign bodies; Departments; Ears &hearing
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Intervention Development: Quick Response Code Implementation for Point-of-Care Training Needs in the Emergency Department: JEN

ABSTRACT (ENGLISH)

The rise of a digital native generation of nurses entering the ED workforce prompts a need for targeted training resources to meet their needs and preferences. The purpose of this intervention was to (1) leverage Quick Response code technology to provide point-of-care information as it relates to high-risk, low-volume therapies, (2) improve staff nurse perception toward the ease of access to educational and training materials, and (3) improve staff perception of the adequacy of educational and training resources. Training videos ranging in length from 2 to 3 minutes were created and linked through Quick Response codes for smartphone scanning and affixed to relevant pieces of equipment. Nurses were asked to complete project-specific surveys before implementation (n = 20) and at 4 months postimplementation (n = 26). After the second project-specific survey, nearly all (96.2%) of the surveyed nurses described their ease of access to informational materials as extremely easy or somewhat easy. Approximately 93.7% stated yes to having adequate educational resources to meet their training needs, an increase of 50% in comparison with the first project-specific survey. There is a great opportunity to capitalize on the potential preferences of this younger, technologically savvy generation of nurses through Quick Response code implementation and point-of-care training to improve competency with high-risk, low-volume therapies. This intervention could also be tailored to many other aspects of nurse training and education in various settings.

FULL TEXT

Introduction

The nationwide demographics of emergency nurses demonstrate a younger average age than the overall workforce of registered nurses across other specialties. As of 2019, a benchmark survey by the Transport Nursing Workforce revealed the average age of emergency nurses in the United States to be 30 to 39 years.[1] The 2017 National Nursing Workforce Survey revealed the average age of registered nurses across all specialties to be 51 years.[2] When considering the younger average age of emergency nurses, opportunities arise to target educational resources to meet the needs and potential preferences of their demographic.

Digital natives are those who have grown up with advanced technology thoroughly integrated in their daily lives.[3] Given the average age of emergency nurses being 30 to 39 years, it is likely that this group grew up with elements of advanced technology embedded in their daily life, specifically in the areas of communication, leisure, and education. Smartphone access and the proliferation of broadband infrastructure have supported the integration of the use of this technology in health care. The practice of nurses seeking medication and disease-related information through smartphone internet access and applications has been thoroughly documented.[4] Various applications exist on smartphones for knowledge sharing. One application known as BAND allows surgical nurses to share information, photos, and YouTube videos explaining various instruments and procedures.[4] In a 2018 study, Flynn et al [5] noted that greater than 75% of surveyed nurses demonstrated a preference for using smartphones to access

information and that the group most commonly represented by these digital natives was nurses aged between 18 and 30 years.

As technology use increases across all domains, including health care, the concept of point-of-care or just-in-time training has risen as well.[3] This paradigm has the potential to lessen the risk of harmful trial and error decision-making by providing information that is immediately available.[5] A study by Jamu et al[6] revealed the importance of educating emergency nurses on high-risk low-volume therapies (HRLVTs); pieces of equipment or procedures that are used infrequently but bear a high level of complexity creating a risk to patient care.[7] This concept was supported by annual learning needs assessments sent out to emergency nurses in our acute-care, community hospital setting. Training and education should be tailored towards nurses who prefer using technology to access point-of-care information.

Quick Response (QR) codes, first developed by the automobile industry in Japan, provide codes that can be scanned by any smartphone with a camera.[3] Once scanned, they connect the user with whatever corresponding content had been linked to that specific code (ie, YouTube videos, a photograph, a website). When implemented effectively, they can help bridge the gap between educational material and learners by providing point-of-care education.

This intervention development project intended to increase staff comfort and perceived ease of access to informational materials pertaining to HRLVTs while capitalizing on the preferences of a digital-native generation. This intervention implementation of QR code technology for just-in-time training aimed to offer brief, easily accessible videos explaining/demonstrating the setup/management of HRLVT devices or procedures.

Methods CONTEXT

This intervention was implemented in the emergency department of a 371-bed hospital. This community hospital's emergency department sees 56 000 patients per year and features a 4-bed trauma bay. It is an American College of Surgeons level III trauma center, New York State Stroke Center, and American Academy of Pediatrics level II neonatal critical care center.

Staff nurses participate in education during their initial orientation that introduces them to various HRLVTs. This education provides them with a knowledge of the equipment and indications for use. Brief training is also provided during this period during which a staff educator observes the staff nurse performing the skill. This counts as their recorded competency, which is completed annually through a skills fair. The attendance of annual skills fairs (after the initial orientation) are optional per union regulations.

INTERVENTIONS

Results of the annual learning needs assessments were completed and evaluated to assess themes and trends and to extract priority training needs. These anonymous learning needs assessments were collected 4 months before the implementation of QR code technology for point-of-care training. Many HRLVTs were among the primary requests (expressed in the free-text response portion of the survey) for ongoing training owing to the nature of their infrequent use, including the rapid infuser, arterial line setup, water seal chest tube setup, and end-tidal carbon dioxide monitoring. Though each nurse in the department possesses a competency for each of these HRLVTs, many have not used the equipment since their orientation and, as such, can benefit from refresher training.

Instructional video clips pertaining to these themes and requested equipment were created and edited by the author, a clinical nurse educator who is board certified in emergency and trauma nursing. To maintain a point-of-care brief style of refresher training, the videos were recorded with a goal duration of less than 3 minutes. The rapid infuser, however, required a longer explanation and thus exceeded the goal video length (7 minutes).

The videos were reviewed for accuracy and quality by other staff educators. They were then uploaded to YouTube on the department's YouTube channel. This ensured that the videos were accessible not only through QR code links but by searching the channel as well. The videos were then linked through YouTube to unique QR codes performed through a free website.[8] The QR codes were downloaded, enlarged, and printed for ease of access. Figures 1 and 2 are examples of associated QR codes.

STUDY OF THE INTERVENTIONS

Anonymous learning needs assessments were performed from July 1 to July 31, 2020, 4 months before QR code implementation. These were distributed on paper to ascertain priority education and training needs. This guided the selection of highly requested HRLVTs by giving nurses the opportunity to name those HRLVTs for which they wished to receive training.

Data from the first project-specific survey were acquired over a 2-month period immediately before implementation, from September 1, 2020 to October 31, 2020. Likert-style surveys were disseminated to nurses in the emergency department to determine nursing perception of resource/training accessibility before and after this intervention. The intervention went live November 1, 2020.

In the first month of the intervention, QR codes were provided in a binder located at the main nursing station within the emergency department. The binder included instructions on how to scan a QR code and an alphabetically organized library of all the codes. The process for scanning was discussed daily at the morning briefs and huddles.

In discussing the intervention with staff during the second month of QR implementation, it was understood that this resource would be most valuable when affixed to specific equipment. This feedback was discussed by leadership and immediately implemented on December 15, 2020. QR codes were laminated for cleaning to comply with infection-control policies and affixed through hospital-grade Velcro to the various pieces of equipment. Staff verbalized that this change not only made access easier but served as a helpful reminder of the codes, thus prompting their increased use.

The video explaining how to set up the rapid infuser was affixed by QR code to the device itself. The QR codes for the videos explaining how to set up an arterial line and how to zero an arterial line were affixed to the storage closet where those supplies were kept. The same process was repeated for chest tubes, ventilators, and the end tidal carbon dioxide monitoring module.

Data from the second project-specific survey were acquired 4 months after implementation, from March 1, 2021 to March 31, 2021. Likert-style surveys were disseminated to nurses in the emergency department to gauge satisfaction specific to the training provided for HRLVTs through QR codes.

The project lasted 10 months, beginning with the learning needs assessments in July 2020 until data analysis and synthesis, followed by manuscript submission in April 2021. A visual representation of this timeline is demonstrated in Figure 3.

ANALYSIS

The first and second project-specific surveys were sent out to the entire roster of 112 nurses in the department through Microsoft forms (Microsoft Corp). This resulted in unequal adherence to the unmatched surveys; 20 nurses took the first project-specific survey and 26 nurses took the second project-specific survey. This was an unintended result as the goal was to have equal response rates between the first and second project-specific surveys.

Descriptive statistics were used to analyze the first and second project-specific survey responses. Percent changes from pre- to postdata were calculated and assessed.

All participants in the department were provided with the same QR codes, however, not all participants received the same acuity of patients over the 7-month live intervention project period and, as such, may not have needed to scan QR codes pertaining to specific equipment in that time. The intervention began with the goal of recording data regarding the number of times each QR code was scanned. The QR code generator used for this intervention was unable to provide that service, and, as such, this metric was unable to be recorded as initially planned.

The linked YouTube videos, since implementation of the QR codes, have received the following numbers of views as of March 31, 2021:

••Rapid infuser - 117 views

••Arterial line setup - 61 views

••Zero an arterial line - 2076 views

••Water seal chest tube setup - 32 views

••End tidal carbon dioxide monitoring - 14 views

Results

Before implementation of the QR codes in the emergency department, 45% of the surveyed nurses (n = 20) described their ease of access to informational videos for specific equipment and procedures through a Likert scale as somewhat difficult or very difficult. Half of those surveyed answered no to feeling that they had adequate resources for information on specific equipment and procedures, demonstrated in Figure 4A.

At the 4-month project-specific survey (n = 26), 96.2% of the surveyed nurses described their ease of access to informational videos for specific equipment and procedures as extremely easy and somewhat easy (demonstrated in Figure 4B). A small percentage (3.8%) described their ease of access to informational videos as somewhat difficult. Most of the respondents (92.3%) felt like they had adequate resources for information on specific equipment and procedures, with only 7.7% answering no.

Lessons Learned

Emergency nurse perception of the accessibility of informational videos regarding specific high-acuity equipment improved considerably in this study from the first project-specific survey data to the second project-specific survey data. After the implementation of the QR codes, most of the nurses surveyed described their ease of access as extremely or somewhat easy, with 3.8% still describing it as difficult (a decrease of 41.2% from preimplementation survey data). The accumulated data suggested that the implementation of this technology had assisted with the rendering of critical, point-of-care training material for HRLVTs.

Emergency nurse perception of having adequate refresher training resources for specific pieces of equipment and procedures improved across pre- and postsurvey data. Before the implementation, half of the nurses surveyed (n = 20) reported feeling inadequately prepared with resources on these pieces of equipment. After its implementation, a lesser percentage (7.7%) of those surveyed (n = 26) reported feeling inadequately prepared. This implies that the integration of QR code technology and point-of-care training videos are perceived as adequate resources by staff nurses in the department, and the addition of these services filled a training gap.

There is a great opportunity to capitalize on the leadership of this younger, technologically savvy generation of nurses through QR code implementation and point-of-care training to improve competency with HRLVTs as well as other aspects of nurse training and education. The implementation of QR codes affixed to HRLVT pieces of equipment improved surveyed staff nurse perception on the ease of access to informational materials. It also increased the number of surveyed staff nurses who felt adequately prepared with training resources on specific equipment and procedures.

Interdepartmental relationships were created and strengthened through the filming of these videos. Neurology physician assistants at the hospital expressed interest in recording a video for external ventricular drain setup in the emergency department, citing a need for nurses to know exactly how to prepare for this HRLVT. The video was uploaded to YouTube and linked through the same QR code process to the storage area containing all the relevant supplies. Owing to the extensive nature of the information, this video exceeded the 3-minute-length goal. However, discussion at staff briefs revealed satisfaction from nurses in its availability despite its longer length.

Limitations

QR code implementation for point-of-care training might be beneficial only to those comfortable rapidly using technology. Although 2019 demographic information from the Transport Nursing Workforce demonstrates the average age of emergency nurses to be 30 to 39 years,[1] a portion of the workforce remains in more advanced age

groups. Nurses older than 40 years may or may not affiliate themselves with the same experiences as younger digital natives. Alternatively, digital natives will have varying levels of comfort and experience with technology. As such, the success of this implementation is ultimately dependent on the individual user's willingness, comfort, and ability to access the videos regardless of their age and technology experience.

Other factors influencing the success of this process include smartphone availability and network access. QR codes are only scannable by smartphone technology, and those without access to this type of device will be unable to participate in this style of point-of-care training. Network access also plays a crucial role as those without a strong enough Wi-Fi signal or data availability might face difficulty in quickly accessing the information. Delayed loading of the videos might render them no longer useful for point-of-care training needs.

Survey data were collected through unmatched samples, with the first project-specific survey data collected from 20 nurses and the second project-specific survey data collected from 26 nurses (17.9% and 23.2% of nurses within the department, respectively). This resulted in an unmatched analysis of data; low response rates limit the generalizability of these results. As previously mentioned, it was not possible to differentiate which YouTube video views came from the QR code scans and which came from YouTube traffic. We were also unable to determine the number of times each QR code was scanned, which limited our ability to analyze the data as originally planned. Future research in this area should plan for these factors in advance, as there are QR code services that exist with this feature at an added fee.

Implications for Emergency Clinical Care

The field of emergency health care is constantly evolving. This requires clinical staff to be up to date on best practices to render the highest quality of care. Patients present to emergency departments with a wide variety of conditions, making it crucial for nurses to be able to perform a vast set of skills and procedures. Some of these therapies, known as HRLVTs, are not routinely used. Competency for these therapies is achieved during orientation to the department; however, the therapy itself may not be seen by the nurse for a long period of time afterward. This makes ongoing training critically important to provide sufficient care. The implementation of QR code technology, including 2- to 3-minute training videos, provides an effective way to render point-of-care training to this population of nurses. Through the implementation of this technology, we have recognized an increase in staff satisfaction by word-of-mouth feedback as it relates to training provisions as well as an improvement in perceived ease of access to training materials.

Conclusions

Leveraging the use of QR code technology, in conjunction with 2- to 3-minute brief video clips, can improve staff perception of adequacy and the ease of access to point-of-care training specific to HRLVTs. Countless new technologies and procedures enter the field of emergency health care each year, which signifies a need for ongoing refresher training. Initial competency accomplished during orientation to the department may not depict a true and ongoing ability to perform these HRLVTs. As such, this technology can offer personalized training when convenient for the user or at the exact moment they are using the specific HRLVT. This intervention could be easily tailored to other aspects of nurse training or education in various settings. In addition, future research should include larger, matched samples and examine the cost effectiveness of such training/education strategies.

DETAILS

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A Retrospective Analysis of the Impact of the Coronavirus Disease 2019 Pandemic on Health Care Workers in a Tertiary Hospital in Turkey: JEN

ABSTRACT (ENGLISH)

Introduction

Several vaccines have been developed and approved for use against severe acute respiratory syndrome coronavirus-2; however, the use of personal protective equipment remains important owing to the lack of effective specific treatment and whole community immunity. Hydroxychloroquine sulfate was a treatment option in the early days of the pandemic; however, it was subsequently removed owing to a lack of evidence as an effective treatment. We aimed to evaluate the testing and infection characteristics of coronavirus disease 2019 among health care personnel and determine the effectiveness of prophylactic hydroxychloroquine sulfate use to prevent transmission.

Methods

This retrospective observational study was conducted between May 1 and September 30, 2020. The health care personnel included in the study were physicians, nurses, and paraprofessional support personnel. The health records of health care personnel who had been tested for severe acute respiratory syndrome coronavirus-2 using polymerase chain reaction were retrospectively analyzed.

Results

In total, 508 health care personnel were included in the study. A total of 152 (29.9%) health care personnel were diagnosed with coronavirus disease 2019. The positive polymerase chain reaction rate was 80.3% (n = 122). A comparison of infected and uninfected health care personnel showed a difference in age and occupation and no difference in sex, working area, and prophylactic hydroxychloroquine sulfate use.

Discussion

Protective measures in low-risk areas of our hospital require improvements. All health care personnel should be trained on personal protective equipment use. There was no evidence to support the effectiveness of prophylactic hydroxychloroquine sulfate against severe acute respiratory syndrome coronavirus-2 transmission.

FULL TEXT

Contribution to Emergency Nursing Practice

••This article contributes to the clinical findings of coronavirus disease 2019–infected health care personnel and the effectiveness of hydroxychloroquine use.

••All health care personnel must be trained on the correct use of personal protective equipment at regular intervals, particularly paraprofessional support personnel, such as secretaries or technical staff.

••Our results showed no evidence that the use of prophylactic hydroxychloroquine was effective against severe acute respiratory syndrome coronavirus 2 transmission. Joint pain, weakness, and anosomia were the most common symptoms among health care personnel infected with severe acute respiratory sync"?>drome caronavirus 2, or SARS-CoV-2.

Introduction

Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) continues to show worldwide impact. To date, approximately 86 million people have been infected and more than 1.5 million have died.[1,2] In Turkey, 2.3 million people have been infected and the total number of deaths has reached 22 450.[3] The rapidly increasing number of patients in critical condition or dying has caused a significant challenge to public health. Mortality rates are correlated with countries' health care resources. In addition, the invasive ventilator and intensive care unit resources are inadequate.[4]

It is important to protect health care personnel (HCP) from the risk of infection to ensure continuity of effective health care. The World Health Organization (WHO) recommends the use of personal protective equipment (PPE) for HCP at high risk owing to their interaction with patients with coronavirus disease 2019 (COVID-19).[5] Several vaccines have been recently developed for use against SARS-CoV-2; however, the use of PPE and precautions against transmission remain important owing to the lack of effective specific treatments and whole community immunity.[6-9]

The potential efficacy of hydroxychloroquine sulfate (HCQ) against SARS-CoV-2 was demonstrated in vitro after the first severe acute respiratory syndrome epidemic in 2005.[10] It was included in treatment algorithm in the early days of the 2020 pandemic; however, there was no evidence for its efficacy in the treatment of COVID-19 and it was subsequently removed from use.[11-15] Additional studies have investigated the efficacy of HCQ use before exposure to SARS-CoV-2, and during the pandemic, we became aware that some HCP working in our hospital had used HCQ as prophylaxis.[16-18]

This study's primary focus was to evaluate the testing and infection characteristics of COVID-19 among HCP. In addition, we sought to determine the effectiveness of prophylactic HCQ use in the prevention of transmission.

Methods Design

This retrospective observational study was performed between May 1 and September 30, 2020 in a tertiary academic hospital. The study was conducted in compliance with the Declaration of Helsinki and approved by the regional ethics committee (2020/03-47).

Setting and Infection Prevention Measures

The setting was the only hospital in our city within which COVID-19 patients are hospitalized. During the study process, the mean daily admission to the emergency department with COVID-19 symptoms was 352. In total, 1957 patients with COVID-19 pneumonia were hospitalized in 5 months. Our hospital continued to provide routine health care, in addition to COVID-19 care, during the pandemic. The working areas in the hospital were divided into 2 groups according to high and low COVID-19 transmission risk. High-risk areas were defined as the emergency department, COVID-19 suspected emergency department, COVID-19 isolation wards, and COVID-19 intensive care units. The low-risk areas were defined as the outpatient clinics, administrative divisions, information technology clerical, technical clerical, and other areas where routine hospital operations continued. HCP with no chronic disease worked in the high-risk areas of the hospital; working shifts were limited to 4 hours in these areas. A disposable mask (1200 N95/FFP2 NR; ERA, İstanbul, Turkey), goggles (Pulsafe LG20 Goggle; Bacou-Dalloz Company, Paris, France), isolation gowns (Safetouch TP63 5/6 classic disposable protective coverall; Safetouch Ltd, Istanbul, Turkey), and nonsterile gloves were routinely used during the care of patients who were suspected or confirmed to have COVID-19 in high-risk areas. Furthermore, all PPE was used for 1 shift in high-risk areas. After each shift, the goggles were routinely sterilized, and all other PPE was disposed of. Surgical masks and nonsterile gloves were used in low-risk areas.

PARTICIPANTS

Of the 1830 HCP working in our hospital, 523 were tested for SARS-CoV-2 by oropharyngeal/nasal swabs and

polymerase chain reaction (PCR) between May 1 and September 30, 2020. Fifteen HCP were excluded because of missing data; therefore, 508 HCP were included in the final analysis. Informed consent was obtained from each HCP.

Age, sex, occupation (physicians, nurses, and paraprofessional support personnel), working area (high/low risk), the reason for PCR testing (suspected contact, screening, presence of COVID-19 symptoms), COVID-19-related symptoms (fever, sore throat, anosmia, shortness of breath, cough, joint pain, fatigue), use of prophylactic HCQ, side effects if HCQ was used, PCR result, chest computed tomography (CT) result, hospitalization, and treatment regime for COVID-19 were retrospectively analyzed. HCP with a positive PCR test were classified as being infected with COVID-19. In addition, HCP with a positive chest CT for COVID-19 or those with COVID-19–related symptoms, even with a negative PCR test, were classified as being infected with COVID-19.

DATA ANALYSIS

The data were analyzed using SPSS version 22.0 (SPSS Inc, Chicago, IL). Visual (histogram and probability graphs) and analytical methods (Kolmogorov-Smirnov test) were used to determine the distribution normality. The descriptive statistics were expressed as mean (SD) for normally distributed variables. The categorical data were expressed as n (%). For the intergroup comparisons, a *t* test was used to compare the normally distributed data (age), and Pearson's chi-square or Fisher exact test was used to compare the categorical variables. All analyses were 2-tailed. A *P* value of **Results**

A total of 508 HCP were included in the study. The mean age was 35.89, SD = 8.2 years, and most of the HCP (n = 328, 64.6%) were female. Nurses were the largest proportion of HCP (n = 310, 61%), followed by paraprofessional support personnel (n = 102, 20.1%), and physicians (n = 96, 18.9%). In total, 307 (60.4%) HCP were working in high-risk areas, and 152 (29.9%) were diagnosed with COVID-19. The positive PCR rate was 80.3% (n = 122). The number of HCP using HCQ before any suspected contact was 40 (7.9%), and 1 participant reported HCQ-related side effects (arrhythmia). All demographic data are shown in [Table 1].

HCP who had been diagnosed with COVID-19 were significantly younger than HCP who had not been diagnosed with COVID-19 (33.97, SD = 8.45, t = 3.47 *P* = .001). A total of 84 (55.3%) nurses, 43 (28.3) paraprofessional support personnel, and 25 (16.4%) physicians had been diagnosed with COVID-19. The paraprofessional support personnel were diagnosed significantly more than nurses and physicians (χ^2 = 9.15, *P* = .01). Most of the HCP diagnosed with COVID-19 (n = 84, 55.3%) were working in high-risk areas. Among the HCP who had used prophylactic HCQ, 15 (40%) had been diagnosed with COVID-19 and 25 (60%) had not. There was no significant difference in sex, working area, and prophylactic HCQ medication between diagnosed and undiagnosed HCP. The intergroup comparisons are summarized in [Table 2].

