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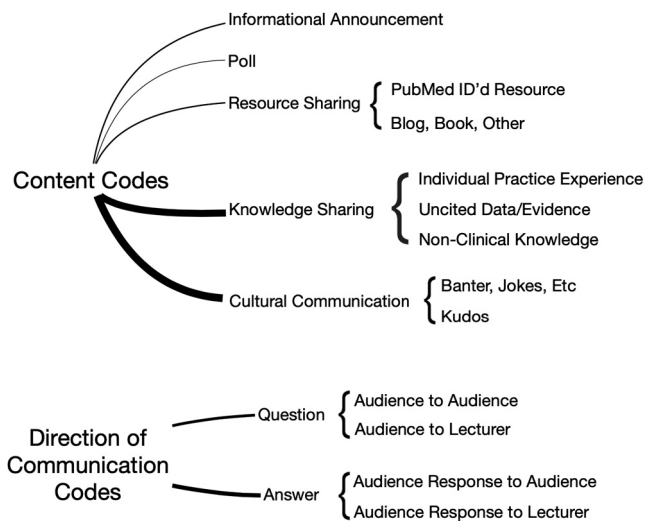
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author made a final coding determination. Following the study period, a survey distributed to residents and faculty assessed attitudes towards the synchronous online discussions.

Results: The qualitative analysis of the transcripts identified 2352 coded messages. The final coding schema can be seen in Figure 1. Of 1720 identified content codes, the most commonly identified themes were cultural communications (40.8%) and knowledge sharing (39.0%). Within the broader theme of knowledge sharing, participants were most likely to share individual practice experience (366/671 codes). Statements with uncited data/evidence (113 codes) occurred in similar frequency to sharing of academic resources (137 codes).

Questions directed towards other members of the audience (48.8% of questions) were only slightly less common than questions directed to the lecturer (51.2% of questions). There were 56 respondents to the survey (30 residents, 25 faculty, 1 fellow). Of the 44 respondents that had presented didactics, 54.5% (24/44) identified that it was challenging to keep up with the synchronous online discussion. From the perspective of the audience, 82.1% (46/56) felt it was easy to keep up with the discussion. Presenters of didactics felt identifying a member of the audience as a surrogate was the easiest means to keep up with the discussion (75%, 33/44 presenters). Audience members agreed that they were much more likely to ask a question in a synchronous online discussion as opposed to speaking out loud (71.4%, 40/56).

Conclusions: Weekly academic conferences are a critical component of residency education, enabling not only the acquisition of knowledge but also the social sharing of knowledge/experiences developing of robust communities of practice. Our qualitative analysis found that cultural communication occurred with near equal frequency to knowledge sharing and that sharing of individual practice experiences was more common than sharing of academic resources. These synchronous online discussions may make it more likely for audience members to ask questions of each other or the lecturer but keeping up with the discussion was challenging for lecturers.



Global, and Cochrane CENTRAL, as well as grey literature. Database searches were not limited by date or language. Two reviewers identified studies describing any interventions for delirium prevention and/or treatment in the ED. Disagreements were settled by a third reviewer. The risk of bias was evaluated by the Cochrane risk of bias tool or Newcastle-Ottawa (NOS) scale. We described the overall findings from selected articles for this systematic review instead of a planned meta-analysis.

Results: Our search strategy yielded 6, 838 studies of which 12 met study inclusion criteria. Our observed kappa was 0.79 (95% CI:0.56 - 1.0). Half of these studies were available in abstract only. Of included studies, two were randomized controlled trials (RCT): A total of seven studies used mixed study settings including ED. Two RCTs evaluated pharmacologic interventions for delirium prevention, three non-RCTs employed a multifactorial delirium prevention program, three non-RCTs evaluated regional anesthesia for hip fractures, two studies evaluated the implementation of delirium screening, and one study evaluated the use of Foley catheter, medication exposure, and risk of delirium (Table). Of the 12 studies included only four studies demonstrated a significant impact on a delirium incidence and duration – one RCT of melatonin, two non-RCT studies on multifactorial program, and one case control study on the use of Foley catheter.

Conclusion: Our review demonstrated that research into delirium prevention and treatment in the ED setting is still in its infancy. Older adults with hip fracture appear to be a target population; however, interventions studied to date have not demonstrated a significant impact. Further research is needed into effective delirium prevention and treatment interventions in the ED.