Of the HCP who had been diagnosed with COVID-19, 62 (40.8%) were asymptomatic. The most common symptom was joint pain (n = 48, 31.6%), followed by weakness (n = 33, 21.7%) and anosmia (n = 32, 21.1%). The PCR result was a false negative in 30 (19.7%) HCP. COVID-19 was confirmed in these participants by symptoms related to COVID-19; 2 of these showed positive COVID-19 on the chest CT. A total of 5 (3.3%) HCP had a positive chest CT for COVID-19. Three of these were hospitalized. Acetylsalicylic acid and enoxaparin, in addition to HCQ, favipiravir, and paracetamol, were administered to the 2 discharged HCP. Plasma and predniSONE were added to this treatment for the 3 hospitalized HCP. Two of the 3 hospitalized HCP required noninvasive mechanical ventilation and were placed in the prone position. Hypoxia worsened, and 1 HCP who had used HCQ as prophylaxis required intubation. This HCP was extubated on the 4th day of hospitalization, fully recovered on the 13th day, and discharged on the 14th day. The characteristics of the HCP diagnosed with COVID-19 are summarized in [Table 3].

Discussion

We evaluated the testing and infection characteristics of 508 HCP who had been tested for SARS-CoV-2 using PCR. Over the 5-month study period, 152 HCP were diagnosed with COVID-19. A false-negative PCR result was found in 30 HCP. Most of those infected with COVID-19 were asymptomatic and recovered with outpatient treatment. One HCP developed respiratory failure and required intubation. There was no evidence to support that prophylactic HCQ medication was effective against SARS-CoV-2 transmission.

SARS-CoV-2 spreads person-to-person through direct contact or indirectly through contact with contaminated surfaces.[19] HCP working in the emergency department, isolation services, and intensive care units where aerosol-generating procedures, such as noninvasive ventilation and tracheal intubations, are frequently used are at a high risk for transmission.[20] Enhanced PPE use is recommended for HCP to prevent the risk of infection.[21] Simpler PPE, such as surgical masks alone or in combination with a face shield, is used in areas such as outpatient clinics where the risk is relatively lower and routine hospital operation continues.[4] The risk of transmission to HCP has increased as the number and required health care of cases has increased; however, the rate of infected HCP decreases with appropriate PPE use, pandemic design within hospitals, and community protective measures. At the beginning of the pandemic, in January 2020, the rate of infected HCP was reported as 29% among hospitalized patients in Wuhan.[22] In Italy, there were 15 314 cases of COVID-19 infections among HCP by April 2020, which accounted for 11% of all confirmed cases.[23] Chou et al[24] have reported that the COVID-19 infection rate among HCP from various countries ranged from 1.9% to 12.6% in the third update of their review in August 2020. In the absence of official data, medical society research has shown that 29 865 HCP have been infected, which corresponds to 11.5% of all confirmed cases by September 17, 2020 in Turkey.[25] The total number of confirmed cases and the infected HCP rate in our city are unknown owing to a lack of official data. However, during the study period, 1957 patients have been hospitalized and only 3 (0.15%) were HCP. This rate seems low when compared with the literature, which may be related to the consistent use of PPE and working conditions in the hospital. For example, shorter working hours reduces viral load exposure, which means a better prognosis in COVID-19.[26]

Nosocomial transmission has been recognized as an important amplifier in the epidemics of SARS in 2003 and Middle East respiratory syndrome in 2012.[27] However, some studies have reported that this is not valid during the SARS-CoV-2 pandemic. Hunter et al[28] have reported that the infection rates of patient- and nonpatient-facing HCP were similar, and nosocomial transmission from patients to staff is not an important factor. The observations from China, where personnel screening tests are widely applied, are similar.[20] In this study, we found no significant difference in the number of COVID-19 diagnoses between high- and low-risk areas, in line with the literature. This result provides important information regarding SARS-CoV-2 transmission measures in a hospital. Low infection rates in high-risk working areas are associated with transmission prevention protocols and PPE use that is sufficient to prevent transmission. By contrast, the high infection rates in low-risk working areas may be due to low personnel compliance with PPE use. PPE use is included in the standard training curriculum of physicians and nurses in medical faculties; however, paraprofessional support personnel, such as secretaries or technical staff, were not trained on how to use PPE at this facility. The results of our study confirmed this lack of training; paraprofessional support personnel had a greater likelihood of being infected with COVID-19. We concluded that training on the correct use of PPE should be repeatedly conducted for all HCP working in the field, as recommended by WHO. This is particularly important for paraprofessional support personnel because the benefits of such training are lost within 6 months.[5,29] In addition, screening testing is not being performed on the people who have no COVID-19 symptoms and suspicious contact in many countries. Therefore, many SARS-CoV-2 carriers remain undetected, and HCP working in low-risk areas who use simpler PPE face a higher risk of contracting the disease.

COVID-19 infections are commonly asymptomatic or show mild symptoms.[30] However, this infection can be life-

threatening by causing severe respiratory failure, acute ischemic stroke, or myocardial involvement.[31,32] It is often more severe in the elderly and individuals with comorbidities.[33,34] In line with previous studies, most HCP were asymptomatic in this study. No life-threatening complications were observed, except in 1 case requiring respiratory support. At the beginning of the pandemic, fever and dyspnea were the main symptoms of COVID-19 in Wuhan, China.[20,35] However, after the spread of SARS-CoV-2 worldwide, joint pain and weakness are observed as the main viral symptoms.[35,36] In addition, gastrointestinal symptoms, such as diarrhea, nausea, and vomiting are common in patients with COVID-19.[3738] In this study, the most common symptoms noted were joint pain, weakness, and anosmia, which are similar to recent literature. Only 12 of the 152 HCP reported having a fever. Gastrointestinal symptoms were not observed among any of our HCP diagnosed with COVID-19.

Multiple vaccines have been developed for SARS-CoV-2; however, specific treatment has not been developed, which increases the anxiety of HCP regarding transmission and leads to them seeking alternative chemoprophylaxis options.[6,7,39] Yao et al[40] have demonstrated that HCQ could reduce the spread of SARS-CoV-2 in vitro. In a retrospective study conducted in India, Chatterjee et al[41] have reported that the SARS-CoV-2 incidence is significantly lower in HCP who used prophylactic HCQ. However, Abella et al[16] have reported no significant difference in the incidence of SARS-CoV-2 between HCP administered with HCQ or a placebo. WHO reported no significant difference in patient improvement following the use of HCQ and subsequently removed HCQ from routine treatment recommendations.[17] The results of this study support that HCQ is not effective in preventing SARS-CoV-2 transmission. In addition, the HCP that needed respiratory support and intensive care had been using prophylactic HCQ.

Limitations

This study had some limitations because of its retrospective nature. First, the number of HCP using HCQ was low compared with the total number of participants. In addition, HCP may have used other drugs/medications, such as vitamin supplements, that were not reported during the study. This situation may have affected the effectiveness of prophylactic HCQ use. PPE use, rule compliance, and HCP behavior against possible transmission in normal daily life were unknown. These limitations prevented any comparisons of transmission occurrence in HCP. To address these factors, multicenter, prospective studies are needed.

Conclusions

In summary, protective measures in the low-risk areas of hospitals must be improved. All HCP should be trained on proper PPE use at regular intervals, particularly paraprofessional support personnel, such as secretaries or technical staff. Furthermore, according to the results of this study, there was no evidence to support the use of prophylactic HCQ against SARS-CoV-2 transmission.

Variables	Number	%
Age, y, (mean) (SD)	(35.89)	(8.2)
Sex		

Male	180	35.4
Female	328	64.6
Occupation		
Nurses	310	61
Paraprofessional support personnel	102	20.1
Physicians	96	18.9
Working area		
High risk for COVID-19 transmission	307	60.4
Low risk for COVID-19 transmission	201	39.6
The reason for PCR		
Suspected contact	309	60.8
Screening	109	21.5
Presence of COVID-19 symptoms	90	17.7
Prophylactic HCQ use	40	7.9
Diagnosis of COVID-19	152	29.9

Demographic characteristic	Infected HCPs	Uninfected HCPs				Mean
SD	Mean	SD	t value	P value	Age	33.97
8.45	36.71	8.01	3.47	.001		N
%	N	%	X^2 value	P value	Sex	
			0.03	.86	Male	53

34.9	127	35.7			Female	99
65.1	229	64.3			Occupation	
			9.15	.01†	Nurses	84
55.3	226	63.5			Paraprofessional personnel	43
28.3	59	16.6			Physicians	24
16.6	71	19.9			Working area	
			2.24	.12	High risk for COVID-19 transmission	84
55.3	223	62.6			Low risk for COVID-19 transmission	68
44.7	133	37.4			Prophylactic HCQ use	
			1.19	.28	Yes	15
9.9	25	7			No	137

Variables	Number	%
Symptoms		

Asymptomatic	62	40.8
Fever	12	7.9
Sore throat	5	3.3
Anosmia	32	21.1
Shortness of breath	23	15.1
Cough	8	5.3
Joint pain	48	31.6
Weakness	33	21.7
The reason for PCR		
Suspected contact	60	39.5
Screening	2	1.3
Presence of COVID-19 symptoms	90	59.2
Positive PCR	122	80.3
Diagnostic criteria		
Only PCR	61	40.1
Only COVID-19 symptoms	28	18.4
PCR and COVID-19 symptoms	58	38.1
PCR and CT	1	0.65
COVID-19 symptoms and CT	2	1.3
PCR and COVID-19 symptoms and CT	2	1.3
Positive chest CT for COVID-19 pneumonia	5	3.3
Hospitalization for COVID-19	3	2
Treatment		

Favipiravir and HCQ	147	96.7
Favipiravir, HCQ, paracetamol, acetylsalicylic acid, and enoxaparin	2	1.3
Favipiravir, HCQ, paracetamol, acetylsalicylic acid, enoxaparin, predniSONE, and plasma	3	2

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Suicide Screening and Risk Assessment in the Emergency Department: Case Review of a Suicide Attempt Survivor: JEN

ABSTRACT (ENGLISH)

One in 10 of those who die by suicide are seen in an emergency department within the 2 months before their death. Despite national guidelines and resources (including from the Joint Commission and Emergency Nurses Association) for suicide screening, risk assessment, and follow-up care, suicidal ideation and behavior continue to go undetected in emergency departments, leading to gaps in care. This case review was conducted as part of a larger electronic medical record review of emergency department practices and aims to highlight potential gaps in care and identify missed opportunities for suicide screening and risk assessment. In addition to highlighting these missed opportunities, this case review provides recommendations for suicide screening and risk assessment resources with options for evidence-based follow-up care for suicidal patients.

FULL TEXT

Contribution to Emergency Nursing Practice

• Universal suicide screening in emergency departments can double the detection of those at risk. Owing to their routine contact with suicidal patients, emergency nurses play a key role in suicide screening implementation.
• This case review highlights missed opportunities to screen a patient for suicidal ideation, assess risk, and provide appropriate follow-up care during several ED visits.
• Emergency nurses are encouraged to familiarize themselves with the risk factors for suicide and clinical tools for suicide prevention. Hospital systems should continue to train emergency nurses in these suicide prevention areas to improve adherence to guidelines and improve care for suicidal patients.

Introduction

In the United States, 127 adults die by suicide every day.[1] One in 10 of those are seen in an emergency department within the 2 months before their death.[2] Researchers have identified the emergency department as a promising setting for suicide prevention and have recommended universal screening, risk assessment, and follow-up care standards.[3,4] Recent national guidelines also advocate for increased suicide screening and improved follow-up care for those at risk of suicide presenting to the emergency department.[5,6] Emergency nurses have an important role to play in suicide prevention because of their routine contact with patients who are experiencing suicidal ideation (SI).[7] Consequently, the Emergency Nurses Association provides a Clinical Practice Guideline for suicide risk assessment, which outlines evidence-based practices for screening all patients for SI and suggests resources for emergency nurses at any stage of an ED stay.[8]

Despite these guidelines, SI and behaviors continue to go undetected in the emergency department, leading to gaps in care.[9,10] Studies on ED care have identified several barriers to screening and risk assessment among providers. These include a lack of self-efficacy related to suicide care and ED workflow challenges.[11-13] Given these barriers, recommendations specific to the emergency nursing community for increasing screening and risk assessment include improved training, interdisciplinary guidelines, and mechanisms for monitoring implementation.[14]

Although emergency nurses are not the only providers responsible for the care of suicidal patients, they have an important role. Screening at ED triage alone can often help support the receipt of appropriate treatment and prevent gaps in care.[15,16] Research suggests that universal screening in the emergency department may double the detection of recent SI or behavior[15] and that brief, ED-based interventions after risk detection are effective at reducing suicide attempts.[17] Here, we review a case where there were multiple missed opportunities to provide suicide screening, risk assessment, and follow-up care. We seek to highlight where screening, assessment, and support could have been provided and investigate the conditions under which this care was not received.

Case Review

The patient is a white, non-Latino man in his early 40s. A review of his electronic health record (EHR) over 1 year revealed that he experienced chronic homelessness, endorsed being a Navy veteran, and did not have access to Veterans Health Administration benefits. He also reported that he had no family or friends and had a history of anxiety and post-traumatic stress disorder. To investigate the care received by this patient, we conducted a chart review using an integrated EHR.[18]

This case review was identified as part of a larger study on current ED practices (larger study's institution ID: IRB00000471 and IRB00001976, projects IRB #18923). We first identified an Index ED visit during a prespecified period (January 1, 2017-January 1, 2018), where it was documented that the patient had a suicide attempt and subsequently presented to a large community hospital for his resulting injuries. We then reviewed all visits in his EHR for 6 months before and 6 months after this visit. Over the course of a year, this patient presented to the emergency department 9 times. This patient utilized 4 different emergency departments, named chronologically in the case review (eg, ‘Hospital A,’ ‘Hospital B’). Details for each ED encounter including the chief complaint, documented providers, and presence of a documented screening are outlined below (see Figure for a timeline of encounters).

ENCOUNTER 1

In the first visit of the study period, the patient reported to the emergency department at Hospital A for an abscess. Here, a case manager documented that he was a veteran, was chronically homeless, recently moved from out of state, had a previous inpatient psychiatric unit stay, and had a history of SI, 2 suicide attempts, and polysubstance abuse. The patient was discharged to urgent care, where a physician assistant examined and treated his abscess and encouraged the patient to establish care with a primary care provider. The patient was not screened for SI.

ENCOUNTER 2

The patient presented to Hospital B for acute bronchitis and cellulitis and was seen by 2 registered nurses (RNs) and a family nurse practitioner. He was not screened for SI.

ENCOUNTER 3

In this encounter, the patient was brought into Hospital C by emergency medical services (EMS) for injuries after being hit by a slow-moving train in a suicide attempt. He was admitted to the trauma intensive care unit and treated for his injuries and hospital-acquired pneumonia. During his week-long stay, he was seen by various doctors, physician assistants, social workers, RNs, and a pharmacist. In addition to care provided for his injuries, he was offered assistance with finding a shelter and was screened for substance use. The patient declined assistance identifying a shelter, reporting that he did not want to be kicked out during the day. The patient was not screened for SI.

ENCOUNTER 4

The patient again presented via EMS to Hospital C for pain resulting from previous injuries. He stayed in the hospital for 4 days and was seen by various doctors, RNs, and social workers. Social workers attempted to transfer the patient to an inpatient psychiatric unit at another hospital, but his transfer was denied because of recent methamphetamine use and lack of current SI. The patient met with 3 social workers during his stay. He reported having SI to 2 of them, one of whom documented asking him directly about his SI and suicide planning. The National Suicide Prevention Lifeline was provided in his discharge summary. No screenings for SI were conducted using validated or reliable assessments at any point during this stay.

ENCOUNTER 5

In this encounter, the patient reported to Hospital C after being assaulted. He met with various doctors, RNs, and social workers, was treated for his pain, and was offered housing assistance. The patient was not screened for SI.

ENCOUNTER 6

The patient presented to Hospital B and was treated by doctors for his leg fracture and other assault-related injuries. The doctors recorded working with a social worker to secure a motel for the patient while his leg healed. He was not screened for SI.

ENCOUNTER 7

The patient was brought to Hospital D by EMS after reporting pain and shortness of breath. Providers treated his pain and discussed shelter options with a social worker. The social worker documented that the patient did not bring up SI but did not indicate formally or informally screening him.

ENCOUNTER 8

The patient reported to Hospital E shortly after for pain resulting from his previous injuries. He saw a doctor who documented that the patient “complains of suicidal ideation” in the context of poor pain management. He was not formally screened for SI, and the doctor documented that the patient was not at “serious suicide risk.”

ENCOUNTER 9

In this encounter, the patient had a phone call with a social worker from Hospital C. They discussed housing resources and how to access Veterans Health Administration benefits. He was not screened for SI.

ENCOUNTER 10

Finally, the patient came to Hospital B reporting cast difficulties. He was seen by doctors, social workers, and RNs and was not screened for SI.

Discussion

This case review depicts the ED care received by a patient experiencing chronic homelessness over the course of a year and highlights instances where he was not screened for SI. There was no documentation of a formal suicide screening using valid and reliable screening instruments at any of the encounters during the study period. Given the documented characteristics of this patient (veteran, chronic homelessness, history of suicidal behavior, etc), there were also many missed opportunities to assess suicide risk and provide follow-up care. These gaps in care may be preventable and suggest a lack of guidance and resources for ED staff.

As previously mentioned, providers may have faced barriers that impeded their ability to implement screening and follow-up care.[11-13] Important to note is that emergency nurses are often tasked with implementing numerous screenings because of their routine contact with patients. Consequently, the Emergency Nurses Association General Assembly delegates passed a resolution GA20-04, which guides future work. The resolution only recommends screenings in the emergency department that are evidence-based, demonstrate reliability and validity in the ED setting, and specifies the conditions under which screenings should be mandatory.[19] The Joint Commission has provided a variety of options for screening,[20] risk assessment,[21] and safety planning in National Patient Safety Goal (NPSG) 15.01.01,[22] all of which have been validated and studied in the emergency department. This NPSG also highlights trainings associated with the screening tools and provides guidance for when follow-up care is mandatory.[5] Although NPSG 15.01.01 requires ED providers to screen all patients for suicide who are being evaluated for behavioral health conditions,[5] none of the hospitals in this case review provided formal guidance or training for how to adhere to this requirement.[5,17,23,24] Hospitals should provide this training to improve emergency nurses' self-efficacy with respect to suicide prevention.[25-27]

In addition to the ED-validated resources recommended in NPSG 15.01.01, various clinical practice guidelines and resources are available to emergency nurses who are seeking more information.[5,28,29] Nurses could use the Columbia-Suicide Severity Rating Scale to screen patients for SI.[30,31] To assess risk, they might utilize the P4 Suicidality Screener.[32] After identifying risk, providers may offer a variety of follow-up resources such as the National Suicide Prevention Lifeline, outpatient mental health appointments, post-ED telephone calls, a suicide safety plan, or an inpatient psychiatric hospitalization, depending on the identified risk level. All of these interventions, when implemented, are associated with improved outcomes for suicidal patients.[4,33-35]

Research has shown that universal screening in the emergency department can improve the receipt of appropriate follow-up care for suicidal patients without placing an overwhelming screening burden on providers,[36] and future research should continue to improve screening implementation without disrupting ED workflow. In addition, most studies have included adolescent participants, and research has demonstrated success using alternate screening modalities (eg, via tablet or telephone) for screening patients for suicide.[37-42] Future research should continue to explore implementation of these modalities with adult patients, particularly for those with overlapping medical and social complexities, which may not be feasible to address in the emergency department.

Limitations

There are several limitations. As this is a case review for 1 patient, findings may not generalize to other settings. This report was also limited to what was documented in the EHR. In addition, although the chart reviews were conducted in an integrated EHR, it is possible that there were other visits during the study period that were not captured. Finally, as we were also limited to a specific range of documented visits given the study timeline, we were not able to identify whether the patient attempted or died by suicide beyond the study period.

Conclusion and Implications for Emergency Clinical Practice

Universal suicide screening in emergency departments is feasible and can double the detection of those at risk.[16] Consequently, guidelines at the national and state levels encourage emergency departments to enhance risk assessment and follow-up care. As this case review highlights, implementation of these guidelines and formal training in how to care for suicidal patients in the emergency department is limited. Not screening for SI and assessing risk can lead to missed opportunities to provide follow-up care, as shown in this case review. Screening for SI and assessing suicide risk is especially important in emergency departments, where prevalence of those at risk of suicide is high and where emergency nurses play an important role because of their routine contact with

suicidal patients.[2,7] Hospital systems should continue to train in these areas to aid emergency nurses in identifying available clinical tools for screening and risk assessment, embedding these processes into their workflow, and ultimately improving care for suicidal patients.

Author Disclosures

Conflicts of interest: none to report.

The views expressed in this article are those of the authors and do not necessarily reflect the position or policy of the Department of Veterans Affairs, the National Institutes of Health, or the United States government.

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This case review conforms to Elsevier's patient consent policy.

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Differences in Documented and Actual Medication Administration Time in the Emergency Department: A Prospective, Observational, Time-Motion Study: JEN

ABSTRACT (ENGLISH)

Introduction

Retrospective studies suggest that a rapid initiation of treatment results in a better prognosis for patients in the emergency department. There could be a difference between the actual medication administration time and the documented time in the electronic health record. In this study, the difference between the observed medication administration time and documentation time was investigated. Patient and nurse characteristics were also tested for associations with observed time differences.

Methods

In this prospective study, emergency nurses were followed by observers for a total of 3 months. Patient inclusion was divided over 2 time periods. The difference in the observed medication administration time and the corresponding electronic health record documentation time was measured. The association between patient/nurse characteristics and the difference in medication administration and documentation time was tested with a Spearman correlation or biserial correlation test.

Results

In 34 observed patients, the median difference in administration and documentation time was 6.0 minutes

(interquartile range 2.0-16.0). In 9 (26.5%) patients, the actual time of medication administration differed more than 15 minutes with the electronic health record documentation time. High temperature, lower saturation, oxygen-dependency, and high Modified Early Warning Score were all correlated with an increasing difference between administration and documentation times.

Discussion

A difference between administration and documentation times of medication in the emergency department may be common, especially for more acute patients. This could bias, in part, previously reported time-to-treatment measurements from retrospective research designs, which should be kept in mind when outcomes of retrospective time-to-treatment studies are evaluated.

FULL TEXT

Contribution to Emergency Nursing Practice

••Early treatment improves outcomes for many patients of the emergency department. This knowledge is mainly based on retrospective time-to-treatment analyses, using the medication documentation time from the electronic health record.

••The observed medication administration time differed from the documented time in the electronic health record. This time difference was more pronounced for sicker patients. Our findings suggest that retrospective time-to-treatment studies may be prone to measurement bias.

••Our findings should be kept in mind when evaluating retrospective studies concerning time-to-treatment analyses, especially with sicker patients. In addition, future time-to-treatment studies should aim to measure actual medication administration time, instead of using retrospective data from the electronic health record.

Introduction

Early administration of medication in the emergency department is essential when treating life-threatening diseases such as myocardial infarction or sepsis. A delay in administration of medication could have an impact on survival.[1-4] Hence, in the case of sepsis, the Surviving Sepsis Campaign recommends administering broad-spectrum antibiotics immediately when sepsis is recognized or otherwise at least within 1 hour.[5] Nevertheless, studies in this field report door-to-antibiotics or time-to-antibiotics times ranging from 70 minutes to 166 minutes.[1,6-8] Moreover, in 2 systematic reviews, two-thirds of all patients received antibiotics in excess of 1 hour.[9,10] Treatment-focused literature on thrombolysis, asthma, analgesics, and other diseases frequently report time-to-treatment times and observe that delays in treatment are associated with worse prognosis.[11-13] There are different time intervals that can be used for evaluating time-to-treatment times, as shown in Figure 1. Studies differ in the interval used to describe time-to-treatment.[9,10,14-16] Reported medication administration delays in previous studies may not be solely explained by actual delayed administration alone (eg, owing to ED crowding). Alternative causes are likely to influence the delays in time-to-treatment as well.[14-16] Inconsistent time point measurements could be a significant factor in time-to-treatment estimates and the recommendations based on these estimates. First, most studies have retrospective designs, in which, consequently, the reported administration time of the medication is based on the time that is documented in the electronic health record (EHR). This method introduces measurement error as a risk of bias.[17,18] Approximately 53% of the research articles in emergency medicine are chart review studies.[19] Particularly for emergency departments where automatic barcode scanning or other technology for automatic EHR documentation time are not in use, there could be a difference in actual medication administration time and documentation time in the EHR by nurses. Because some studies may assume that medication documentation time is equal to medication administration time, the implications when interpreting the literature are variable. Second, different studies use

different time starting points for documentation of these time periods (eg, arrival time, prescription time, or triage time), resulting in differences in reported time-to-treatment times.[9,10,20-22] By using different starting points, the studies are difficult to compare. To clarify these issues, there is a need for direct observational studies evaluating the factors contributing to a delay in the time to administering antibiotics.[15] In the currently published research literature, only 2 observational studies have reported prospective time-to-treatment measurement.[23,24] However, both studies did not actually compare medication documentation time with medication administration time. Roman et al[23] described the effects of a hospital-wide reform to improve timely delivery of antibiotics, while Miner et al[24] only investigated the effects of oral vs intravenous opioids on medication times. Furthermore, nurses in both previous studies were not blinded for the study objective. Therefore, the nurses in these studies could have behaved differently than they normally would (eg, more accurate documentation of medication), a source of bias commonly known as the Hawthorne effect.[25] Thus, a gap in the existing literature exists to determine if a difference in administration and documentation times results in biased time-to-treatment analyses. To address this gap in the published literature, the purpose of the present study was to explore differences between observed medication administration time and medication documentation time and test associations in the observed time differences with patient and nurse characteristics. As an initial and exploratory study, we hypothesized that there would be a difference between administration and documentation times and that this difference would be influenced by patient and nurse characteristics.

Methods STUDY DESIGN AND SETTING

A prospective observational, time-motion study in the emergency department of the University Medical Center Utrecht was conducted using 6 observers as data collectors. The University Medical Center Utrecht is a 1042-bed tertiary care center in the Netherlands, with more than 23 000 ED attendances per year. This emergency department was open 24 hours, seven days a week. The study protocol was reviewed and approved by the Medical Ethics Review Committee Utrecht (reference number WAG/mb/19/038516).

POPULATION

The study population consisted of patients in the emergency department and emergency nurses. All patients in the emergency department were eligible to participate in this study if informed consent was obtained. All patients who did not agree to participate in this study were excluded. For nurses to be eligible to participate in this study, a participant must have met all of the following criteria: be a trained emergency nurse, work in the emergency department at the study site and have agreed to participate in this study. Emergency nurses who did not meet the inclusion criteria were excluded from participation in this study.

PROCEDURE

As an initial, exploratory study without intervention, no specific effect was expected. No sample size was calculated beforehand. We aimed for 100 patients for initial data and to ascertain sample sizes for future work. The initial study to ensure protocol feasibility was performed from February 2019 until March 2019. Patient case record forms were completed during this time to collect data on patient characteristics. No data were collected on nurse characteristics during this initial period. Subsequently, the full study was planned from February 2020 until April 2020, but had to be terminated prematurely in March owing to the coronavirus disease 2019 (COVID-19) pandemic.

Data collectors, trained in Good Clinical Practice,[26] shadowed and observed 1 emergency nurse during a working shift to register the several time periods. Working shifts lasted from 2 PM until 10:30 PM or 3 PM until 11:30 PM. The observed shifts in this study were all evening shifts on weekdays.Selecting evening shifts were methodologically justified as the busiest time in the emergency department.[27] Emergency nurses were instructed to continue working as they would normally do, when not being followed. To mimic real-life situations and avoid a Hawthorne effect,

nurses were blinded for the study purpose. All participating nurses gave written informed consent for being shadowed without knowing the exact reason for this. In addition, all patients were asked for written informed consent to be observed by 1 of the observers.

Case record forms were used to collect the following data of all new patients who entered the emergency department: age, sex, medical specialty, referring physician, triage color (as described in the Emergency Severity Index),[28] first vital signs, low or high care needs, arrival time, hospital admission (ward, medium care or intensive care) or discharge to home, and time of ED discharge. Furthermore, when medication was prescribed by the treating physician, the following data were documented: type of medication, route of medication administration, prescription time by the treating physician, time of actual administration of medication to the patient, and documentation time in the EHR. From the collected vital signs, the first Modified Early Warning Score (MEWS) at the emergency department was calculated. According to literature, the best cut-off value for the MEWS score to predict morbidity and mortality is 3.[29] Except for observed medication administration, if portions of the required data were not available at the moment of collection, the case record form data were supplemented within 24 hours using the EHR of the patient.

Nurse characteristics were collected through the case record forms. By means of a nurse survey, the following data were collected: number of years working experience in the emergency department, busyness of the working shift as experienced by the nurse, and number of patients during the shift. By lack of an official measurement for working shift busyness, a scale (1-10) was used. On this scale, 1 represented no busyness at all, whereas 10 was the busiest shift a nurse could imagine.

PRIMARY OUTCOME

The main study end point was the difference in observed medication administration and documentation times. Documentation time was defined as the time that was charted as given. For patients who received multiple medications, the cumulative difference between administration and documentation times was calculated and divided by the total amount of prescriptions. To clarify, the mean difference for each patient was used for our analyses. Thus, the unit of analysis was per patient. An additional per medication analysis (without taking the mean) was also performed and is summarized in Supplementary Table 1. Furthermore, for all medications administered to the patients observed, the following time intervals were calculated: the ED arrival time to prescription time, ED arrival time to actual administration time, ED arrival time to documentation time, prescription time to actual administration time, prescription time to documentation time, and actual administration time to documentation time (Figure 1).

OTHER VARIABLES

Secondary outcome parameters were patient characteristics and emergency nurse characteristics associated with the aforementioned difference in actual administration and documentation time. In addition, we investigated whether this time difference was influenced by route of medication administration.

STATISTICAL ANALYSIS

Data were analyzed using SPSS version 25.0 (IBM Corp, Armonk, NY).[30] Medians and interquartile ranges (IQRs) were expressed for continuous variables if non-normally distributed. Otherwise means and standard-deviations were used. For categorical variables, proportions were used. To compare groups, a chi-square test was used for categorical variables, whereas a Mann-Whitney U test was used for continuous variables.

A Spearman's correlation test was used to investigate a correlation between several continuous/ordinal variables and the administration-documentation time. A correlation between dichotomous variables and the administration-documentation time was analyzed using a biserial correlation test. Data were analyzed with and without outliers.

Results

In total, 20 nurses were approached for informed consent, of whom 18 nurses (90%) were willing to participate. This resulted in the observation of 18 evening working shifts of 18 emergency nurses. During these shifts, 82 patients were treated of whom 34 patients (41.5%) received medication during their stay in the emergency department. Patients who received medication were more often admitted in the hospital (73.5% vs 45.8%, $\chi^2 = 6.24$ $P = .01$) and had lower oxygen saturation levels than patients who did not receive medication (median 97% vs 98% SpO_2, $U = 484.50$, $P = .03$). Baseline characteristics of patients who received medication are shown in Table 1. Additional patient descriptions about the medical specialty referred to and the number of medications administered per patient are summarized in Supplementary Table 2.

In Table 2, the medians of the different time intervals observed in this study are shown (see Figure 1 for the conceptualization of time intervals). The median difference in administration and documentation times was 6.0 minutes (IQR 2.0-16.0). A difference between administration and documentation times of more than 15 minutes was observed for 9 (26.5%) patients. The maximum difference between administration and documentation times was 138 minutes. In 27 (79.4%), the documentation time was later than the actual administration time (median difference 5.0 minutes IQR 2.0-16.0) and in 7 (20.6%), it was earlier (median difference 2.0 minutes IQR 2.0-10.0). In 3 patients (8.8%), the door-to-treatment time based on the EHR was at least 1 hour, whereas the actual door-to-treatment time was less than 1 hour.

Figures 2 and 3 show several patient characteristics and their association with difference in actual medication administration and documentation times. High MEWS, receiving oxygen therapy, low blood oxygen saturation levels, and high body temperature were significantly associated with increasing differences in the documentation time compared with the observed administration time. For all other collected patient characteristics (sex, heart rate, respiratory rate, blood pressure, referring physician, triage color and high care needs), no association was found. In addition, the median difference between actual administration and documentation times for patients with MEWS at least 3 was significantly higher than for patients with MEWS less than 3 (median 5.0 minutes [IQR 2.0-10.0] vs median 18.0 minutes [4.5-115.0]). No relationships were observed in the sensitivity analysis with outliers removed from the data (Supplementary Table 3 and Supplementary Figures 1 and 2).

Table 3 shows the different nurse characteristics of the nurses who participated. In 18 nurses, the median years of working experience in the emergency department was 6.0 years (IQR 3.0-15.0). Shift busyness was rated with a median of 4 (scale 1-10). The median number of patients cared for per shift was 5. There was no association between any of the nurse characteristics and differences in the administration and documentation times. This result was replicated when the outliers were removed (Supplementary Table 4).

Finally, the median difference between actual administration and documentation times was not influenced by route of medication administration (Supplementary Figure 3).

Discussion

This is the first study, to our knowledge, to prospectively investigate whether there is a difference in the actual administration and documentation times of medication given in the emergency department. In half of the patients, the observed administration time of medication was more than 6 minutes discrepant with the documentation time of the medication in the EHR. Although a median difference of 6 minutes in half of the patients might not seem very high, this difference is still more than 15 minutes for 25% of the patients. Furthermore, there was a correlation between receiving oxygen therapy, low blood oxygen saturation levels, high body temperature, and a high MEWS (≥3) and an increasing difference between the administration and documentation times. These results may be interpreted that the care for sicker patients makes accurate documentation of the medication times more challenging. On several occasions, medication was documented in the EHR before it was administrated to the

patient, indicating bias in both delayed timing and potential for the actual event not truly occurring as documented when working with retrospective collected data. Altogether, these results show a clear discrepancy between the actual medication administration and documentation times in the emergency department. Therefore, we infer that this difference introduces a risk of bias in retrospective time-to-treatment research, most pronounced in severely ill patients.[1,6–13] To further clarify the associations of the variables we tested, a multivariate model is recommended in future studies. Owing to the initial and exploratory nature of the current study with a small sample size, the multivariate model was considered beyond the scope of this article.

Our results were not replicated when outliers were removed. However, outliers are a part of clinical practice and cannot be removed from clinical operations. In a larger cohort, we anticipate outliers would still influence the results. In our cohort, most of the outliers were acutely ill ([Figures 2] and [3]). Since these critically ill patients have a large impact on daily practice, we intentionally included outliers in the main report of our analyses.

The currently published time-to-treatment studies focused on medications needed to treat the most acute conditions.[1,11,12] The medication prescribed to patients in our present study included a broader range of prescribed medical treatments than previously measured. For instance, we considered the administration of sodium chloride intravenously as administration of medication. Sodium chloride is used in the timely treatment of conditions, such as dehydration, in the emergency department, and its administration is documented in the EHR. The inclusion of fluids and other nonacute medications in this study could explain why the arrival to documentation time was longer in our present study than in some other studies (57.0-71.9 minutes).[1,7]

There are several ways to improve the accuracy of the documentation time in the EHR, including education for staff on existing guidelines, weekly e-mail reminders of the existing guidelines, EHR interface design changes, and standards of care for certain medical conditions or medications.[12–14,31–33] In addition to these improvements, the observed differences in this study could also be decreased by implementing better ways of monitoring the actual moment of administration of medication. For example, it is unknown if using barcoded medication administration or smart, EHR communicating intravenous systems for intravenous treatment would produce different results.[34,35] These automated methods are susceptible to nurse workarounds, such as not scanning the barcodes at all or scanning multiple medications for multiple patients at once.[36,37] These workarounds may defeat the purpose of implementing the technology, namely to reduce medication errors and adverse drug events. To counter these workarounds, these technologies should be as user friendly as possible, and further observational study as we designed is warranted to fully understand the problem and needed improvements.[38]

Methods of future time-to-treatment studies would be improved by observing actual medication administration time, instead of using retrospective data from the EHR. Studies that focus on the differences in treatment times could also focus solely on acutely ill patients, given our findings indicated that differences in the medication times of these patients were more pronounced. We recommend future studies could also combine the data on ED crowding with the observed time differences to give a more complete analysis of factors influencing medication administration and documentation differences.

Limitations

The present study, being exploratory and the first of its kind, has several limitations related to the dataset, variables, procedures, and setting. A small patient sample size of 82 patients was further decreased with only 40% of patients who received medication. The planned second study period was terminated early owing to the start of the COVID-19 pandemic. Since this termination was implemented for priority infection control preventative reasons and the hospital did not see patients with COVID-19 already at the time of termination, we do not expect that the treatment of patients with COVID-19 otherwise influenced our analysis. We did not collect data on the nurse characteristics

during the initial study period. Although we acknowledge our study could lack statistical power to identify nurse characteristics influencing the administration-documentation time, the correlation coefficients were close to 0 on the data we did have available to test. Although this missing data was a limitation, prioritizing collecting and testing nurse characteristics in future study was not indicated by our results.

Our results should be interpreted with study procedure limitations in mind. Because the analysis was a combination of 2 different study time periods, it is possible that there were unmeasured differences between the first data collection period and the second. However, we were unaware of any major changes in workflow or personnel at the study site. Our results have limited generalizability as we only observed shifts in the evening and on weekdays.[27] Our results need to be interpreted in this context as compliance with guidelines may shift during the day.[39] Furthermore, owing to our study design of observing the nurses instead of the patients, actual patient medication administration could be missed if a colleague and not the observed nurse administered the medication, such as when the observed nurse was on a break. We attempted to minimize the influence of the Hawthorne effect by blinding the nurses for the actual study purpose. Nevertheless, it is possible that the nurses modified their behavior when observed by the data collectors.[25] Despite this limitation, direct observation was, to our opinion, the most optimal option to achieve the most reliable and robust results.[40]

Finally, the study setting may limit generalizability. ED crowding is a factor that influences time-to-treatment times in the emergency department.[16] In this study, we only measured nurse perception of business and did not collect objective measures of workload or crowding in the study context. No automatic devices such as barcode scanners were used by the emergency nurses in our study. Therefore, our findings are only generalizable for hospitals that work in a similar setting with manual medication documentation.

Implications for Emergency Clinical Care

The observed differences in administration and documentation times of medication in the emergency department may have several implications when evaluating the existing literature in this field and determining quality metrics of emergency care. Our results indicated that there may be substantial bias in retrospective time-to-treatment research designs using EHR data instead of observing the actual administration time. Therefore, the results of this study could explain that measurement bias is at least 1 factor in delays or longer time-to-treatment times reported in the published literature.[1,6–16] Our data show an association between the severity of the patient condition and the difference in the administration and documentation times.[9,10,14] Thus, in sepsis research and quality benchmarks, if a patient in a retrospective EHR study appears to have received medication in excess of 1 hour from arrival, our results indicated that the patient could have actually received the medication earlier.

Therefore, several recommendations can be made. Emergency nurses should consider not pre-documenting medications before they are actually given. Automated technology at the practice site is likely to increase reliability of the documented medication times but is vulnerable to workarounds. Finally, a note could be created in the EHR when documentation is delayed after administration to improve accuracy.

Conclusions

In this first of its kind, prospective, observational study, the actual administration time of medication and the documentation time in the EHR did not correspond in a significant part of the observed patients. This discrepancy should be kept in mind when evaluating retrospective studies concerning time-to-treatment analyses. Owing to the small sample size and generalizability limitations of this current study, future studies are required to advance and strengthen our findings.

Author Disclosures

Conflicts of interest: none to report.

The study protocol was reviewed and approved by the Medical Ethics Review Committee Utrecht (reference number WAG/mb/19/038516).

Supplementary materials

Supplementary material associated with this article can be found in the online version at doi:10.1016/j.jen.2021.07.002.

Appendix Supplementary materials

Image, application 1

Patient characteristics	Median or n	IQR or (%)
Demographics		
Age, y, median, IQR	63.5	54.3-74.3
Female (%)	18	(52.9)
Referring physician		
General practitioner (%)	12	(35.3)
General practice center (%)	2	(5.9)
Medical specialist (%)	7	(20.5)
Own initiative (incl. ambulance) (%)	13	(38.2)
Other (%)	0	(0)
Triage color		
Blue (%)	0	(0)
Green (%)	4	(11.8)
Yellow (%)	18	(52.9)
Orange (%)	11	(32.4)
Red (%)	1	(2.9)
ED department		

Low care (%)	17	(50.0)
High care (%)	17	(50.0)
Vital signs		
Temperature,°C, median, IQR	37.2	36.8 -37.6
Heartrate/min, median, IQR	89	72-99
Systolic blood pressure, mm Hg, median, IQR	133	116-149
Diastolic blood pressure, mm Hg, median, IQR	71	65-82
Respiratory rate/min, median, IQR	18	16-24
O2 saturation, % SpO2, median, IQR	97	95-98
O2 treatment (%)	7	(20.6)
Discharge to		
Home (%)	9	(26.5)
Ward (%)	18	(52.9)
Medium care (%)	2	(5.9)
Intensive care (%)	2	(5.9)
Other hospital (%)	3	(8.8)
MEWS ≥3 (%)	7	(20.6)
Admission form		
Intravenous (%)	16	(47.1)
Oral (%)	11	(32.4)
Inhalation (%)	2	(5.9)
Rectal (%)	1	(2.9)
Subcutaneous (%)	1	(2.9)

Sublingual (%)	1	(2.9)
Other (%)	2	(5.9)

Time interval	Duration in min-median	IQR	Minimum and maximum time in min
1. Arrival to prescription time	99	38-153	Min: –45 Max: 323
2. Arrival to administration time	121	44-162	Min: 5 Max: 335
3. Arrival to documentation time	130	68-174	Min: 14 Max: 345
4. Prescription to administration time	12	6-19	Min: 2 Max: 230
5. Prescription to documentation time	16	9-32	Min: –4 Max: 230
6. Administration to documentation time	6	2-16	Min: –18 Max: 138

Nurse characteristics	Median	IQR	Spearman R-coefficient	P value
Working experience (y)	6.0	3.0-15.0	0.05	.42
Shift busyness	4.0	3.0-8.0	0.03	.45
No. patients per shift	5.0	3.0-6.0	–0.10	.34

DETAILS

Subject: Medical prognosis; Electronic health records; Drugs; Oxygen; Saturation; Nurses; Emergency services; Retrospective studies; Medical records; Drug administration; Dependency; Bias; Management; Emergency medical care

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Emergency Response: A Cross-sectional Study of Core Competencies for Nurses Regarding Major Infectious Disease Outbreaks: JEN

ABSTRACT (ENGLISH)

Introduction

The core competencies of nursing personnel have been identified as a main factor affecting nursing effectiveness. This study examined core emergency response competencies of Chinese nursing personnel related to the outbreak of major infectious diseases.

Methods

A survey was conducted among 960 nurses working in a tertiary hospital in Shanghai, China. Data were collected on core emergency response competencies of nursing personnel caring for patients with major infectious diseases, measuring overall competency as well as by dimensions of prevention ability, rescue ability, and preparation ability. A *t*-test and one-way analysis of variance were first analyzed for differences between groups, followed by multiple linear regression to analyze main influencing factors for core emergency response competencies.

Results

The average score for core emergency response competencies of nursing personnel delivering care to patients with major infectious diseases was 128.05 (SD 22.23) (range 36–180 points); or 71%, which is equivalent to moderate performance. Multiple linear regression analysis demonstrated that the main influencing factors for these nursing personnel were before participation in emergency drills for infectious diseases, current educational background, and working experience in the realm of infectious disease nursing. The final model explained 8.4% of the variance in core emergency response competencies.

Discussion

These findings indicate that it is necessary to strengthen the training of nursing staff with educational background deficits or no prior work or drill experience related to infectious diseases to effectively improve the core emergency response competencies of nursing personnel relative to infectious diseases.