Table. Summary of selected articles.

Author/Study year	Intervention	Delirium Outcome	Effect Size	Population	Setting	Overall risk of bias
Schrijver, E/2018	Haloperidol vs Placebo	Incidence	OR 1.43 (95% CI 0.72, 2.78)	General	ED and inpatient	High
Al-Aama, T/2010	Melatonin vs Placebo	Incidence	OR 0.19 (95% CI 0.06, 0.62)	General	ED and inpatient	Low
Naughton, B/2005	Multifactorial	Prevalence	4 months RR 0.56 (95% CI 0.38, 0.8)	General	ED and geriatric unit	High
Bjorkelund, K/2010	Multifactorial	Incidence	9 months RR 0.47 (95% CI 0.3, 0.73)	Older adults with hip fracture	ED and inpatient	Low
Delaney, M/2015	Delirium screening	Return ED visit	RR 0.37 (95% CI 0.22, 0.61)	General	ED	High
Noel, C/2019	Foley catheter	Duration	90 to 35 per month	Older adults	ED	Low
LeBlanc, P/2016	Femoral Nerve Block (FNB)	Incidence	OR 3.1 (95%CI 1.3, 7.4)	Hip fracture	ED	High
Sun, H/2019	Non-pharmacological	Delirium	38.5% (no comparison group)	Older adults	ED, inpatient unit, and ICU	High
Wen, Q/2017	Multifactorial	Incidence	40.1% pre- vs 34.3% post intervention (no raw number)	Hip fracture	ED and inpatient unit	Low
Berrin, L/2020	Delirium screening	Length of stay	10.1% vs "Reported Control" 48%	General	ED and inpatient unit	High
Herrman, N/2020	FNB	Delirium diagnosis	LOS 3.93 vs 3.22 days (p=0.046)	Hip fracture	ED	High
Yip, D/2019	Fascia iliaca block (FIB)	Drug induced delirium	18.4% vs 15.1% (p=0.56)	Hip fracture	ED	Low
			23% vs 26% (p=0.58)			

345 Delirium Prevention and Treatment in the Emergency Department: A Systematic Review

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Study Objective: Delirium is a dangerous syndrome of acute brain dysfunction and is common in the emergency department (ED), especially among the older adults. Most systematic reviews of interventions for delirium prevention and treatment, however, have focused on inpatient settings. The objective of this systematic review was to synthesize the existing evidence on pharmacologic and non-pharmacologic interventions to prevent incident delirium or decrease the severity or shorten the duration of prevalent delirium in older adults presenting to the ED.

Methods: Inclusion criteria included any study of an intervention to prevent or treat delirium in older ED and inpatient settings. Searches using subject headings and keywords were conducted from database inception through June 2020 in Ovid MEDLINE, EMBASE, PsycINFO, CINAHL, ProQuest Dissertations and Theses

346 Mariner Self-Classification of Contact-Type With COVID-19 Index Case and Subsequent Infection on Ships

GW Maritime Medical Access Adam Rutenberg, Byrnes T, Sikka N, Haile-Mariam T, Boniface K, O'Connell F, Hood C, Pourmand A/George Washington University, Washington, DC

Study Objectives: Early cruise line outbreaks of SARS-CoV-2 focused attention on the risk of transmission aboard ships. While cruise ship travel was suspended, many other segments within the maritime industry, including shipping, infrastructure maintenance, and food production continued. Ships became isolated congregate residential and working environments while at sea. To further understand transmission aboard ships, we examined mariners' self-classification of contact with an index case during several independent COVID-19 case investigations.

Methods: This is a retrospective cohort study of mariners aboard vessels with an index case of COVID-19. Data were abstracted from an academic emergency department-based maritime Telemedical Assistance Service that provides care

globally. The first case identified on a vessel was designated the index case and any subsequent cases were designated non-index cases. Immediately upon identification of an index case, mariners were asked to classify their contact with the index case as Casual, Working, and Close, defined as follows: Casual - "Passed in passageways but no physical contact. Rarely in the same space for a prolonged period of time." Working - "Worked in close proximity (but no physical contact) and shared a workspace on occasion." Close - "Had physical contact and was frequently in the same room or workspace." We then identified non-index cases aboard the vessel and examined the self-classification of contact type. This study was approved by the IRB.