FULL TEXT

DETAILS

Subject:	Infectious diseases; Ability; Emergency preparedness; Pandemics; Epidemics; Regression analysis; Nursing; Employees; Competence; Coronaviruses; COVID-19; Emergency medical care; Severe acute respiratory syndrome coronavirus 2
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Resuscitative Decisions in the Emergency Care Setting: JEN

ABSTRACT (ENGLISH)

According to the US Census Bureau, between 2012 and 2060, the US population is projected to grow 34%, from 314 million to 420 million.8 More than 20% of residents will be 65 years or older by 2030, a significant increase from 13% in 2010 and only 9.8% in 1970.8 Emergency nurses, including advanced practice registered nurses, are in a key position to inform, educate, and advocate for patients and their families regarding advance care planning. Background The Patient's Bill of Rights was created by the American Hospital Association in 1970, and it detailed the rights a patient could expect, including informed consent, quality care, privacy, and the right to an AD for health care.12 In what is now known as The Patient Care Partnership, the American Hospital Association continues to advocate for patient involvement in care, including the creation of ADs and the designation of a health care power of attorney.13 The federal PSDA was enacted in 1990 and mandates that individuals can accept or opt out of medical treatment in an AD or by appointing someone as their legal surrogate.14 The PSDA requires hospitals, skilled nursing facilities, home health agencies, hospice programs, and health maintenance organizations to comply with the following requirements7,14: A living will addresses treatment for a person who is terminally ill and unable to make decisions on their own behalf, whereas a durable power of attorney is a legal document that appoints a designated person (surrogate or proxy) to make medical decisions when a person is incapacitated, whether temporarily or permanently.19–21 In some states, Physician Orders for Life-Sustaining Treatment (POLST) documents are used to specify the health care treatment wishes of a seriously ill or frail patient, including resuscitative measures and transport to a hospital.22 A POLST is a portable document that is valid outside of a health care setting and is therefore especially helpful to prehospital personnel.22 There are 4 levels of treatment to be considered during resuscitative care events: no resuscitation be attempted, only provide specified treatments as selected, comfort measures be provided, and all necessary and appropriate interventions be offered. Once the existence of a valid DNR is established, resuscitative efforts will be stopped.24 A patient may also choose to have a DNI order to prevent intubation or mechanical ventilation.18 CMO is a term used to permit the natural dying process while affording maximum comfort, which includes addressing the psychological and spiritual needs of both patient and family.25 Full code is a term used to indicate that health care providers are to attempt all resuscitative interventions including, but not limited to, CPR, advanced cardiac life support, and airway management, including intubation, mechanical ventilation, and heroic measures.

FULL TEXT

Description

In the emergency care setting, resuscitative decisions are encountered frequently. These decisions may be controversial, especially in the absence of advance directives (ADs) delineating the patient's wishes. Ethical issues regarding cardiopulmonary resuscitation (CPR), life-sustaining treatment, futility, self-determination, and ADs may complicate a time-sensitive clinical situation. Legal issues arise with respect to state and country variances in laws regarding ADs, out-of-hospital do not resuscitate (DNR) orders, living wills, power of attorney, minors, and expressed wishes. Family dynamics regarding communication, decision-making, and family presence can be challenging, especially when there is disagreement among family members or with the patient's wishes as stated in an AD. (Family is defined here as a “social unit comprised of people related by ancestry, legal determination, or significant others as identified by the patient.”[1])

Clinical barriers to providing care in accordance with the patient's wishes include the absence of an AD, a recent change in health status which may have caused the patient to reconsider their wishes, or an AD that is too vague to provide meaningful information. In addition, it may be difficult for emergency care providers to access an AD, especially if they are not able to access the patient's electronic health record.[2,3] Even when ADs are available in patients’ records, emergency care providers may fail to note their existence.[4,5]

Resuscitative decisions are often encountered after clinical deterioration or during end-of-life care.[6] Such timing can make these decisions challenging for patients, their families, and the health care team. United States federal laws require health care facilities to comply with the Patient Self Determination Act (PSDA) regarding ADs, which includes patients who come into the emergency department with an established AD.[7]

The issue of resuscitative decisions is magnified by a growing population that is increasingly older as well as by continual advances in health care that allow for extension of life, even in the face of catastrophic illness or injury. According to the US Census Bureau, between 2012 and 2060, the US population is projected to grow 34%, from 314 million to 420 million.[8] More than 20% of residents will be 65 years or older by 2030, a significant increase from 13% in 2010 and only 9.8% in 1970.[8] Emergency nurses, including advanced practice registered nurses, are in a key position to inform, educate, and advocate for patients and their families regarding advance care planning. Emergency nurses are essential resuscitation team members who not only participate in clinical care but also support family members, whether they are present in the resuscitation room or not. It is important that emergency nurses participate in the shared decision-making process, which enables patients, family members, surrogates, and clinicians to make collaborative health care decisions while considering the patient's values and preferences.[9–11]

Emergency Nurses Association Position

It is the position of the Emergency Nurses Association (ENA) that:

1. Emergency nurses respect the patient's autonomy, dignity, and right to self-determination in resuscitative decisions.

2. Emergency nurses collaborate with other health care professionals and advocate for compliance with the patient's stated wishes regarding resuscitation decisions and interventions.

3. Emergency nurses advocate for advance care planning, educate patients and their families on planning options, and verify documentation of ADs, including code status, in the health care record.

4. Emergency nurses support a patient- and family-centered care approach to health care decisions.

5. Emergency nurses support family presence during resuscitation if the family desires to be present.

6. Emergency nurses participate in the development, implementation, and evaluation of resuscitative decision policies and protocols.

7. Emergency nurses are knowledgeable about specific laws and regulations regarding ADs in the locations where they practice.

Background

The Patient's Bill of Rights was created by the American Hospital Association in 1970, and it detailed the rights a patient could expect, including informed consent, quality care, privacy, and the right to an AD for health care.[12] In what is now known as The Patient Care Partnership, the American Hospital Association continues to advocate for patient involvement in care, including the creation of ADs and the designation of a health care power of attorney.[13] The federal PSDA was enacted in 1990 and mandates that individuals can accept or opt out of medical treatment in an AD or by appointing someone as their legal surrogate.[14] The PSDA requires hospitals, skilled nursing facilities, home health agencies, hospice programs, and health maintenance organizations to comply with the following requirements[7,14]:

••Inform patients about their medical care options

••Periodically inquire about the existence of ADs

••Not discriminate against a person with an AD

••Ensure an AD is legally valid

••Promote educational programs regarding ADs

Clinicians are encouraged to counsel patients regarding ADs.[15] Advance care planning is reimbursed by Medicare either as a part of a Medicare wellness visit or as a separate medically necessary service.[15] Outside of US, European countries also acknowledge the importance of patient's wishes, ADs, and proxy decision makers in end-of-life care.[10,16,17]

An AD is a binding document that delineates an individual's decision about their medical treatment.[18] Living wills and durable power of attorney for health care, also known as medical power of attorney, are examples of ADs. A living will addresses treatment for a person who is terminally ill and unable to make decisions on their own behalf, whereas a durable power of attorney is a legal document that appoints a designated person (surrogate or proxy) to make medical decisions when a person is incapacitated, whether temporarily or permanently.[19–21]

In some states, Physician Orders for Life-Sustaining Treatment (POLST) documents are used to specify the health care treatment wishes of a seriously ill or frail patient, including resuscitative measures and transport to a hospital.[22] A POLST is a portable document that is valid outside of a health care setting and is therefore especially helpful to prehospital personnel.[22]

There are 4 levels of treatment to be considered during resuscitative care events: no resuscitation be attempted, only provide specified treatments as selected, comfort measures be provided, and all necessary and appropriate interventions be offered. The most widely recognized terminology and abbreviations include Do Not Resuscitate (DNR) or Do Not Attempt Resuscitation (DNAR),[14] or Do Not Attempt CPR DNACPR),[20] Do Not Intubate (DNI),[18] Comfort Measures Only (CMO), and Full Code (FC). More recently, some have suggested the addition of an alternative called Shock-Only Resuscitation (SOR). With this new status, patients would not receive CPR but could receive defibrillation for shockable cardiac rhythms.[23]

DNR, DNAR, and DNACPR are terms used to direct clinicians to withhold resuscitative measures. In the event a patient goes into cardiopulmonary arrest, without a written DNR order in the medical record, resuscitation efforts will be initiated if it is medically appropriate. Once the existence of a valid DNR is established, resuscitative efforts will be stopped.[24] A patient may also choose to have a DNI order to prevent intubation or mechanical ventilation.[18] CMO is a term used to permit the natural dying process while affording maximum comfort, which includes addressing the psychological and spiritual needs of both patient and family.[25] Full code is a term used to indicate that health care providers are to attempt all resuscitative interventions including, but not limited to, CPR, advanced cardiac life support, and airway management, including intubation, mechanical ventilation, and heroic measures. Although each state has its own version of an AD, there is dialogue about a national AD that would be transferable among states.[26]

In most situations, resuscitation attempts are indicated for all patients in cardiac arrest who do not have a valid DNR order. However, in some situations, guidelines may stipulate additional criteria for decision-making as to when resuscitation should not be attempted or should be withdrawn if started. Examples of such criteria include clear danger to the health care providers, obvious fatal injury or signs of irreversible death, strong evidence that resuscitation would be against the patient's wishes or is futile, and asystole of greater than 20 minutes duration despite resuscitative measures when no reversible cause has been identified.[10,24] External events, such as a pandemic or a mass casualty situation that may result in a demand for health care resources that is greater than the supply, require crisis standards of care that influence decision-making in resuscitative situations.[10,24,27]

In addition to decisions regarding the initiation of resuscitation efforts, the issue of ceasing interventions arises whenever such interventions are ineffective. Terminating resuscitative events may be a difficult decision for care providers and family members, especially in the case of young or previously healthy patients, and can lead to

protracted intervention.[10] Unconscious bias based on socioeconomic and demographic factors may adversely affect these decisions, leading to either protracted or prematurely terminated codes.[28] In addition, emergency care providers frequently have little information about the patient's preresuscitation state of health and, thus, do not know if they may be prolonging suffering even as they consume precious health care resources such as extracorporeal membrane oxygenation.

Structured, advanced care planning initiated early in the patient admission process or immediately following clinical deterioration may lead to greater patient involvement, self-determination, and decision-making.[6] Patient- and family-centered care is an approach to health care that recognizes the role of the family in providing health care; encourages collaboration between the patient, family, surrogate, and health care professionals; and honors individual and family strengths, cultures, and traditions.[29] In 1993, ENA General Assembly passed a resolution supporting family presence during resuscitation. This resulted in the development of a position statement and educational resources.[30,31] Subsequently, ENA developed an evidence-based clinical practice guideline for family presence as an option during resuscitation to help meet the family's psychosocial needs in a time of crisis. In addition, the evidence supports having a designated health care individual stay with the family as well as creating institutional policies and education to support family presence.[32] Other authoritative bodies such as the American College of Emergency Physicians, the American Heart Association, and the European Resuscitation Council also support family presence during resuscitation.[10,33,34]

ResourcesUnlabelled box

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An Unplanned and Fate-filled Professional Journey: JEN

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ABSTRACT (ENGLISH)

After 9 months, I received orders for Germany—first as the head nurse on a medical floor at the Second General Hospital in Landstuhl and then as the head nurse in the 225th Station Hospital emergency department (at that time called emergency room) in Munich. [...]my team of medics and I created protocols for a set of frequently seen ED

chief complaints and for the not-so-frequent multitrauma patients and cardiopulmonary arrest patients. After graduate school, I accepted a clinical nurse specialist (CNS) position in a Cardiac Care Unit. After 20 years of writing and co-editing 9 combined editions of these 2 books, I asked the Mosby Publishing Company's permission turn the books over to the Emergency Nurses Association (ENA).

FULL TEXT

My dad and 2 of my uncles served in World War II. My dad was a Ranger medic, my Uncle Fred was an 18-year-old infantryman, and my Uncle Ray was a top gunner in a B-17 bomber aircraft. I grew up hearing stories about this war and I was so very proud of my family, so when my time came, I joined the United States Army Student Nurse Program because it felt like the right thing to do. My first active-duty assignment was in the thoracic surgery intensive care unit (ICU) at Walter Reed National Military Medical Center in Washington, DC. I thought I would always be an ICU nurse.

After 9 months, I received orders for Germany—first as the head nurse on a medical floor at the Second General Hospital in Landstuhl and then as the head nurse in the 225th Station Hospital emergency department (at that time called emergency room) in Munich. In Landstuhl, I received a call one day from the chief nurse telling me to report immediately to the helipad with an E-cylinder and a blood pressure cuff—that I would be accompanying a critically burned patient who was being evacuated to a larger military hospital about an hour away. I had never been in an ambulance, let alone a helicopter. The patient was on a nonrebreather mask and had 2 intravenous (IV) lines in place, connected to 2 glass IV bottles that we hung from the helicopter ceiling with strips of roller gauze. Every time we hit a bit of turbulent air, the drips came faster. No one told me that it would be impossible to take a blood pressure reading in a Huey—a name for a very noisy, bumpy ride but historically safe helicopter. We and the patient arrived safely at our destination. After a huge sigh of relief, I could palpably feel the adrenaline rush and knew for certain that I wanted to be an emergency nurse.

In Munich, not only was I the head nurse of the emergency department (literally 2 rooms), but I was the only nurse—with a staff of 10 medics and 3 foreign national physicians from Egypt, Turkey, and Iran. Emergency medicine and nursing were not yet specialties. We had no textbooks or protocols to guide us. This made me very uncomfortable, having come from an ICU where we had many resources, textbooks, standard order sets, protocols, and policies, and patient rounds 3 times a day. Hence, my team of medics and I created protocols for a set of frequently seen ED chief complaints and for the not-so-frequent multitrauma patients and cardiopulmonary arrest patients. I loved the pace of the emergency department, the various ages and diagnoses of patients, the uncertainty of who would be coming through the doors next, the need for critical thinking, and the teamwork that had to take place. I loved being a nurse in the emergency department! This is where I was meant to be.

After my discharge from the Army, I went to graduate school. The closest I could come to learning more about emergency nursing was a master's degree in cardiovascular nursing. I really missed being in the military, so I joined the US Air Force Reserves and became a flight nurse after a 6-week training program at the School of Aerospace Medicine in San Antonio. During my 2-week summer duty and an occasional 1-weekend-a-month duty each year, I went on some really busy and challenging missions.

After graduate school, I accepted a clinical nurse specialist (CNS) position in a Cardiac Care Unit. I knew it was not what I really wanted. I longed for an ED position. I decided to move from the East Coast to the West Coast where emergency medicine and paramedic-level emergency medical services (EMS) care programs were being started. What happened next would change my life forever. I interviewed for and was offered a CNS position in the newly created University of California, Los Angeles, Emergency Medicine Center. I am fairly certain that it was because of my military background that the co-chiefs, Dr Marshall Morgan (a cardiologist) and Dr Chuck McElroy (internal medicine) offered me the position. They welcomed me as a colleague on the emergency care team. They, along with first-year resident Paul Auerbach, encouraged me to learn, to teach, to write, to present at conferences, to attend grand rounds and daily rounds, and to get involved with the EMS community. I attended all the emergency medicine (EM) Residency classes, rounds, and Morbidity and Mortality conferences because I wanted to learn and

understand so that I could create educational opportunities for the nurses and techs that would parallel the residents and physicians so that we could work as a finely tuned team. And so it began.

During that time, I also heard about a relatively new organization, the Emergency Department Nurses Association. I joined and got involved right away. I was contacted by the editor of the *Journal of Emergency Nursing* and asked if I would be interested in writing a bimonthly clinical column for the journal. My very first published article was "An Emergency Nurses' Guide to Drawing Arterial Blood Gases."[1] Meanwhile, I was preparing weekly classes and skills sessions for the Emergency Medical Center nursing and tech staff. I wrote to 3 major medical textbook publishers, looking for a textbook that I could use as a reference for my classes. I was contacted by a publisher from C.V. Mosby asking if he could meet with me. We met the following week and he asked if he could see some of my lesson plans. It was then that, much to my astonishment, I was asked if I would be willing to co-author/edit a book for nurses who wanted to learn about emergency nursing. They had already contracted with one co-author who wrote a medical-surgical textbook but had no experience in emergency care. It took a while and several consultation meetings with my colleagues and medical directors before I was convinced that I was capable of that enormous and very important task.

Two years later, *Mosby's Manual of Emergency Care* was published[2] and was very well received. Two years after that, *Emergency Nursing: Principles and Practice*[3] was published and also very well received. They became the go-to books to study for the Certified Emergency Nurse (CEN) examination.

After 20 years of writing and co-editing 9 combined editions of these 2 books, I asked the Mosby Publishing Company's permission turn the books over to the Emergency Nurses Association (ENA). They said yes and the ENA Board said yes. It was the perfect place for these books to endure and to remain current and for opportunities for members to edit, write, or rewrite chapters ad infinitum.[4,5]

After 15 years on the West Coast as a CNS in the ED and EMS communities and concurrently 6 years as clinical faculty at the University of Washington teaching in the Emergency Burn Trauma master's program and co-creating a rural trauma nurse program in Southeast Alaska, I decided to move back to the East Coast—first to Maine at the urging of former ENA President Lynne (Gagnon) Smith. I subsequently accepted a position at Dartmouth Hitchcock Medical Center in New Hampshire as the Trauma Program Director and the Director of the soon-to-be-created Dartmouth Hitchcock Air Response Team. I was heavily involved in the Level One Trauma designation and the creation of statewide Trauma Systems in New Hampshire and Vermont. This was during my ENA presidency in 1995, so it was a very busy time. I could not have done it without the support of the Medical Center administration, staff, and physicians who encouraged me to run for that position and who supported me throughout my presidency.

I was recruited for a position as the Director of Emergency Services at one of the major Harvard teaching hospitals in Boston. The opportunity to try ED administration and to be back home in Boston was something I wanted to do. I was there only 2 years when my world was turned upside down by a devastating personal trauma. My then 13-year-old son sustained a C4 Brown-Sequard spinal cord injury when he dove off of a dock into shallow water at our emergency department summer picnic. Bill Briggs, who later became ENA president, jumped in the water and saved my son's life. I did not go home for the next 10 weeks except to pack one afternoon, staying by my son's bedside 24-7 at 3 different hospitals, as he began his very long life-threatening and then rehabilitation journey. My ENA sisters and brothers were unrelentingly caring and supportive of my son and me, offering prayers and love in abundance, cards, letters, flowers, phone calls, hospital visits, and meals.

I returned to work after 10 weeks away and found that I could not concentrate on work. I was exhausted and distracted and needed to find a job that was not as time consuming and demanding as ED management. Meanwhile, the hospital was going through a major downsizing of middle management, including my management position. As difficult as that was, it was a relief when I learned that my position was being eliminated. Instead of being distraught, I saw it as an opportunity to find something where I could apply my background in emergency care while also allowing me more time with my son.

Several of the attending physicians and emergency medicine residents I had worked with in the past became the new EM physician group at another large Boston academic center. I approached them to see if I could create a

research position in their department. I was able to get some grant money and they welcomed me as a member of that wonderful ED team. For the next 3 years, my research focused on identifying predictors of deep vein thrombosis and pulmonary emboli in patients admitted through the emergency department to the inpatient units.[6-8]

One day, I received a call from a member of the administration of the spinal cord and head injury acute care and rehabilitation center in Atlanta where my son had been a patient. I was asked if I would consider joining their staff as the Northeast regional admissions nurse coordinator. It was a big salary cut and it meant giving up my position in the emergency department, but I felt it was something I had to do to give back to the place that had done so much for my son and his recovery. For the next 3 years, I assessed patients with new spinal cord and brain injuries, met with staff and physicians and insurance companies, and began working on my PhD, researching the motor, self-efficacy, and quality-of-life effects of a nurse-coached exercise program for tetraplegic spinal cord injured patients in a community setting.[9] I was later asked to write a chapter for the seventh edition of Auerbach's Wilderness Medicine book on *Persons with Disabilities in the Wilderness*.[10]

I believe that, as nurses, the universe may lead us down a different path than we may have imagined, if we just pay attention, keep our minds open to new opportunities, and be willing to take some risks. Out of the blue, I received a call from a former colleague with whom I had done rural trauma nurse training in Southeast Alaska. She started a new health care process improvement company and invited me to join her team. She said that much of the work would be process improvement projects and teaching and consulting on new construction or renovations of emergency departments across the US and outside of the US. It was an intriguing offer that interested me very much. My son was in college and I was an empty nester. It was a good time in my life and career to take on this new challenge. I became a co-owner of the business and was responsible for the eastern region of the US and international projects. My projects took me all over the US, to 5 Canadian provinces, Europe, the Middle East, and Australia. I learned much during my 5 years with the company and was grateful for that opportunity.

However, there was a restlessness in my professional soul. I missed the military and I missed teaching. Quite by accident, I came across the website for the Uniformed Services University of the Health Sciences (USUHS) in Bethesda, MD. As far as I knew, it was a Department of Defense Medical School, educating active-duty personnel to become physicians for the Military Healthcare System. I thought that maybe they would have a place for a nurse researcher with a background in emergency, trauma, flight, and spinal cord injury nursing. I did not know that they also had a Graduate School of Nursing—PhD and DNP programs. All the students were active-duty military nurses. As I was reading through the Graduate School of Nursing information, I was pleasantly surprised and excited to see that Marguerite Kearney Littleton was the Associate Dean for Research. Marguerite and I were 2 of the co-authors of ENA's original *Standards of Emergency NursingPractice*.[11] I called her and she immediately asked me if I was interested in a faculty position. I surprised myself when I said that I was.[12] Yet another ENA colleague who made a difference in my life.

I was hired to teach the core courses in the DNP program. I also had a joint appointment in the School of Medicine where I taught emergency trauma skills (IVs, cricothyrotomies, spinal immobilization, hemorrhage control, Glasgow Coma scoring, and primary and secondary surveys) to first-year medical students. I was (and still am) a faculty member and evaluator for the annual combat medical field exercise Operation Bushmaster for fourth-year medical students and second-year DNP students. Besides trauma skills, the students demonstrate their understanding of tactical operations, care under fire, battlefield evacuations, communicable diseases, cultural awareness, triage and care during mass casualties, dealing with the media, teamwork and accountability, and countless other scenarios one may encounter in a combat theater. I was back in my element![13]

As part of my responsibilities at USUHS, I was asked to be the nurse lead on a project associated with a multimillion-dollar US State Department Grant, “The African Peacekeeping Rapid Response Partnership.” The mission was to prepare selected African nation military forces to respond to combat or infectious disease outbreaks in partner African nations. My role was to recruit nursing faculty for the project, develop a trauma nursing course specific to military combat nursing, and implement the course and instructor training in the partner nations. The course and instructor training were completed in Uganda and Rwanda. Owing to the coronavirus disease epidemic,

courses to be taught in Ghana, Senegal, and other African nations were delayed. This was one of the most rewarding things I have ever done in my career. I was so honored to be chosen to lead this mission.

During my time at USUHS, I became very familiar with the Wounded Warrior community on base, many of whom had been severely wounded and in the Walter Reed National Military Medical Center's Military Advanced Training Center Rehabilitation Program for 2 or more years. They had burns, amputations, vision loss, hearing loss, polytrauma, traumatic brain injuries, and post-traumatic stress disorder. I worried about what would happen to them when they left the familiarity, camaraderie, and the bonds they had formed with their like-minded battle buddies at the Medical Center, who understood what it was like to lose comrades and learn to deal with extreme disabilities and the physical and psychological challenges of war.

With the advice of a close friend who is a Wounded Warrior with bilateral lower limb amputations, we brainstormed what could be available all around the country where Wounded Warriors could go to continue to heal physically and mentally. We came up with the idea of matching Wounded Warriors with college athletes as workout buddies on college campuses. Student athletes are like-minded, understand teamwork, work hard, eat healthy food, hold each other accountable, encourage each other, and have each other's backs—just like the veterans when they were on active duty. Veterans and College Athletes Together (VCAT) was born. Because USUHS did not have athletic teams, I searched for a university where we could implement VCAT. I first did a pilot project for a year at a university in Boston. I then applied for a full-time faculty position at the University of Delaware with the caveat that I would teach there as long as I was allowed to start a VCAT program. I not only received their approval but also received a very generous grant from the Dean of the College of Health Sciences. We are currently hosting our third cohort of veterans and have received external grant funding for another year.[14] VCAT veterans lost weight, body fat, body mass index, and waist circumference. They gained muscle mass and improved flexibility. Psychological surveys demonstrated improvements in such areas as resilience, overall wellness, and quality of life. Perhaps the most important outcomes were evidenced in qualitative descriptive group sessions. Comments were made and reiterated about how much better they felt, how their communications have improved, how they sleep better, how much they enjoyed coming to the sessions, and how they are eating healthier food. One veteran said that VCAT saved his life.

In addition to the VCAT program, I received approval to create a new undergraduate elective course, “Care of Military Members, Veterans and Their Family Members in Civilian Healthcare.” The first offering was in the spring of 2021 and it received outstanding reviews from the students. It is being offered again this fall. The foundation of the course is the “Have You Ever Served?” initiative from the American Academy of Nursing (SB Sheehy and LS Schwartz, unpublished data, 2021).[15,16]

My professional journey has taken me down many unplanned paths. I have learned so much at every stop along the way. Throughout my nursing career, ENA has been my personal and professional foundation for so many reasons—the friendships, opportunities, encouragement, knowledge, skills, leadership opportunities, and trust in each other. I have come full circle in my career, starting with the military and now coming close to the end of my career, again with the military, always with emergency nursing keeping me grounded and focused on learning new things and making a difference, regardless of the work I was doing.

My advice to those of you new to emergency nursing is to be brave, take risks, keep learning, ask questions, share your knowledge, be kind to your patients and to one another, take care of yourself, and enjoy your journey in the greatest profession in the world. You will have so many options from which to choose.

I gratefully acknowledge my ENA colleagues and friends, my many fellow staff members and students, and most especially 3 caring and brilliant physicians, Dr Marshall Morgan and Dr Chuck McElroy, former co-directors of the University of California, Los Angeles, Emergency Medical Center, who believed in me and who allowed me to tag along so that I could learn and create a parallel knowledge base specifically for emergency nurses, and Dr Paul Auerbach, whom I met when he was a first-year EM resident. His encouragement has helped me in so many ways over our 42-year friendship. Rest in Peace, Marshall, Chuck, and Paul.

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Emergency Nursing Review Questions: November 2021: JEN

ABSTRACT (ENGLISH)

A.Placing one sheet on the floor of the room to collect trace evidence from removed clothing B.Handling bullets with a pair of rubber-tipped forceps and placing them in a gauze-lined, sterile plastic cup C.Storing clothing, jewelry, and other general wear in a plastic hospital belongings bag D.Suspending an applicator in a Styrofoam cup in the patient room and leaving the room to retrieve an envelope 2. The patient's initial vital signs included an apical pulse of 126, a blood pressure (BP) of 82/48, a respiration rate of 26, an oral temperature of 39.6°C (103.2°F), and a lactate level of 4.5 mmol/L. [...]for the brain to be adequately perfused and maintaining a target CPP of 60 mm Hg, the patient must maintain an adequate BP.

FULL TEXT

Questions

1. An emergency nurse is caring for a patient involved in an altercation where the discharge of a firearm occurred. What techniques performed by the emergency nurse suggest understanding of proper evidence collection?

2. **A.**Placing one sheet on the floor of the room to collect trace evidence from removed clothing

3. **B.**Handling bullets with a pair of rubber-tipped forceps and placing them in a gauze-lined, sterile plastic cup

4. **C.**Storing clothing, jewelry, and other general wear in a plastic hospital belongings bag

5. **D.**Suspending an applicator in a Styrofoam cup in the patient room and leaving the room to retrieve an envelope

2.

Which of the following situations suggests traction splint application is contraindicated?

•**A.**Suspected mid-shaft femur fracture

•**B.**Mid-shaft femur deformity with concurrent pelvic injury

•**C.**Injury to the distal femur

•**D.**Suspected proximal tibia fracture

3.

A 37-year-old female patient arrived at your emergency department 90 minutes ago, presenting with altered mental status, evidence of open wounds and redness to the right lower extremity. The patient's initial vital signs included an apical pulse of 126, a blood pressure (BP) of 82/48, a respiration rate of 26, an oral temperature of 39.6°C (103.2°F), and a lactate level of 4.5 mmol/L. The patient weighs 60 kg. She received 2 L of isotonic crystalloids, 1000 mg of intravenous (IV) acetaminophen, and 2 g of cefazolin IV. Altered mental status persists after treatment.

Repeat vital signs include an apical pulse of 124, a BP of 84/50, a respiration rate of 24, an oral temperature of 38.9°C (102.1°F), and a lactate level of 4.0 mmol/L. How should the nurse anticipate proceeding?

•**A.** Initiating a norepinephrine drip at a rate of 5 µg/minute

•**B.** Continuing fluid resuscitation with isotonic crystalloid

•**C.** Initiating an EPINEPHrine drip at a rate of 0.6 µg/minute

•**D.** The patient is adequately resuscitated, requiring no intervention

4.

A triage nurse is evaluating a 70-year-old male patient who arrived at the emergency department with a steady stream of blood coming from both nares. The nurse has the patient apply direct pressure to the nose and lean forward. The patient also states he is on apixaban (Eliquis). The bleeding has slowed at this time. Which Emergency Severity Index level is most appropriate for this patient?

•**A.** ESI level 2

•**B.** ESI level 3

•**C.** ESI level 4

•**D.** ESI level 5

5.

A 47-year-old patient is experiencing signs of a severe traumatic brain injury. Which of the following interventions is least effective in supporting adequate cerebral blood flow in this patient?

•**A.** Ventilating the patient to target $PaCO_2$ 35 mm Hg to 45 mm Hg

•**B.** Elevating the head of the stretcher to 30 degrees

•**C.** Administering fluid boluses to maintain systolic BP of ≥100 mm Hg

•**D.** Hyperventilating the patient at a rate of 20 breaths/minute.

Answers

1. Correct answer: B

Preservation of forensic evidence is a critical element of emergency department nursing. Two major objectives of forensic evidence collection are preservation (preventing degradation and contamination) and maintaining the chain of custody. Bullets and other metal fragments should be handled in a manner that prevents chipping or scratching, which includes using padded equipment for handling and storage. When managing a trauma patient, 2 sheets should be placed on the floor of the hospital room instead of 1 sheet. The first layer limits contamination from the floor. The second sheet layer should be preserved for examination of trace evidence that may shed from the patient's clothing during removal. Items stored for evidence preservation should be stored in packaging made of breathable material, such as paper; this includes items that must be dried before being placed in a storage receptacle. Suspending an applicator in a Styrofoam cup can facilitate drying of specimens, but care must be given to ensure that the chain of custody is not broken while facilitating this process, otherwise evidence tampering can occur.[1]

1. Correct answer: C

Certain lower extremity injuries may benefit from traction splinting. Traction splinting provides benefits to the patient, such as relief from pain and swelling, as well as reducing injury to blood vessels and nerves in proximity to the injury. Currently, traction devices are indicated for mid-shaft fractures of the femur as well as fractures of the proximal tibia. Per Trauma Nursing Core Course guidelines, a patient presenting with evidence of both a treatable femur fracture and a pelvic injury can receive femur splinting following the application of a pelvic splinting device. In a distal femur fracture, the traction splint can rotate the distal bone fragment anteriorly, potentially compromising the popliteal artery and nerve.[2,3]

1. Correct answer: A

This patient has not responded to the administration of a 30 mL/kg bolus of intravenous crystalloid fluids. A bolus of crystalloid fluids should be administered within 3 hours of arrival at the hospital, according to 2016 Surviving Sepsis guidelines. Based on repeat assessment data, vital signs, and lab values, the patient continues to be hypoperfused. When a patient does not respond to fluid resuscitation, the addition of a vasopressor is recommended. The preferred vasopressor for patients in septic shock is norepinephrine, with EPINEPHrine or vasopressin being added to norepinephrine if the patient does not reach a target mean arterial pressure (MAP) of 65 mm Hg.[4-6]

1. Correct answer: A

This patient should be placed in ESI level 2, high risk. ESI level 2 is reserved for patients who are high risk, in severe distress, presenting with confusion or concerning vital signs. The patient in this case is suffering from epistaxis and appears to have risk factors that limit the success of simple interventions. The triage nurse recognizes that although the initial intervention of applying direct pressure to the nose slows the bleeding, the ability to control the bleeding fully may be inhibited by the patient's use of a blood thinner. The patient may require additional interventions, such as vasoconstrictive medications (Neo-synephrine or cocaine) or nasal packing to provide further hemostasis. ESI levels 3 through 5 are assigned to patients based on the number of resources needed to treat the patient. These patients, however, do not present with an immediately life-threatening or high-risk situation.[7]

1. Correct answer: D

Cerebral perfusion pressure (CPP) is the difference between the patient's MAP and intracranial pressure (ICP). This is expressed as CPP = MAP–ICP. Therefore, for the brain to be adequately perfused and maintaining a target CPP of 60 mm Hg, the patient must maintain an adequate BP. This may include administering IV crystalloids or vasopressors to maintain the systolic BP at or above 100 mm Hg, which will improve MAP. Other interventions are targeted at reducing ICP, and include elevating the head of the patient's stretcher to 30 degrees and maintaining normal carbon dioxide levels in the bloodstream. Hypercapnia ($PaCO_2$ >45 mm Hg), a sign of inadequate ventilation, has a vasodilatory effect on cerebral arteries, increasing blood flow, but also worsening ICP. This puts the patient at greater risk for herniation. Hypocapnia ($PaCO_2$ 2

Send submissions to Sara Webb, MSN, C-PNP, CFNP, C-NPT, Paramedic at: sara.webb@jhmi.edu or submit five questions with rationale and references directly to JEN.

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Loss Strikes Like an Empty Bell: JEN

FULL TEXT

Loss strikes like an empty bell,Or the wind in a vacant home,Pushing uselessly against absence.Loss is opening a car doorTo the surprise of a silent worldAnd turning aroundTo tell no one.With time, wounds healBut loss lingers quietly –Even the word adrift is too loudAnd is best written beforePen scratches paper.Loss goes unansweredAs mute questioning does,But the silence makes us remember.

Submissions to this column are encouraged and may be submitted at jenonline.org where submission instructions can be found in the Author Instructions.

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Emergency Nurses' Experiences in Treating Patients With Mental Illness: A Qualitative, Interpretive Metasynthesis: JEN

ABSTRACT (ENGLISH)

Introduction

Each year, emergency departments are seeing an increase in the number of patients with mental illness. Nurses often do not feel equipped with the knowledge or skills for this patient population while caring for them. Although there is published literature about nurses caring for patients with mental illness, there is a gap in knowledge about the lived experiences of these frontline workers.

Methods

To gain a better understanding of the experiences of emergency nurses in treating patients presenting with psychiatric issues, a qualitative interpretive metasynthesis of 5 qualitative articles was conducted.

Results

Three themes emerged from the synthesis: (1) feeling unprepared and unqualified, (2) feeling anxious and hesitant, and (3) the need to keep the patient environment safe.

Discussion

The overarching finding in our QIMS was the prevalent feeling of general concern regarding treating patients with mental illness despite the nurses' own preconceptions and apprehensions. It is important to understand the lived experiences of nurses treating patients with mental illness to learn be better prepared for future encounters.

FULL TEXT

Contribution to Emergency Nursing Practice

• What is already known on emergency nurses' care for patients with mental illness is that they often do not feel equipped with the knowledge or skills for this population.

• The main finding of this paper is that emergency nurses feel unprepared or unqualified, anxious and hesitant, yet they feel the need to keep the patient environment safe.
• Recommendations for translating the findings of this paper into emergency clinical practice includes further administrative and colleague support as well as further training and education.

Introduction

There are an estimated 43.4 million adults in the United States with a mental illness.[1] For many people, the emergency department is the first stop when they need urgent health care attention.[2] This brings up multiple concerns, including that emergency departments are serving more patients with mental health issues.[1] ED visits for mental disorders increased by 55.5% for depression, anxiety, or stress and 52% for psychoses and bipolar disorders between 2006 and 2013.[1] Emergency departments have become inundated with these types of cases, and it has indubitably affected the nurses on the front line who are at risk for challenges in caring for this patient population. Nurses are central to the working of health care organizations.[3] Emergency nurses seemingly face a plethora of challenges because they typically make the first contact with patients, and they provide the most hands-on care compared with other hospital staff. During the initial phase of acute illness and trauma, emergency nurses are educated to assess and collaboratively treat patients.[4] Emergency nurses work in an environment replete with chaos, violence, unrealistic patient expectations, and death while experiencing stress and witnessing tragedies.[4-6] Because emergency departments continue to see increasing numbers of patients with mental illness,[78] this presents management and diagnostic challenges for frontline ED workers.[9] Despite these challenges, emergency nurses are faced with the responsibility of providing high-quality care.[10]

Although nursing experiences in caring for patients are diverse, the perspectives and attitudes that emerge are comparable. To understand the commitments of a nurse to their patient, 1 study reports that caring in nursing has traditionally been perceived as a moral way of being, centering on the connection with patients, concern for self and others, and goodness.[11] Although caring and compassion have become synonymous with the nursing profession,[11] there are nurses who lack empathy for some patients and feel a sense of antipathy toward them.[7] Antipathy is defined as “a strong feeling of dislike,”[12] which nurses have felt toward patients, particularly those with untreated mental illness.[7] However, it is also imperative to understand that researchers have found that there is a stigma by association for many nurses owing to public perceptions and negative stereotypes.[13]

Patients who self-harm can be viewed as manipulative and attention seeking, as well as “beyond the reach of help.”[7] [14] While trying to build rapport with patients, nurses experience negative perceptions of those with mental illness owing to particular behaviors, including agitation and yelling.[15] In a study comparing specialty nursing areas, emergency nurses reported lower rates of compassion satisfaction (24.5%) as well as moderate to high levels of burnout (82%).[11] This is due to their work environment and the stressors related to lack of support services.[11]

Working conditions in emergency departments are unique. Nurses are sometimes overloaded and have little time to attend to their other patients because the patients with acute and severe mental illness sometimes require more time. Moreover, nurses need to develop positive attitudes, knowledge, and skills that they often do not have.

Many nurses experience violence in the emergency department and begin to develop symptoms of posttraumatic stress disorder (PTSD). In a study with members of the Emergency Nurses Association, 94% of the nurses experienced at least 1 PTSD symptom, with 17% probable for PTSD.[16] Other researchers have reported that up to 33% of the emergency nurses have symptoms of PTSD.[1718] In some respects, many emergency nurses are not prepared for patients with mental illness and this, coupled with violent experiences and grappling with their own emotional and mental health issues, can inevitably create everyday challenges during their workday. Potential serious health problems such as PTSD are due to emergency nurses’ exposure to high levels of stress, work overload, lack of support, and situational trauma.[19]

In 1 study, nursing participants who had cared for patients with behavioral health (BH) issues had moderate average perceived competency related to their care in the emergency department.[15] The findings from this particular study validate nurses’ perceptions that more education related specifically to patients with BH issues is essential.[15] Furthermore, it was concluded that emergency nurses lack knowledge and skills in caring for patients with mental

illness.[20] Providing more directed or specific education to emergency nurses could be key in their treating patients with mental illness as well as in their attitudes and perceptions while caring for these patients.

Researchers have been able to capture statistics about the population classified as mentally ill through surveys and secondary data, as well as through focus groups and interviews. Researchers have also been able to capture how to effectively treat patients with mental illness at psychiatric facilities and hospitals. Quantitative studies provide us with data that are expressed in measurement units, but there is very little qualitative work comprising emergency nurses' experiences. The purpose of our study was to conduct a qualitative, interpretive metasynthesis (QIMS) to provide an understanding of emergency nurses' lived experiences in treating patients with mental illness and add to the scant literature pertaining to this particular topic.

Methods

QIMS was used for our study. This method is used for "synthesizing the findings of a group of qualitative studies into an enhanced understanding of the phenomenon of inquiry."[21-23] The authors synthesized "a group of studies on a related topic into an enhanced understanding of the topic of study wherein the position of each individual study is changed from an individual pocket of knowledge of a phenomenon into part of a web of knowledge about the topic where a synergy among the studies creates a new, deeper and broader understanding."[24] This is an intentional process that enriches researchers' analysis of combined qualitative evidence and increases efficacy in integrating qualitative research into evidence-based practice.[24]

We were able to gain accounts of lived experiences using this approach. A 4-step description of the synthesis process was applied: (1) gather the sample, (2) identify the key findings, (3) relate themes across the studies, and (4) describe the phenomenon.[25] QIMS has not been used for our topic of study before, and through this process the authors have provided an enhanced understanding of the phenomenon from the perspective of emergency nurses caring for patients with mental illness.

Article Search Narrative

A comprehensive article search was completed in March 2020 by the first and second authors. The search terms included psychiatric care, mental health, mental services, emergency department/room nursing, perspectives, views, perceptions, attitudes, and opinion. The EBSCOhost search engine (EBSCO Information Services) was used, and Academic Search Complete was 1 of the databases searched. Other databases used in the search included American Psychological Association PsycArticles, American Psychological Association PsycInfo, CINAHL Complete, Health Source: Consumer Edition, Health Source: Nursing/Academic Edition, MEDLINE, and Psychology &Behavioral Sciences Collection. A total of 96 articles were found, with article results from Academic Search Complete (45 articles), CINAHL Complete (34 articles), and MEDLINE (17 articles).

The inclusion criteria were English language and emergency nurses from any country. For this search, we limited the articles to peer-reviewed journals, with date ranges from 2010 to 2020. A total of 17 duplicates were removed from the 96 articles, leaving 79 articles; of these, the abstracts were reviewed, and 16 articles seemed to meet the inclusion criteria. On further review of the 16 articles, a full-text screen was completed, and 11 articles were removed. Five of them met the inclusion criteria as studies that were published in peer-reviewed journals, published in English, sampled emergency nurses, and were conducted using qualitative methods only (Figure).

Rigorous and Accelerated Data Reduction

The Rigorous and Accelerated Data Reduction (RADaR) technique was used to code and analyze the data in this study. This technique provides a way of organizing, reducing, coding, and analyzing qualitative data in a rigorous and accelerated way.[26] The RADaR technique was used in tandem with Microsoft Word (Microsoft Corporation) to create tables, which encourages focusing on the content of the data from the articles. There are 5 steps involved in the RADaR process that were used for this study: (1) ensure that all data transcripts are formatted similarly, (2) place formatted data into an all-inclusive phase I data table, (3) reduce data in the all-inclusive data table to produce a phase II data table, (4) reduce data in the phase II data table to produce more data tables, and (5) draft the project deliverables using the final phase of the data table.[26]

Data Analysis Theme Extraction and Theme Synthesis

The 5 articles (Table 1) were separated and formatted similarly to include the title of the article, name(s) of the author(s), setting, qualitative method data, and all quotations extracted from the articles.

Article titles, names of authors, quotations, notes, and themes from each of the articles were then placed in 1 data table in Microsoft Word. The original themes were extracted from the articles to maintain the veracity of the interpretations by the original authors (Table 2). This process included the 5 articles listed, and each was read to determine the themes identified by the authors. Quotations were then extracted from the original themes and analyzed to determine the synthesized themes (Table 3). A synthesis of the studies materialized into a new, synergistic understanding of emergency nurses' experiences in caring for patients with mental illness.

Triangulation

The 2 types of triangulation methods used to reduce systematic bias in this QIMS were sources and analysts.[2728] A retrospective triangulation of the sources was used in this study to include a variety of settings throughout different countries. During the development of this project, triangulation of the analysts was accomplished through multiple meetings with the second and third authors. This significantly reinforced rigor and maintained consistency in evaluation of the articles and the theme choices.

Results

The analysis of the 5 articles generated 3 themes. The themes presented included (1) feeling unprepared and unqualified, (2) feeling anxious and hesitant, and (3) the need to keep the patient and environment safe (Table 3).

Theme 1: Feeling Unprepared and Unqualified

Many of the nurses stated that they either felt unqualified to deal with a patient presenting with psychiatric issues or were unsure how to treat them from check-in to discharge. The nurses explained from personal experience and talked about a sense of discouragement regarding ongoing education opportunities, lack of knowledge about how to work with certain patients presenting with psychiatric issues as well as psychiatric medication, paperwork issues, and support from doctors and BH services. One nurse from a group in the northeastern US had this to say:"It is horribly disorganized and there is no one person to go to for help with any class or seminar. I think there should be a clear plan of action regarding ongoing education, patient care planning. Trying to find the course and sign up, go through the paperwork for approval, where to start on the paper trail, to submit it is very difficult."[20]

Another nurse from the same area of the US corroborated the need for more education:I think we should add some education on treating patients with mental illness or understanding the disease, and this could happen each year when we have ED skills lab for example. I try to gain as much understanding and knowledge as I can from the behavioral health consult team who are really very effective in their care and are always willing to share with us what interventions might work best in each case.[20]

Although nurses are able to use their own clinical judgment many times, the frustration regarding not having the same number of support staff members during the day was reiterated by 1 nurse in Australia:"...they've employed an [extra] mental health nurse overnight to try and de-escalate [patients] before they become a problem…why can't we do it during the day? We've got no problems overnight...some nights we'll have 12 people in short stay that are all mental health…"[10]

A nurse in Australia reiterated thack of knowledge about mental health problems:"The biggest thing is lack of knowledge. More and more we're moving our staff through triage competencies a lot quicker, so they don't even have the background knowledge."[29]

Feeling unprepared and unqualified can have a significant adverse impact not only for the nurse in terms of their own thoughts and decision-making, but also on providing quality therapeutic care to a patient with psychiatric concerns. This may trigger an undesirable reaction for the nurse and cause further distress and anxiety during their workday.

Theme 2: Feeling Anxious and Hesitant

Each article mentioned the emotional process that nurses go through when treating patients with mental illness. Some nurses stated that they felt the need to help because it is what they are required to do as nurses, but they also wanted to treat the patient because it is what is right. There are nurses, however, who do not want to treat or do not

care to treat patients presenting to the emergency department with a mental illness. The reasons include lack of trust in the patient, feeling fearful of the patient, and their own countertransference. One nurse from Australia stated:“I don't feel like I am being an advocate. I feel like I'm meant to be there to help...and look after the patients and then I'm being told that I have to be the prison guard at the same time to hold them [patients] down and force them [patient] to have medications...”[10]

For a nurse in Canada, 1 interaction with a patient presenting with psychiatric issues made her anxious, and she stated:“She's screaming at me, okay, so unfortunately screaming patients make my heart pound, so probably my throat is in my chest at the moment and my hands are starting to shake.”[30]

Nurses from the aforementioned area in the northeast US stated that they felt a sense of deception when receiving a patient presenting with psychiatric issues:"Many of these patients are attention-seeking and they come back in, time and time again. I do suppose their attention-seeking behaviors is part of their illness, but I often feel we are being taken advantage of."[20]

One nurse in Australia spoke about wanting to avoid judging patients:“I do want to avoid judging someone when they are presenting, and although it may sound like a mental health presentation, you need to be conscious that you are not missing something that is organic.”[29]

Although emergency nurses deal with feelings of anxiousness and hesitancy, they remain focused on their job to not only keep the patient safe, but also to keep the environment safe for staff and other patients and family members.

Theme 3: The Need to Keep the Patient and the Environment Safe

The safety of both ED staff and, especially, patients was of great importance to many nurses. Many of the nurses also felt a sense of duty to protect not only other staff, but, especially, the patients when a patient with psychiatric issues presented to the emergency department. The safety of a patient presenting with psychiatric issues, however, was of utmost importance to the nurses as well. Reiterating the need to protect staff and patients was a nurse from Australia:“…We had a police officer escort a section 10 [person apprehended by police whom they believe is mentally ill and may harm themselves or others] in [emergency department] under the influence of some substance who was very aggressive...He kept spitting at everyone so...he was held down.....”[10]

Other nurses recounted keeping patients classified as aggressive safe from harming themselves by using manual restraint:“…Sometimes it just takes too long…if someone's really getting aggro [aggressive] we need to be a little bit quicker…[and] at least stop this behavior and get them [patient] into a position that is safe but that's not going to be harmful to...the people around them or to us....”[10]

In Canada, a nurse recalled a patient who needed immediate care for their own safety:“...I wouldn't want him sitting in the waiting room because maybe other people staring at him that might agitate him further...I'd want him in treatment room as soon as I could.”[30]

In Ghana, 1 nurse agreed with the law making suicide a crime, which ultimately could deter patients with psychiatric issues from going to the emergency department and keep them from harming themselves, stating:

- “It will in a way help to reduce the rate of suicide.”[31]

These accounts of safety issues are a profound reminder that managing all these variables at the same time is a major task., Additionally, supporting emergency nurses in their continuing education and providing encouragement during moments of turmoil with patients presenting with psychiatric issues may enrich their nursing experiences.

Discussion

The purposeful development of the synergy in this QIMS created a more concentrated collection of themes that provided us with a better understanding of nurses’ experiences and perspectives in treating patients presenting with psychiatric issues in the emergency department.[32] Triangulation was especially crucial for this QIMS during the synthesis process to achieve validity and strengthen our study.[32] This study adds to the current scarce qualitative literature available about emergency nurses’ lived experiences while treating patients with mental illness.

There were similarities in the nurses’ experiences concerning feeling unprepared and unqualified when treating

patients presenting with psychiatric issues. These experiences are similar to those in a previous study concerning the need for more education in working with patients with mental illness.[15] Owing to the specific nature of patients with mental illness, the training and education needed should include de-escalation, communicating with these specific patients, and assessment.[33] True to past studies, there were also similarities when the nurses spoke about feeling anxious and hesitant, including concern regarding the unknowns of treating a patient presenting with psychiatric issues, as well as with feelings of anxiousness, feelings of deception by patients, and their own personal beliefs about mental health and suicide.[71114]

In addition, there is a perceived lack of safety and vulnerability felt by the nurses, which was found in a previous study.[34] There was an emphasis that patient and staff safety were of utmost importance. Furthermore, mental illness may still be stigmatized even at places that are intended to treat mental illness, and nurses may feel unsupported by their hospitals, leaving them to manage their bias, anxiety, and burnout on their own.[1135] Researchers have stated that the stigmatization process has marginalized, disenfranchised, excluded, and denied the human rights of people with mental illness.[35]

The overarching finding in our QIMS was the prevalent feeling of general concern regarding treating patients with mental illness despite the nurses' own preconceptions and apprehensions. It is of utmost importance to understand the lived experiences of nurses asked to perform their jobs under scrutiny, in dangerous situations, and without the full support and education needed to keep both patients presenting with psychiatric issues and the staff safe. Of note, there is a scarcity of this literature.

Limitations

It is important to discuss first that this QIMS is not generalizable to all nursing experiences in emergency departments across the world. We must take into account different cultures, values, and the diverse health care systems. It is also imperative to keep in mind that the 5 articles analyzed come from different parts of the world that all have different cultures, laws, and health care systems. To put this into perspective, Ghanaian culture has not yet touted the benefits of a counseling relationship.[36] Compare this with US culture, which relies heavily on the therapeutic relationship; however, there is also a stigma attached to that in Ghana purely on the basis of repeated visits by patients presenting with psychiatric issues to the emergency department.[7]

Furthermore, our QIMS had a limited amount of qualitative studies specifically related to emergency nurses treating patients with mental illness. The small sample sizes for each study need to be taken into consideration because this affects the generalizability. Finally, as seen with the 5 chosen studies, the settings vary, making it difficult to assure reliability regarding data collection and data analysis. Providing more directed or specific education to emergency nurses could be key in treating patients with mental illness as well as in improving nurses' attitudes and perceptions while caring for these patients.

Implications for Emergency Clinical Care

Although many implications can be noted for emergency nurses and the need for ongoing training and education, it is important to understand the need to provide support to them and to other staff who do not have much training with patients presenting with psychiatric issues. These needs could be attended to and reinforced by other ED colleagues, hospital administration, and senior managers. Those in administration or in senior-level positions may provide more support by visiting with, or directly observing, the frontline emergency nurses several times a month. For social workers working with emergency nurses, it is important to provide guidance and affirmation to the nurses. It is vital as well that social workers provide resources and advocate for the nurses who spend more time with their patients presenting with psychiatric issues than do physicians and other staff.

The treatment and care provided by emergency nurses may improve with education. Vital skills and confidence to

care for patients with mental illness can be improved with developed continuing education.[715] There is a need for an increase in support or for the provision of more staff to aid nurses. This support could be in the form of having more back-up provided by nurse aides or nurse technicians. Furthermore, there is a need to solidify safety precautions for the staff, which could be in the form of more security officers or additional safety protocols and collaboration between social workers and administration that incorporates helping nurses with de-escalation techniques.

Conclusion

Although this study offers readers insight into emergency nurses' experiences while treating patients presenting with psychiatric issues, other questions have emerged from this for further research: (1) After receiving more training and education, do nurses feel more prepared or feel better about treating patients with mental illness? (2) Are negative attitudes toward patients presenting with psychiatric issues indicative of negative outcomes for them? (3) What are nurses' experiences regarding protecting themselves or safety protocols that they have used while treating patients with mental illness?

To establish a greater evidence base, further research is needed related to emergency nurses' experiences while treating patients with mental illness. Further research should involve before-and-after educational intervention designs. Finally, more qualitative research is needed to grasp the impact of emergency nurses' lived experiences.

Author Disclosures

Conflicts of interest: none to report.

Study	Tradition/data collection method	N	Demographics of respondents	Setting
Chapman et al[10]	Semistructured interviews	15	12 women, 3 men (aged 24-46 y)	Three emergency departments across metropolitan area in Australia
Clarke et al[30]	Interviews using a digital voice recorder	11	All women with an average of 2.2 years of experience	Regional emergency departments in moderately sized Canadian city
Hjelmeland et al[31]	Semistructured interviews	8	4 women, 4 men	Accra, Ghana
Plant and White[20]	Focus group	10	All women with 4 to 32 years of experience	Northeast United States
Gerdtz et al[29]	Semistructured interviews	16	Two-thirds from metropolitan locations; one-third from rural/regional locations	Emergency departments in 6 different regions of Australia

Study	Original themes
Chapman et al[10]	1. Part of the job
2. Reasons for manual restraint	3. Restraint techniques
Clarke et al[30]	1. Managing the scores
2. Managing the environment	3. Managing uncertainty: “What's Actually Going on Here?”
4. Managing their own distress	Hjelmeland et al[31]
1. The law has a deterrent effect	2. People have no right to take life
3. Suicide scares people	Plant and White[20]
1. Facing the challenge	2. Struggling with the challenge
3. Unmovable barriers	4. Sinking in hopelessness and seeking resolutions
Gerdtz et al[29]	1. Physical structure of the environment
2. Time pressures imposed on triage assessment	3. Activity level and triage workload
4. Australasian triage scale guidelines	5. Staff education in mental health and triage training
6. Resources to support triage decision-making for mental health problems	7. Triage nurses’ knowledge of mental health problems
8. Triage nurses’ levels of experience in assessment of mental health conditions	9. Triage nurses’ attitudes toward mental illness
10. Police presence	11. Patient's behavior

Synthesized themes	Original themes extracted

Feeling unprepared and unqualified	1. Facing the challenge.[20]2. Managing the scores.[30]3. Struggling with the challenge.[20]4. Managing uncertainty: “What's Actually Going on Here?”[30]5. Part of the job.[10]6. Triage nurses’ knowledge of mental health problems.[29]
Feeling anxious and hesitant	1. Managing their own distress.[30]2. Suicide scares people.[31]3. Sinking in hopelessness and seeking resolutions.[20]4. Part of the job.[10]5. Triage nurses’ attitudes toward mental illness.[3]
The need to keep the patient and environment safe	1. Reasons for manual restraint.[10]2. Managing the environment.[30]3. The law has deterrent effect.[31]4. Struggling with the challenge.[20]

DETAILS

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Resilience Among Professional Health Workers in Emergency Services: JEN

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ABSTRACT (ENGLISH)

Introduction

Although it seems logical that working in an emergency service implies having a great capacity to face extreme situations, resilience in health care workers has been shown to be related not only to individual personality characteristics but also with external factors. The objective of this study was to understand the resilience of health professionals working in hospital and in-hospital emergency services and to determine the relationships of resilience with sociodemographic and work-related conditions.

Methods

This cross-sectional study included emergency physicians, nurses, and nursing assistants. Sociodemographic variables, work characteristics, and the Resilience Scale–25 were analyzed. Data were not missing at random and models with imputed data were tested.

Results

A total of 321 professionals participated. Their mean age was 43.36 years (SD 8.73), and 81.31% were women. The mean resilience score was 133.38 (SD 17.11), which corresponds to moderately low to moderate levels. Being single (B = −7.35; *P* <.01) or divorced (B = −8.26; *P* = .04) were associated with decreased resilience in the raw score of the Resilience Scale-25. Working shifts that do not include night shift (OR = 2.00, 95% CI 1.04, 3.90, *P* = .04) and being a nurse (OR = 2.11, 95% CI 1.07, 4.18; *P* = .03) were associated with higher odds of belonging to categories of lower resilience levels. However, more professional work experience was related to lower odds of belonging to categories of lower resilience levels (OR = 0.94, 95% CI 0.89-0.99, *P* <.04). Several variables, including marital status, demonstrated inconsistent associations across different modeling methods.

Conclusions

Resilience in professional health workers was related to personal and working conditions. The scores of emergency

staff were low and improvement with specific strategies is needed.

FULL TEXT

DETAILS

Subject:	Working conditions; Emergency medical care; Software; Job characteristics; Workers; Medical personnel; Physicians; Women; Questionnaires; Data analysis; Nurses; Emergency services; Work experience; Resilience; Professional ethics; Health care; Stress; Age; Marital status; Sociodemographics; Response rates; Variables; Data collection; Mental health; Family income; Nursing; Coronaviruses
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Military, Veteran, and Public Health Service Communities: JEN

ABSTRACT (ENGLISH)

Launch According to author Shannon Huffman Polson, who is among the first women to fly an Apache helicopter in combat in the United States Army, (1) commit, (2) learn, and (3) launch are the foundational steps to her process of cultivating internal grit and resilience.1 Given the importance of continuing to ensure that nurses are well represented in international, national, and state high-level decision-making and leadership roles to achieve population health equity,2 this process is poignantly relevant to our specialty. Lauded among early nursing theorists, her 21 Nursing Problems theory offers a unique and solid pragmatism that resonated for me with the unscheduled and immediate problem-solving nature of our emergency nursing specialty.4 Over the last century, the military and nursing evolved together from one of the few and initial professional systems by which women could formally achieve senior leadership promotion and rank in substantial numbers, serve in formally recognized and deployed roles in the military,5 and generate long-lasting scientific innovations and advances in disaster and trauma nursing interventions, prehospital trauma, and women's health.6 We have a tradition in the Journal of Emergency Nursing (JEN) of honoring our military and veteran nurses annually in our November issue. Readers can visit the JEN website7 for a collection of recently published military community and veteran health original research, literature review, and evidence-based papers on topics that include infection control,8 emergency nursing education and professional development,9-11 mental health,12,13 specimen-collection devices in the unit supply chain,14 emergency department point-of-care blood biomarker testing,15 and more.Tribute and Farewell Each November, we've included a tribute and farewell to members of the editorial team who have served for a decade or more.

FULL TEXT

Jessica Castner, PhD, RN, CEN, AE-C, FAEN, FAAN

Commit…Learn…Launch

According to author Shannon Huffman Polson, who is among the first women to fly an Apache helicopter in combat in the United States Army, (1) commit, (2) learn, and (3) launch are the foundational steps to her process of cultivating internal grit and resilience.[1] Given the importance of continuing to ensure that nurses are well represented in international, national, and state high-level decision-making and leadership roles to achieve population health equity,[2] this process is poignantly relevant to our specialty. Polson[1] recommends drawing a circle of trustworthy relationship connections as part of the second step, learning. This circle includes mentors, your dream team, colleagues, friends, and acquaintances. At the edges of this solar system of connections are role models, some of whom may be people you have never met or whom you emulate from history or from afar. As members of our discipline and emergency specialty make ongoing contributions to valuable knowledge by continuing to assume high-level leadership and policymaking roles, we are creating a brilliant and inspiring constellation of emergency nursing pioneers, vanguards, and leaders as role models to elevate one another and the next generation of emergency nursing professionals.

Pioneers, Vanguards, and Leaders

Dr. Faye Glenn Abdellah, EdD, LLD, ScD, RN, FAAN, is one of those distant lights that is a shining example for me.[3] In a time when our specialty is pulling together and cohesively supporting one another in the face of pandemic-related burnout and professional crises, I'm reminded of the wisdom and deep resilience of my earliest professional mentors who navigated nursing during international war and conflict during their own early careers. They show us that together we can and will overcome the challenges of today, no matter how impossible it may seem.

Abdellah was the pioneer of many firsts: first nurse to serve as Deputy Surgeon General of the US (1981-1989), first nurse to earn the rank of Rear Admiral, Upper Half, and founding Dean for the Uniformed Services University Graduate School of Nursing. Lauded among early nursing theorists, her 21 Nursing Problems theory offers a unique and solid pragmatism that resonated for me with the unscheduled and immediate problem-solving nature of our emergency nursing specialty.[4] Over the last century, the military and nursing evolved together from one of the few and initial professional systems by which women could formally achieve senior leadership promotion and rank in substantial numbers, serve in formally recognized and deployed roles in the military,[5] and generate long-lasting scientific innovations and advances in disaster and trauma nursing interventions, prehospital trauma, and women's health.[6] We have a tradition in the *Journal of Emergency Nursing* (*JEN*) of honoring our military and veteran nurses annually in our November issue. The purpose of this editorial is to introduce this November 2021 issue that carries on the tradition of honoring military and veteran nurses while seeking to expand to include their families, communities, and our public health service nurses moving forward.

We currently have a call for military community and veteran health manuscripts at *JEN.* We are actively recruiting emergency care relevant manuscripts that focus on military members, military families and caregivers, veterans, or veteran families and caregivers as the population or sample; include military or veterans as a measured characteristic to test hypotheses or predictive models; include military treatment facility, veteran hospital, or military environment as the setting; or advance interventions, clinical techniques, theories, concepts, leadership, or evidence-based practices rooted in or derived from military/veterans affairs innovation or science. Readers can visit the *JEN* website[7] for a collection of recently published military community and veteran health original research, literature review, and evidence-based papers on topics that include infection control,[8] emergency nursing education and professional development,[9-11] mental health,[12,13] specimen-collection devices in the unit supply chain,[14] emergency department point-of-care blood biomarker testing,[15] and more.

Tribute and Farewell

Each November, we've included a tribute and farewell to members of the editorial team who have served for a decade or more. This November, we honor Carrie A. McCoy, PhD, MSPH RN, CEN. Dr. McCoy became coeditor of the Emergency Nursing Review Questions section of *JEN* in 1995, after serving as a CEN item writer, member of

the Board of Certification for Emergency Nursing (BCEN) Board of Directors, and BCEN Research Committee. Dr. McCoy also served as a member of the Editorial Board of *JEN* and chaired the search committee for a new editor for *JEN* in 2006. She received a doctoral scholarship from the Emergency Nursing Association as well as a National Institute for Nursing Research predoctoral fellowship to study risk for agricultural injuries in women. Dr. McCoy has also been active in her local Emergency Nursing Association chapter, having served as a Trauma Nursing Core Course instructor since the inception of Trauma Nursing Core Course. In addition, she was member of the Greater Cincinnati Area Red Cross Disaster Team and the Kentucky Medical Reserve Team. She also served as member of the Community Advisory Committee for the Foundation for a Healthy Kentucky. She served in the US Army as a nurse during the Vietnam era and in 2011 was awarded the Greater Cincinnati Woman Veteran of the Year in the area of education. Dr Mccoy is retired from the University of Cincinnati Medical Center, where she spent many years working as a staff nurse in the emergency department, and she is Professor Emerita, Northern Kentucky University, where she taught nursing. On a personal note, I found our conversations about Dr. McCoy's adventures in organic farming to be endlessly delightful. To discuss public health, program planning and evaluation, and clinical emergency nursing with Dr. McCoy was to feel immersed in the presence of profound and inspiring wisdom. The editorial team wishes Dr. McCoy much happiness, health, and joy in her retirement.

DETAILS

Subject:	Emergency medical care; Public health; Veterans; Problem solving; Health promotion; Pragmatism; Leadership; Emergency services; Nursing; Teams; Evidence based research; Resilience; Nurses; Health services; Medical education; Evidence-based medicine; Supply; Theorists; Biological markers; Innovations; Decision making; Military nurses; Literature reviews; Professional development; Mental health; Health disparities; Disease control
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Quality Improvement: Using Teach-Back to Improve Patient Satisfaction during Discharge in the Emergency Department: JEN

ABSTRACT (ENGLISH)

Introduction

Patients discharged in the emergency department often have poor understanding of their discharge instructions. Teach-back is a communication method that involves asking patients to explain in their own words what a health care provider just told them. The purpose of this project was to determine whether nurse-led teach-back at discharge could improve patient satisfaction with discharge information.

Methods

A teach-back method was used to educate patients on what to do if they do not feel better after leaving, using a single site quality improvement design. Patient satisfaction was measured using a standardized benchmark question on whether providers explained what to do if they did not feel better after leaving. The department goal for this question was established as achieving a response of “Yes, definitely” for 64.4% or more of the satisfaction surveys. Patient satisfaction data were collected before and after intervention through a survey given to patients within 24

hours after their visit. A statistical process chart was used to analyze whether the observed improvements coincided with implementation of the teach-back intervention.

Results

Although there was an overall increase in post-intervention scores (61%) from baseline scores (59%), there were no special cause variations signaling that the intervention had a significant impact.

Discussion

Teach-back may improve patient satisfaction with discharge information. Future implementation with measures of intervention adoption, fidelity, accountability, and sustainability are needed.

FULL TEXT

Contribution to Emergency Nursing Practice

••Teach-back is an intervention in the emergency department setting that may improve patient understanding, but limited data are available on teach-back's influence on patient satisfaction.

••Teach-back may improve patient satisfaction but only with sustained efforts by clinical staff.

••Emergency nurses can consider using teach-back when explaining discharge information to improve patient comprehension, but effect on patient satisfaction is still unknown.

Introduction

In the emergency department, patient education at discharge is an essential part of the patient's visit to teach about disease processes, improve treatment compliance, provide follow-up guidance, and prevent unnecessary return visits. The Agency for Healthcare Research and Quality (AHRQ), a federal agency in charge of improving health care system quality and safety, lists teach-back as a suggested communication tool to increase patient understanding of health information.[1] Other communication tools suggested by the AHRQ include addressing language differences, considering cultural beliefs, and providing patient follow-up ([Box]).[1] In a recent systematic review on teach-back, it was found to be effective in a wide range of settings, populations, and comprehension outcomes.[2] Although the AHRQ and health care research both support the use of teach-back as a strategy to improve patient comprehension,[1,2] research is conflicting on whether teach-back can improve patient satisfaction with provider communication.

LOCAL PROBLEM

In the emergency department at a large urban level 1 trauma center, only 59.1% of the patients responded “Yes, definitely” to the question on whether the providers explained what to do if they do not feel better after leaving. This was below the department's goal of 64.4% (65% national ED benchmark).

COMMUNICATION GAP AND TEACH-BACK

Health literacy is the ability of individuals to obtain, process, and understand basic health information in order to make appropriate health care decisions.[1] Patients commonly receive health information verbally by providers, yet patients are only able to recall approximately half of the medical instructions provided to them.[3] Even when medical instructions are recalled, almost half of what patients recall is incorrect.[4] Unfortunately, recall of information may be even lower in the emergency department than in other health settings.[5] Even with both written and oral instructions, patients discharged from the emergency department have poor comprehension of the various aspects of discharge information including reasons to return.[6,7] When called a day after discharge, nearly one-third of ED patients have substantive questions or areas of confusion, with some patients reporting no recollection of receiving any discharge information.[8] Traditional written health information also has the additional problem of being poorly understood by people with different primary languages and lower literacy levels. Tools such as audio and video media, the

changing of font sizes, and pictorial education have been hypothesized to improve patient comprehension of discharge information,[9] but research has found these interventions to have limited success.[7]

Teach-back, which targets validation of patient comprehension, can be both a practical and cost-effective intervention to communicate with patients, particularly those with low health literacy.[2,10] Teach-back is a method that can enhance patients' understanding by allowing them the opportunity to verbalize in their own words information previously given by a provider. If the patient is unable to "teach-back" the information to the provider, the provider can re-explain it in a way the patient can understand.[11] The teach-back technique not only tests whether the patient is listening and understanding but also provides insight to the provider's communication skills and word clarity, and patient application of given information.[12] In a recent systematic review of the implementation and impact of teach-back, 19 out of 20 studies showed teach-back to be effective in learning as well as improving other health-related outcomes, such as quality of life.[2] The few published studies that have looked at the impact of teach-back in the emergency department have also shown promising results. Teach-back in the emergency department has improved the recall of information regarding diagnosis, treatment, follow-up care, and return instructions.[10,13,14]

TEACH-BACK AND PATIENT SATISFACTION

Although teach-back has shown to increase health literacy, very little is known about its effect on patient satisfaction. One study on teach-back found that it improved the satisfaction of hospitalized neurology patients receiving medication information.[15] When nursing students implemented teach-back with medication education as part of a quality improvement (QI) project, the intervention improved the patients' knowledge of medications but did not improve patient satisfaction.[16] Other studies conducted in a hospital medical unit, emergency department, and pregnancy/parenting telemedicine found no improvement in patient satisfaction with teach-back.[10,17,18]

PURPOSE

The purpose of this QI project was to determine whether nurse-led teach-back intervention could improve patients' satisfaction with discharge information to the department's goal of 64.4% or greater.

Methods DATA COLLECTION

This QI project used a longitudinal design that compared weekly baseline data with data collected after intervention. The project was conducted from February to October 2019 in the emergency department at a large urban level 1 trauma center located in Southern California that services about 260 patients per day. Patients discharged from the emergency department received a survey via email and an interactive voice recording (phone call) within 24 hours after their visit. The survey, which was produced by National Research Corporation (NRC) Health, contained 16 questions about their experience. It was used by this hospital before the QI project for collecting patient satisfaction data. The survey was chosen because of its quick patient outreach, previous integration into the department system, timeliness of results, and large data sample size. Surveys were sent in English, Spanish, Russian, or Mandarin, on the basis of patients' listed preferred language in the electronic medical records. NRC was responsible in translating the survey to the 4 different language options.

The question chosen to reflect patients' satisfaction of the provider explaining the discharge information was, "Did the care providers explain what to do if you did not get better after leaving?" There were 4 Likert-type answer choices, which were scored for data analysis: "No" (1), "Yes, somewhat" (2), "Yes, mostly" (3), and "Yes, definitely" (4). For the purposes of this project, the data include percentages of respondents who answered "Yes, definitely."

Pre-intervention data were collected for 13 weeks during February to April (N = 2570) to establish as a baseline. The QI project intervention was taught to staff in late April and May. The post-intervention data were collected for 18 weeks during June to October (N = 4694).

INTERVENTION IMPLEMENTATION

When implementing teach-back, the provider needs to be aware of their approach when asking patients to “teach-back” the information. During the teach-back process, some patients can feel as if their time is being wasted or that they are being judged or even insulted.[19] Medical terminology should be avoided.[20] If medical terminology must be used, such as a medical diagnosis (diabetes, congestive heart failure), those terms must be explained so that patients can later define the medical terminology in their own words. To optimize patient dialog and avoid patient judgment, a 4-step method was created ([Figure 1]) on the basis of recommendations from the AHRQ[1] and by incorporating methods supported by research on patient/provider communication.[11,12,14,19,21] When using teach-back at discharge, nurses were taught to (1) set a nonjudgmental tone; (2) explain the discharge information, including telling the patient what to do if they do not feel better after leaving, using simple terms and avoiding medical jargon; and (3) ask the patient an open-ended question about what to do if they do not feel better after leaving. Possible example questions provided during staff training were as follows: What is your plan if you are feeling worse in 3 days; Tell me 2 things that would happen, which would require you to return to the emergency department before following up with your doctor? The final step, (4) is to address any misunderstandings through reinforcement and clarification. Steps 3 and 4 may need to be repeated until satisfactory understanding by the patient is achieved. Emergency nurses (N = 93, 65% of total department) were trained on how to use teach-back after reviewing the written discharge summary with the patient at time of discharge. Training was provided by an emergency clinical nurse in 3 department meetings in late April and by the charge nurse during staff huddles for 3 weeks in May. During the same weeks of May, a clinical reminder adhesive note stating “Teach-Back, If you are not feeling better after leaving” was placed on the discharge paperwork at the time of discharge to remind nurses of the teach-back QI intervention. An email was also sent to the nursing staff in May, encouraging them to incorporate teach-back into their practice. No follow-up training was given after the month of May. No intervention fidelity or adoption at the individual nurse level was measured.

ETHICAL CONSIDERATIONS

This QI project was reviewed by both the hospital's Nursing Quality Improvement Committee and the Nursing Research Council, who determined this to be a quality improvement project. Hence, the project was deemed exempt from requiring the organizational Institutional Review Board review.

DATA ANALYSIS

Descriptive statistics were used to analyze participant demographic data. Changes in pre-intervention and post-"?>intervention data were assessed using a statistical process control chart available through the QI Macros Software, version 2021 (KnowWare International Inc). More specifically, a p-chart was used to assess changes in the weekly data on percentage of respondents who answered “Yes, definitely.” Data collected during the intervention time frame (weeks 14-17) were excluded. We followed methods well established in the literature for identifying special cause variation[22] to determine whether significant improvements were made after the intervention: (1) a single point outside the control limits, (2) a run of 8 or more points in a row above (or below) the centerline, (3) 6 consecutive points increasing (trending up) or decreasing (trending down), (4) 2 out of 3 consecutive points near (outer one-third) a control limit, and (5) 15 consecutive points close (inner one-third of the chart) to the centerline.-"?>

Results PATIENT DEMOGRAPHICS

Response rate of patients varied per month, with 27.4% being the lowest and 32.2% being the highest. [Table] shows the age, sex, language, race, and ethnicity demographics of the pre- and postintervention populations. A majority of respondents were 45 to 74 years old (44%), female (56%), white (67%), Non-Hispanic (79%), and reported English as their primary language (93%-94%).

PATIENT SATISFACTION WITH DISCHARGE INFORMATION

Figure 2 shows the p-chart of the percentage of respondents who answered “Yes, definitely” to the question, “Did the care providers explain what to do if you did not get better after leaving?” Overall, the average percent of the respondents responding “Yes, definitely” increased from a baseline of 59% to 61% at the end of the post-intervention period. Nonetheless, there were no special cause variations that indicated significant improvements after implementation of the teach-back intervention. The department goal was not met.

Discussion

At the end of the QI project, we did not meet the department goal of reaching 64.4% or greater on the patient satisfaction score. Furthermore, this QI project did not show sustained improvement of patient satisfaction through nursing-led teach-back. This finding is similar to previous studies on patient satisfaction and teach-back in and outside of the emergency department.[10,16,17,18] Patient satisfaction measurements did improve after the first month of intervention, and improvements trended down for most months afterwards. It can be hypothesized that this trend may be due to frontline nurses utilizing the teach-back intervention less often over time, but no data were collected to support this claim. This project only measured patient satisfaction and did not measure patient comprehension. The feasibility of the present study required design simplicity for implementation at the site and future study that incorporates measures of knowledge attainment, knowledge retention, and satisfaction together would improve the understanding of possible correlation between multiple variables. Only satisfaction with one aspect of the discharge information was measured in this project of, “what to do if you did not get better after leaving?” Future QI projects studying patient satisfaction on different education aspects (diagnosis, treatment, follow-up care, or medications) may have different results.

Before this QI project, the feasibility of measuring the effects of teach-back in the emergency department had been understudied.[13] Teach-back implementation can be challenging, particularly in the emergency department, because of the fast pace and frequent changes in patient acuity. A previous study measured teach-back as adding 1 minute and 39 seconds to the discharge conversation.[13] In a crowded emergency department, nurses are pressured to expedite discharges to improve patient throughput, which may prevent the required time for properly reviewing discharge information and test for patient comprehension.

Only 65% of emergency nursing staff attended the meetings when the teach-back education was provided. To reach the nurses that were not in attendance, the use of teach-back was discussed during staff huddles and via department email. Clinical reminders in the form of adhesive notes were also used. Having frontline teach-back champions educating remaining staff may have improved the overall department's intervention utilization and increased frontline staff support, adoption, and sustainability of the intervention.

This QI project only targeted nurses utilizing the teach-back method because the current practice pattern at this project location was that the nurses provided the discharge education. Although not included in this project, ED physicians and respiratory therapists also provide patient education. Published literature in interdisciplinary medical and respiratory care journals recommend incorporating teach-back for patient education such as discharge plan review, and medical device instructions.[20,23] Teach-back by clinicians in the home health field is also recommended and may reduce rehospitalizations.[24] Teach-back, particularly on the subject of “what to do if you don't get better after leaving,” may be hypothesized to reduce ED return visits, although past research has not shown teach-back to affect inpatient 30-day readmission rates.[25] Patient satisfaction with teach-back should be further examined with different health care providers and in various clinical settings.

Language barriers often exist at time of discharge. When teach-back was performed properly, nurses could easily identify language issues when patients were asked to answer an open-ended question. Nurses were encouraged to

use in-person, audio, or video interpreters when language barriers were identified. Even with available resources, health care providers may habitually provide simple commands and instructions without use of interpreters, which can impact the quality of communication exchange. Another language barrier is that the NRC survey sent to patients was available only in English, Spanish, Russian, and Mandarin. The limited languages of this survey did not seem to decrease survey participation, because response rate of non-English speaking patients was higher than that of English speaking ones (34.3% vs 29.8%).

Patient engagement with teach-back is always a factor to consider when measuring patient satisfaction. Patient engagement may decrease because of long wait times, feeling tired or ill, and fear of making mistakes.[13] Some patients, particularly those with limited health literacy, have vocalized concerns about teach-back being condescending, judgmental, and insulting.[19] As 1 patient remarked, “What you mean do I understand? Of course I understand what you are saying. I am not dumb.”[19] Setting a nonjudgmental tone, as taught in this QI project, is an important step to mitigate perceived patient judgment.

A strength of this project is the large number of total surveys collected (N = 7264). Instead of increasing the workload of creating and training staff on a new survey, data were pooled from an existing facility operation and routine benchmarking measure. Although a formal cost analysis was not performed for the QI project, the costs to the organization were limited to several thousand adhesive notes, a stamp, and three 15-minute staff meetings with frontline nursing staff. Potential revenue could occur with improved hospital reimbursement with elevated patient satisfaction scores and reduced costs associated with unnecessary return ED visits.

Limitations

We were unable to determine the fidelity of this QI project (the implementation of an intervention as intended) because we did not measure whether nurses were utilizing the teach-back method and whether they continued to use the method over time. This may impact the project's internal validity. Teach-back studies in the past have tried different implementation strategies to improve fidelity and sustainability. Observers have been used to monitor communication methods used during the discharge process to ensure that teach-back had occurred.[6,14,17] The Institute for Healthcare Improvement recommends using a clinical leader such as a charge nurse as an observer to assess whether frontline staff are executing the desired interventions from QI projects.[26] Bedside nursing stakeholders, such as teach-back champions, could have been assigned to listen in on a number of discharges per day and provide re-education as needed. For any staff that is involved with monitoring or re-educating nurses performing the QI task, allocated time should be given to participate in these activities.[27] Unless supported by department management, finding protected time for QI projects may be difficult, especially when departments have high census and low staffing.

Other teach-back studies have made infrastructure changes, such as adding prompts to the electronic medical record.[2] A pop-up banner could have been added to the patient's chart requiring nurses to document whether they used teach-back at discharge. It is our recommendation that further teach-back projects should include intervention tracking and routine staff reinforcement to optimize utilization and help hardwire the teach-back method into practice.

Additionally, the project was conducted in only 1 emergency department within 1 health care organization, which may limit external validity of findings across other settings and organizations. Nonetheless, lessons learned from this project can serve as a guide, which can be adapted to meet the specific needs of the implementing organization.

Implications for Emergency Clinical Care

This QI project showed that when frontline nurses were introduced to the teach-back method for use at discharge, the intervention may have slightly and initially improved patient satisfaction, although this improvement was not sustained in the long term. This project not only looked at the relationship of teach-back and patient satisfaction but

also exposed opportunities to enhance QI projects' fidelity and to prevent drift to baseline practice. Without a strong effort by the staff to carry out the QI tasks and deliberate monitoring, it is impossible to know whether nurses are performing the intended intervention.

Even if teach-back does not improve patient satisfaction, the benefit to patient comprehension is well documented in the literature.[2] Teach-back can be used to improve learning throughout the ED visit and not just at time of discharge. Teach-back can also include other skills in addition to communication, such as psychomotor skills redemonstration. "?>AHRQ also refers to patient redemonstration of psychomotor skills as the "show-back" method.[1] For example, a patient can demonstrate to the nurse a newly taught skill, such as breathing in an incentive spirometer or self-administering insulin. We encourage all health care providers to add teach-back to their practice, especially at time of discharge.

Conclusions

Findings from this QI project did not show that teach-back improved patient satisfaction with the provider's communication of the discharge information over time. However, lessons learned from this project shed light on the critical importance of incorporating a plan for changes in practice and sustainment of efforts. How to create a culture receptive to change is often the most difficult part of QI projects. Further implementation research should be performed on how to implement and integrate teach-back in the emergency department with measures of intervention adoption, fidelity, accountability, and sustainability.

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Author Disclosures

Conflicts of interest: none to report.

Response	Pre-intervention	Post-intervention		n
%	n	%	Age (y)	0-17
252	9.8	442	9.4	18-44
907	35.3	1634	34.8	45-74
1124	43.7	2054	43.8	≥75
287	11.2	564	12.0	Total
2570	100.0	4694	100.0	Sex
Female	1450	56.4	2644	56.3
Male	1120	43.6	2050	43.7

Total	2570	100.0	4694	100.0
Language	English	2406	93.6	4344
92.5	Spanish	143	5.6	313
6.7	Other	21	0.8	37
0.8	Total	2570	100.0	4694
100.0	Race	Asian	148	5.8
262	5.6	Black	543	21.1
927	19.7	Hawaiian/Pacific	5	0.2
13	0.3	Native American	3	0.1
8	0.2	White	1716	66.8
3123	66.5	Unknown/Declined	155	6.0
361	7.7	Total	2570	100.0
4694	100.0	Ethnicity	Hispanic	489
19.0	919	19.6	Non-Hispanic	2045
79.6	3718	79.2	Declined/ Unknown	36
1.4	57	1.2	Total	2570

Tool 1: Form a Team
Tool 2: Create a Health Literacy Improvement Plan
Tool 3: Raise Awareness
Tool 4: Communicate Clearly
Tool 5: Use the Teach-Back
Tool 6: Follow Up with Patients
Tool 7: Improve Telephone Access
Tool 8: Conduct Brown Bag Medicine Reviews
Tool 9: Address Language Differences
Tool 10: Consider Culture, Customs, and Beliefs
Tool 11: Assess, Select, and Materials
Tool 12: Use Health Education Material Effectively
Tool 13: Welcome Patients: Helpful Attitude, Signs, and More
Tool 14: Encourage Questions
Tool 15: Make Action Plans
Tool 16: Help Patients Remember How and When to Take Their Medicine
Tool 17: Get Patient Feedback
Tool 18: Link Patients to Non-Medical Support
Tool 19: Direct Patients to Medicine
Tool 20: Connect Patients with Literacy and Math Resources
Tool 21: Make Referrals Easy

DETAILS

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Risk assessment of self-injurious behavior and suicide presentation in the emergency department: An integrative review: JEN. (2022). Journal of Emergency Nursing, 48(1), 57-73. doi:https://doi.org/10.1016/j.jen.2021.10.002

IntroductionGlobally, there is a lack of clarity regarding the best practice to distinguish patients at the highest risk of suicide. This review explores the use of risk assessment tools in emergency departments to identify patients at high risk of repeat self-harm, suicide attempts, or death by suicide.MethodsThe review question ("Does the use of risk assessment tools in emergency departments identify patients at high risk of repeat self-harm, suicide attempts, or death by suicide?") focused on exposure and outcome. Studies of any design were included. The Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines were used. Study characteristics and concepts were extracted, compared, and verified. An integrative approach was used for reporting through narrative synthesis.ResultsNine studies were identified for inclusion. Two risk assessment tools were found to have good predictive ability for suicide ideation and self-harm. Three had modest prediction of patient disposition, but in one study, the clinical impression of nurses had higher predictive ability. One tool showed modest predictive ability for patients requiring admission.DiscussionThis review found no strong evidence to indicate that any particular risk tool has a superior predictive ability to identify repeat self-harm, suicide attempts, or death by suicide. Best practice lacks clarity to determine patients at highest risk of suicide, but the use of risk assessment tools has been recommended. Nevertheless, such tools should not be used in isolation from clinical judgment and experience to evaluate patients at risk. Education and training to augment risk assessment within the emergency department are recommended.

The effect of music-moving toys to reduce fear and anxiety in preschool children undergoing intravenous insertion in a pediatric emergency department: A randomized clinical trial: JEN. (2022). Journal of Emergency Nursing, 48(1), 32-44. doi:https://doi.org/10.1016/j.jen.2021.10.004

IntroductionIntravenous catheter insertion is a highly invasive medical procedure that causes fear and anxiety in children. This study aimed to analyze the effect of a toy (with music and movement) distraction method on fear and anxiety in children aged 4 to 6 years.MethodsThis experimental, randomized clinical trial used parallel trial design guided by the Consolidated Standards of Reporting Trials checklist. Using simple randomization, eligible children (age 4-6; N = 60) were assigned to the intervention group (n = 30), who received the toy distraction method, or to the control group (n = 30), who received standard care. The Children's Fear Scale was used to evaluate the fear levels, and Children's State Anxiety Scale was used to evaluate anxiety levels. Physiological parameters (pulse, oxygen saturation) and crying time were monitored by the researcher as indicators of fear and anxiety. The chi-square test, repeated measures analysis of variance, Friedman test, t test, the Mann-Whitney U test, Wilcoxon test, and the intraclass correlation test were used for data analysis.ResultsThere was no statistically significant difference in terms of fear and anxiety scores, physiological parameters, and crying time during the procedure between the children in the intervention and control group.DiscussionWe found that this method of toy distraction was not effective in reducing fear or anxiety during the intravenous catheter insertion procedure. Accordingly, we recommend that this distraction method be performed in different age groups and with larger samples in various painful and stressful practices in the future and that comparison be made with various distraction methods.

Board of directors: JEN. (2022). Journal of Emergency Nursing, 48(1) doi:https://doi.org/10.1016/S0099-1767(21)00314-7

NCPD earn up to 11.5 contact hours: JEN. (2022). Journal of Emergency Nursing, 48(1), 117. doi:https://doi.org/10.1016/S0099-1767(21)00328-7

The path ahead and the promise of the future: JEN. (2022). Journal of Emergency Nursing, 48(1), 1. doi:https://doi.org/10.1016/j.jen.2021.09.007

Today, I'm the Chief Nursing Officer at the same hospital and about to embark on my year as the ENA President. ENA continues to be here to support you in many ways: advocating for a healthy nursing work environment, creating

ENA University for your continuing education and skill development, and offering volunteer opportunities to help you grow within the organization. With that goal in mind, if we each push forward down the path toward our highest hopes and aspirations, the momentum of the emergency nursing community will build toward positive change.

Implementing a novel nursing site manager role in the pediatric emergency department for patient and staff safety during the COVID-19 pandemic: JEN. (2022). Journal of Emergency Nursing, 48(1), 13-21. doi:https://doi.org/10.1016/j.jen.2021.07.009

1 Much of the worldwide severe acute respiratory syndrome outbreak was hospital based, and health care workers were a significant portion (37%-63%) of suspected cases in affected countries.2 There are limited data on infection and mortality rate from coronavirus disease 2019 (COVID-19) among health care workers in the United States and around the world. Among 6760 adults hospitalized from March 1 to May 21, 2020, 5.9% were health care providers, with nursing-related occupations (36.3%) representing the largest portion of hospitalized providers.3 In the US and Mexico, health care workers represent 1 in every 7 COVID-19 cases.4 Notably, “these two countries account for nearly 85% of all the COVID-19 deaths among health care workers in the Pan American Health Organization] region.4 This reality, along with the idea that “there can be no patient safety without health worker safety,”5 made it immediately apparent that programs supporting the emergent and unprecedented educational needs of emergency nurses had to be implemented in a rapid, sustainable manner. Key stakeholders involved during the initial development and implementation of the site manager program included hospital-wide biocontainment team leaders, infection control experts, emergency department physician and nursing leadership, and staff nurses, clinical assistants, environmental services, and administrative staff. Because strict isolation was necessary for these patients, site managers enlisted the assistance of child life specialists to help with distraction techniques to decrease the patient’s fears and anxiety.

Emergency nurses association position statement: Medication management and reconciliation in the emergency setting: JEN. (2022). Journal of Emergency Nursing, 48(1), 88-93. doi:https://doi.org/10.1016/j.jen.2021.10.003

The three phases of the reconciliation process are imperative to ensure effective medication management and obtaining an as complete and accurate medication history is the first step.2 Medication management and reconciliation in the emergency setting is a collaborative effort between nurses, physicians, pharmacists, and patients to reduce risk for patients in health care settings and at home.1,2,4,8,9,13–15 This process requires that health care providers, including emergency nurses, communicate clearly with patients and their caregivers about the importance of maintaining an accurate medication list.4,13,16 An accurate medication list includes all medications including prescriptions, over-the-counter medications, supplements, herbals, medicinal marijuana, known allergies and last dose. Emergency nurses play an important role in empowering patients to understand the role they play in the medication management process as well as helping them to understanding the potential risks of drug/drug or drug/food interactions.3,13,16,20,36 Emergency nurses can educate patients and/or their caregivers on the importance of maintaining and keeping with them an accurate medication history including, dosage and frequency of all prescriptions, over-the-counter drugs, supplements, medicinal herbs, and other substances.16,20,36 Additionally, emergency nurses are in a position to advocate for best practices in the medication management process to ensure patient safety.ENA Position It is the position of the Emergency Nurses Association that: Triage is intended to rapidly identify life-threatening or high-risk situations. ...]collection of comprehensive medication history can be delayed and performed after the patient is stable. When first announced, there was little direction as to the who, what, when, where, and how to complete the process, which led to, and continues to create, confusion among emergency nurses and other health care providers.18,37 As initially defined by TJC, the process of medication reconciliation was intended to reduce discrepancies and prevent medication errors but was complex, laborious, and did not necessarily result in accurate information.18,19 Because of difficulty in implementation the lack of proven strategies for success TJC, in 2011, suspended the original NPSG and incorporated medication reconciliation into NPSG number 3.1 This safety goal acknowledges the challenges of reconciliation yet still requires a “good faith effort” to obtain a medication history (the first step) on arrival and then comparing it with those medications that are prescribed (the reconciliation stage).

Commentary on “Remote advance care planning in the emergency department during COVID-19 disaster: Program development and initial evaluation”: JEN. (2022). Journal of Emergency Nursing, 48(1), 7-9. doi:https://doi.org/10.1016/j.jen.2021.10.007

Novel applications of telehealth exploded during the pandemic.1 From virtual acute care visits to virtual triage and home visits and telehealth via ambulances, synchronous and asynchronous telehealth etched a permanent place in the emergency care specialty.2 In this edition of the Journal of Emergency Nursing (JEN), Liberman et al3 explore a pragmatic telehealth program developed to take the heavy, bedside end-of-life discussion away from the front-line staff and offload it to a trained group of nurses via telehealth. The program developed a system by which the bedside team could alert the remote palliative care providers to engage the family in end-of-life decisions.4 These included DNR/DNI, MOLST, health care proxy discussions, and disposition. Considerations on supporting the entire health care workforce included providing work during quarantine, providing offsite work to those health care workers at higher risk of contracting severe COVID-19, and providing a channel to support both the emotional needs of the emergency health care workers at the bedside and the need to work for those sidelined; this program was ideal.

Prevalence of prolonged length of stay in an emergency department in urban denmark: A retrospective health records repository review: JEN. (2022). Journal of Emergency Nursing, 48(1), 102.e1-102.e12. doi:https://doi.org/10.1016/j.jen.2021.08.005

IntroductionProlonged length of stay in emergency departments is associated with increased hospitalization, hospital-acquired pressure ulcers, medication errors, and mortality. In acute admissions in Denmark in 2018, 67% of patients experienced waiting time from arrival to examination. This study aimed to estimate the prevalence of prolonged length of stay (≥6 hours) and identify risk factors related to input, throughput, and output components.MethodsA retrospective health records repository review included 4743 patients admitted to a single urban emergency department in Denmark in January 2019. Data collected from the electronic health record system repository included demographic and organizational characteristics and were analyzed using descriptive statistics and logistic regression.ResultsAmong patients admitted in the study period, 31% had a prolonged length of stay of ≥6 hours. Prolonged length of emergency department stay was associated with being female (male odds ratio OR], 0.86; 95% confidence interval CI], 0.75-0.98), treatment by medical service (OR, 4.25, 95% CI, 3.63-4.98) vs surgical or injury, triage acuity of 2-Orange (OR, 1.45; 95% CI, 1.18-1.78) or 3-Yellow (OR, 1.47; 95% CI, 1.23-1.75) on a 5-level scale, evening (OR, 1.44; 95% CI, 1.24-1.66) or night (OR, 2.36; 95% CI, 1.91-2.91) arrival, ages 56 to 80 (OR, 1.79; 95% CI, 1.52-2.11) and >81 (OR, 2.40; 95% CI, 1.99-2.88) years, and hospital admission (OR, 1.19; 95% CI, 1.04-1.38) vs discharge from the emergency department to home.DiscussionFemale, elderly, and medical patients were each identified as at-risk characteristics for ≥6-hour length of stay in the emergency department. Acute care patient pathways in the emergency department, particularly for evening and night, with guideline-based care and system level improvements in patient flow are warranted. Further research with larger populations is needed to identify and support interventions to decrease prolonged length of stay.

Experience of violence and factors influencing response to violence among emergency nurses in south korea: Perspectives on stress-coping theory: JEN. (2022). Journal of Emergency Nursing, 48(1), 74-87. doi:https://doi.org/10.1016/j.jen.2021.07.008

IntroductionThis cross-sectional study aimed to explore the experiences of workplace violence involving emergency nurses and to identify the factors influencing the response to violence on the basis of the stress-coping theory formulated by Lazarus and Folkman.MethodsUsing a cross-sectional design, a structured questionnaire was administered to measure the experience of violence, perceived stress, coping actions after violence, resilience (Connor-Davidson Resilience Scale), and responses to violence. The participants were 131 nurses who were working in the emergency departments in 9 of 11 general hospitals in 2 cities in South Korea. The collected data were analyzed using descriptive statistics, t tests, analyses of variance, Pearson correlations, and hierarchical multiple regression analyses.ResultsThe most frequent type of violence was verbal violence, and the main offender involved in all types of violence was the patient. The methods for coping with violence were mainly passive, and emotional responses were the most frequently reported response to violence. In the final model (explanatory

power = 41.5%), with response to violence as the dependent variable, the effects of the experience of violence disappeared, and only the effects of perceived stress and resilience remained.DiscussionThe results of this study suggest that internal factors such as perceived stress and resilience have a more meaningful effect on the response to violence than the experience of violence itself. The findings are expected to serve as assessment data for preparing interventions and policies around prevention of, and effective coping regarding, workplace violence toward emergency nurses.

A framework for standardizing emergency nursing education and training across a regional health care system: Programming, planning, and development via international collaboration: JEN. (2022). Journal of Emergency Nursing, 48(1), 104-116. doi:https://doi.org/10.1016/j.jen.2021.08.006

IntroductionThe challenges related to providing continuing education and competence management for emergency nurses are not unique to any one organization, health system, or geographic location. These shared challenges, along with a desire to ensure high-quality practice of emergency nursing, were the catalyst for an international collaboration between emergency nurse leaders in Region Zealand, Denmark, and nurse leaders and educators from a large academic medical center in Boston, Massachusetts. The goal of the collaboration was to design a competency-based education framework to support high-quality emergency nursing care in Region Zealand. The core objectives of the collaboration included the following: (1) elevation of nursing practice, (2) development of a sustainable continuing education framework, and (3) standardization of training and nursing practice across the 4 emergency departments in Region Zealand.MethodsTo accomplish the core objectives, a multi-phased strategic approach was implemented. The initial phase, the needs assessment, included semi-structured interviews, a self-evaluation of skills of all regional emergency nurses, and a survey regarding nursing competency completed by emergency nurse leadership. Two hundred ninety emergency nurses completed the self-evaluation. The survey results were utilized to inform the strategic planning and design of a regional competency-based education framework.ResultsIn 18 months, and through an international collaboration, emergency nursing education, training, and evaluation tools were developed and integrated into the 4 regional emergency departments. Initial feedback indicates that the education has had a positive impact. The annual competency day program has continued through 2021 and is now fully institutionalized within the regional emergency nursing continuing education program. Furthermore, use of this innovative education framework has expanded beyond the emergency department to other regional nursing specialties.Discussion and ConclusionThrough this unique collaboration with regional and international participants, a sustainable, regional emergency nursing education program was developed that has elevated and standardized the practice of emergency nurses in Region Zealand, Denmark. This program development can serve as a model for region-wide or health care system–wide collaborations in other countries.

Considerations for collaborations: International nursing continuing professional development: JEN. (2022). Journal of Emergency Nursing, 48(1), 10-12. doi:https://doi.org/10.1016/j.jen.2021.11.002

Efforts to standardize continuing professional development (CPD) activities will assist in achieving baseline competency in a rapidly changing health care environment, no matter the geographical location. ...]the Nursing Council of Hong Kong defines CPD as “...any post-registration/post-enrollment educational skill or experience updating which is nursing-specific or health care related with an aim to enrich the nurses’ contribution to quality health care and help them in their pursuit of professional goals,”4 whereas nursing CPD is defined by the American Nurses Credential Center (ANCC) as an educational activity that builds upon the educational or experiential knowledge of a professional registered nurse.5 The administrative bodies, generally referred to as regulators, of nursing and midwifery professional practice have a strong voice in the regulation of practice and have used this influence to motivate and inspire specific CPD requirements.6 Some studies have called for specific CPD requirements for advanced practice nurses and midwives, especially in pharmacology.7 Regardless of the regulatory body over nursing practice in a particular region, flexibility toward professional development, especially during this pandemic, is necessary.8 Knowing and understanding nurses’ professional practice needs and development requires awareness and perspective of the particular health care landscape.Perspective Outside the United States Nursing CPD can mean several different things throughout the world. Under this regulatory body, the Professional Development Committee advises the Nursing Council on many things, including the authorization of CPD providers,

their educational activities, and their performance.12 To maintain nursing licensure, nurses must accumulate a minimum of 45 CPD points every 3 years.4 These different regulatory models, of which there are many more, do have some elements in common. Just as significant is the desire for collaboration among nurses, midwives, or other health care providers to develop high-quality nursing education within their country or region.Lessons Learned Through Successful International Collaboration Sigma Theta Tau International Honor Society of Nursing (Sigma), founded in 1922 by 6 nurses at the then Indiana University Training School for Nurses in Indianapolis, IN, is an international nursing organization.

Information for readers: JEN. (2022). Journal of Emergency Nursing, 48(1) doi:https://doi.org/10.1016/S0099-1767(21)00315-9

National estimates of workplace telehealth use among emergency nurses and all registered nurses in the united states: JEN. (2022). Journal of Emergency Nursing, 48(1), 45-56. doi:https://doi.org/10.1016/j.jen.2021.07.001

IntroductionThe goal of this research was to quantify the baseline status of prepandemic workplace emergency nursing telehealth as a key consideration for ongoing telehealth growth and sustainable emergency nursing care model planning. The purpose of this research was to: (1) generate national estimates of prepandemic workplace telehealth use among emergency and other inpatient hospital nurses and (2) map the geographic distribution of prepandemic workplace emergency nurse telehealth use by state of nurse residence.MethodsWe generated national estimates using data from the 2018 National Sample Survey of Registered Nurses. Data were analyzed using jack-knife estimation procedures coherent with the complex sampling design selected as representative of the population and requiring analysis with survey weights.ResultsWeighted estimates of the 161 865 emergency nurses, compared with 1 191 287 other inpatient nurses revealed more reported telehealth in the workplace setting (49% vs 34%) and individual clinical practice telehealth use (36% vs 15%) among emergency nurses. The geographic distribution of individual clinical practice emergency nurse telehealth use indicates greatest adoption per 10 000 state residents in Maine, Alaska, and Missouri with more states in the Midwest demonstrating emergency nurse adoption of telehealth into clinical practice per population than other regions in the United States.DiscussionBy quantifying prepandemic national telehealth use, the results provide corroborating evidence to the potential long-term adoptability and sustainability of telenursing in the emergency nursing specialty. The results also implicate the need to proactively define emergency nursing telehealth care model standards of practice, nurse competencies, and reimbursement.

Is your trauma center peds ready?: JEN. (2022). Journal of Emergency Nursing, 48(1), 2-6. doi:https://doi.org/10.1016/j.jen.2021.11.001

Injury remains the leading cause of death for children age 1 to 18 years, yet the initial care of most injured children also takes place in emergency departments primarily designed and equipped to treat adults.5 The results of recent studies have shown that even trauma centers are inconsistent in their level of readiness to care for children.6,7 For example, while the majority of trauma centers have a tool to use for precalculated pediatric drug dosing, many lack other important parameters such as recording pediatric weights in kilograms only and the presence of a quality improvement process that includes pediatric-specific metrics.6 A recently published study of injured children brought to 832 emergency departments in US trauma centers was the first to dig deeper and evaluate the association between pediatric readiness of emergency departments verified as trauma centers (as per the 2013 NPRP nationwide assessment), in-hospital mortality, and in-hospital complications.7 In the study of over 372 000 injured children, receiving initial care in an emergency department that had a pediatric readiness score within the highest quartile of readiness was associated with 42% lower odds of death. The authors concluded that if all the children included in the study had been treated in emergency departments in the highest quartile of readiness, an additional 126 lives (95% confidence interval 97-154 lives) might have been saved in each of the 6 years for which data were collected.7 That is over 700 children’s lives that might have been saved if the trauma centers had all invested the time and resources required to better prepare for stabilizing pediatric emergency care! The presence of a PECC has been identified as the single most important factor that influences the readiness of any emergency department that cares for pediatric patients.10 The 2018 American Academy of Pediatrics Committee on Pediatric Emergency

Medicine and Section on Surgery, American College of Emergency Physicians Pediatric Emergency Medicine Committee, and Emergency Nurses Association Pediatric Committee Joint Policy Statement, “Pediatric Readiness in the Emergency Department,”9 identified the presence of 2 PECCs, one a physician and one a nurse, as central to the readiness of any emergency department that cares for children. “Implementing a Novel Nursing Site Manager Role in the Pediatric Emergency Department for Patient and Staff Safety during the COVID-19 Pandemic,”12 published in this current issue of the Journal of Emergency Nursing (JEN) described the way the Boston Children’s Hospital emergency department pivoted quickly at the onset of the pandemic to meet the specialized needs of their multidisciplinary staff during this time, while ultimately also benefiting their pediatric patients.

Editorial board: JEN. (2022). Journal of Emergency Nursing, 48(1) doi:https://doi.org/10.1016/S0099-1767(21)00313-5

Remote advance care planning in the emergency department during COVID-19 disaster: Program development and initial evaluation: JEN. (2022). Journal of Emergency Nursing, 48(1), 22-31. doi:https://doi.org/10.1016/j.jen.2021.09.006

BackgroundThe coronavirus disease 2019 pandemic caused an unprecedented surge of patients presenting to emergency departments and forced hospitals to adapt to provide care to patients safely and effectively. The purpose here was to disseminate a novel program developed under disaster conditions to address advance care planning communications.MethodsA program development and initial evaluation was conducted for the Remote Goals of Care program, which was created for families to communicate patient goals of care and reduce responsibilities of those in the emergency department.ResultsThis program facilitated 64 remote goals of care conversation, with 72% of conversations taking place remotely with families of patients who were unable to participate. These conversations included discussions of patient preferences for care, including code status, presence of caregivers or surrogates, understanding of diagnosis and prognosis, and hospice care. Initially, this program was available 24 hours per day, 7 days per week, with gradual reduction in hours as needs shifted. Seven nurses who were unable to work in corona-positive environments but were able to continue working remotely were utilized. Lessons learned include the need for speed and agility of response and the benefit of established relationships between traditionally siloed specialties. Additional considerations include available technology for patients and families and expanding the documentation abilities for remote nurses. A logic model was developed to support potential program replication at other sites.DiscussionUpon initial evaluation, Remote Goals of Care Program was well received and demonstrated promise in decanting the responsibility of goals of care discussions from the emergency department to a calmer, remote setting. In future iterations, additional services and technology adjustments can be made to make this program more accessible to more patients and families. Other facilities may wish to replicate our Remote Goals of Care Program described here.

Over-the-counter medication prescribing in a pediatric emergency department: Health records review: JEN. (2022). Journal of Emergency Nursing, 48(1), 94-101.e1. doi:https://doi.org/10.1016/j.jen.2021.09.003

ObjectiveThe purpose of this project was to describe patterns in over-the-counter medication prescribing for nonacute patients with Medicaid in a pediatric emergency department. Differences were also tested in visit time and charges between patients with and without over-the-counter medication prescriptions.MethodsRetrospective chart review of children with Missouri Medicaid presenting to a single site between January 1, 2018 and December 31, 2018 was conducted. Low-acuity patients with common diagnoses were included. Over-the-counter medications prescribed, the cost of prescriptions, the time spent in the emergency department, provider care time, patient age, and the month of visit were extracted. Data were analyzed with descriptive statistics and t tests.ResultsApproximately 37% of children were prescribed over-the-counter medications, most commonly antipyretics. When comparing visits in which an over-the-counter medication was prescribed to visits without an over-the-counter medication prescription, we found no significant difference in the associated charges, total time in the department, and provider care time.ConclusionOver-the-counter medications were prescribed for more than one-third of children cared for in the pediatric emergency department for low-acuity presentations. These visits may represent a substantial area for Medicaid access barriers, system redesign, and cost savings.

Table of contents: JEN. (2022). Journal of Emergency Nursing, 48(1) doi:https://doi.org/10.1016/S0099-1767(21)00312-3

Stay positive and keep the strength: JEN. (2021). Journal of Emergency Nursing, 47(6), 829. doi:https://doi.org/10.1016/j.jen.2021.09.004

For me, it is like seeing the light at the end of the tunnel as we move along, and as we get closer to it, the tunnel seems to take a turn, rendering the light dimmer and more distant. A positive attitude is essential to be successful. Another quote I find inspirational is from General Colin Powell: “Perpetual optimism is a force multiplier.”

Catheter length in-vein impacts ultrasound-guided peripheral intravenous catheter survival: JEN. (2021). Journal of Emergency Nursing, 47(6), 843-845.e2. doi:https://doi.org/10.1016/j.jen.2021.06.001

Dear Editor: The 2021 Infusion Nursing Standards of Practice was updated to highlight the importance of choosing a longer peripheral intravenous (PIV) catheter when ultrasound (US) guidance is needed.1 A longer PIV increases the likelihood of more catheter length in-vein, which is a key predictor of PIV catheter survival.2-5 Recently, the article “The Effect of Catheter Length Placed Into the Vein on Peripheral Ultrasound-Guided Catheter Survival Time: A Prospective Observational Study” was published in the Journal of Emergency Nursing.6 The results demonstrated that US PIV survival was not related to in-vein length of catheter. Furthermore, we aim to provide a balanced perspective of the current evidence on this important topic.Dissecting the Study We used a published critical appraisal tool to assess the quality of the Miles et al6 manuscript and determined that there were several pertinent methodological weaknesses worthy of additional discussion.7 See Supplementary Appendix for a complete list of categories and evaluation scores. The patient population in this study of 98 patients was highly diverse with roughly equal proportions recruited in the emergency department and the intensive care unit. ...]it is unclear if the most appropriate statistical approach was used for this analysis.

Optimizing discharge knowledge and behaviors: JEN. (2021). Journal of Emergency Nursing, 47(6), 839-842. doi:https://doi.org/10.1016/j.jen.2021.09.001

Effective instructions provide patients the ability to manage their home care, including obtaining and taking medication, arranging follow-up, and understanding the circumstances under which they should return to the emergency department.1,2 Inadequate or poorly understood instructions are associated with poor adherence to prescribed therapy regimens and related negative outcomes including unscheduled returns and higher rates of hospital admission.3–6 Individual and environmental factors have been implicated in the poor comprehension of and compliance with discharge instructions,1,4–7 including limited health literacy.1,6 Although some research has examined the association between ED discharge instructions and patient satisfaction, limited research examines teach-back's effect on patient satisfaction.8,9 In this issue of the Journal of Emergency Nursing, Hodges et al evaluated teach-back as a method of increasing patient satisfaction with the discharge process. The authors identified patient comprehension outcomes as a subject for future research.10 Optimizing ED discharge instructions requires a thorough consideration of both process and outcome measures.1,11 The Agency for Healthcare Research and Quality's 2014 Improving the Emergency Department Discharge Process: Environmental Scan Report identifies components for a high-quality ED discharge and factors that contribute to a discharge failure. Individuals with low health literacy are among those considered to be at risk for discharge failure.1 However, the emergency department's chaotic environment, lack of familiarity with providers, limited time for education, and the patient's physical condition among other conditions can make understanding of and ultimately adhering to discharge instructions challenging for many patients.4,5 Research has demonstrated that verbal instructions and a combination of verbal and written instructions provide less than optimal comprehension of discharge instructions, with many patients having <50% recall.5 In addition, many studies of ED discharge do not evaluate postdischarge adherence to instructions.1,5 Optimizing the understanding of instructions and compliance with follow-up care begins with unhurried, unambiguous instructions delivered in lay terms to the patient; as appropriate, a translator should explain in the patient's preferred language.12 When the patient is open to the technique, teach-back is a fundamental part of this process.

Prevalence and associated factors of burnout risk among intensive care and emergency nurses before and during the coronavirus disease 2019 pandemic: A cross-sectional study in belgium: JEN. (2021). Journal of Emergency Nursing, 47(6), 879-891. doi:https://doi.org/10.1016/j.jen.2021.08.007

IntroductionThis study aimed to assess (1) the prevalence of burnout risk among nurses working in intensive care units and emergency department before and during the coronavirus disease 2019 pandemic and (2) the individual and work-related associated factors.MethodsData were collected as part of a cross-sectional study on intensive care unit and emergency nurses in Belgium using 2 self-administered online questionnaires distributed just before the pandemic (January 2020, N=422) and during the first peak of the pandemic (April 2020, N=1616). Burnout was assessed with the Maslach Burnout Inventory scale.ResultsThe overall prevalence of burnout risk was higher among emergency nurses than intensive care unit nurses but was not significantly different after the coronavirus disease 2019 pandemic (from 69.8% to 70.7%, χ^2=0.15, P=.68), whereas it increased significantly among intensive care unit nurses (from 51.2% to 66.7%, χ^2=23.64, P < .003). During the pandemic, changes in workload and the lack of personal protective equipment were significantly associated with a higher likelihood of burnout risk, whereas social support from colleagues and from superiors and management were associated with a lower likelihood of burnout risk. Several determinants of burnout risk were different between intensive care unit and emergency nurses.ConclusionOur findings indicate that nurses in intensive care unit and emergency department were at risk of burnout but their experience during the coronavirus disease 2019 pandemic was quite different. Therefore, it is important to implement specific measures for these 2 groups of nurses to prevent and manage their risk of burnout.

The accuracy of medication administration data in the emergency department: Why does it matter?: JEN. (2021). Journal of Emergency Nursing, 47(6), 837-838. doi:https://doi.org/10.1016/j.jen.2021.08.008

...]unaddressed EHR-related systems issues with medication administration in the emergency department still exist. ...]along with the increasing use of artificial intelligence (AI) in the emergency department, expert clinical involvement in all development and implementation phases of AI is essential and often missing. ...]working groups, such as from the Nursing Knowledge Big Data Science conference, have generated a framework for documentation burden.7 My colleagues and I are leading8 an initiative funded by the National Library of Medicine that brought relevant stakeholders together in a symposium to reduce documentation burden by 75% in the next 5 years.8 Finally, clinical documentation reduction efforts commonly recommend that EHR companies create more user-friendly documentation structures.

Editorial board: JEN. (2021). Journal of Emergency Nursing, 47(6) doi:https://doi.org/10.1016/S0099-1767(21)00258-0