Results: In the study cohort, 26 of 139 mariners tested positive (19%) and 8 of the 26 (31%) positives were index cases. Of the 18 non-index cases, 11, 2, and 1 mariner(s) reported casual, working, and close contact with an index case, respectively (61.1%, 11.1%, and 5.5%). The remaining 4 mariners did not report a contact type. Of the 113 mariners who tested negative, 68, 27, and 5 reported casual, working, and close contact with an index case respectively (60.1%, 23.4%, 4.4%). No contact at all was reported by 4 (3.5%) mariners and 9 (8%) did not answer. 9 of the 26 (34.6%) positive mariners were asymptomatic, and 2 of the 113 negative mariners reported symptoms consistent with COVID-19.

Conclusion: In our cohort, most mariners who were infected reported only casual contact with the index case. This suggests that in this setting, perceived close contact may not accurately identify all those at highest risk. Mariners may find it difficult to accurately rate their level of interaction with their shipmates, and further analysis by department and watch schedule is necessary. Alternatively, the congregate setting aboard the vessel may place mariners at higher risk for contracting COVID-19, regardless of duration of shared physical proximity, due to factors unique to the maritime environment such as ventilation and compartmentalization of space. In this cohort, mariners' self-perception of contact type does not appear to predict risk of transmission.

347 The Effect of Electronic Assignment of Patients to Physicians in the Emergency Department on Operational Metrics



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Study Objectives: To evaluate the association of implementation of an electronic patient assignment with selected throughput metrics when compared to physician self-assignment. It was hypothesized that in an environment that does not include individual physician-based clinical productivity incentives, systems-based approaches such as this may be effective in improving operational efficiency.

Methods: This was a retrospective observational study of ED throughput metrics at a large community acute care hospital before and after the implementation of an electronic patient assignment system. In January 2019, this emergency department replaced the traditional physician self-assignment model with a sophisticated electronic operating system that assigns patients based on predictive analytics, acuity, and resource alignment among other factors. The patient assignment system was implemented in January 2019. The study periods were July 1 to December 31, 2018 (before) and July 1 to December 31, 2019 (after). The study periods were chosen to minimize seasonal variance and to account for the adjustment period in the weeks immediately following implementation of the electronic patient assignment system. Historical data for the selected time periods was extracted from the electronic health record (EHR) relational database (EPIC Clarity). Statistical analysis was performed using SAS to perform independent group t-tests. Metrics included arrival to doctor time, room to doctor time, arrival to room time, length of stay, length of stay for patients triaged as Emergency Severity Index (ESI) 4 and 5, and percentage of patients who left without being seen (LWBS). The metrics included discharged patients only.

Results: 48,114 discharged patients were included for analysis. 23,327 patients prior to implementation and 24,787 patients after implementation. Mean arrival to doctor time decreased from 66.97 min to 63.72 min ($p < 0.0001$). Mean room to doctor time decreased from 20.4 min to 8.25 min ($p < 0.0001$). Mean length of stay for all discharged patients decreased from 261.1 min to 250.1 min ($p < 0.0001$). Mean length of stay for triage acuity ESI 4 and 5 decreased from 141.1 min to 110.6 min ($p < 0.0001$). The mean arrival to room time increased from 46.9 min to 55.83 min ($p < 0.0001$). The percentage of patients who left without being seen increased slightly from 3.36% to 3.78% ($p = 0.0043$). Mean arrival to room

time increased from 46.9 to 55.8 minutes ($p < 0.0001$). Increases in arrival to room time and the percentage of patients who left without being seen in the post-intervention period are possibly due to an increase in total patient volume and a relative decrease in lower acuity patients. These two factors would both be expected to place increased strain on ED operational resources. Had these other factors remained stable, it is possible that the operational improvements identified might have been even greater.

Conclusion: An electronic patient assignment system is associated with improvement in several important operational metrics in a large, community hospital's emergency department.

348 Undiagnosed Mental Health Issues Are Common in Emergency Department Patients With Vague Presenting Complaints



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Study Objective: Vague presenting complaints of generalized pain, weakness and fatigue are common in the emergency department (ED) and are frequently presenting symptoms of undiagnosed depression or anxiety. However, screening for underlying mental health conditions is not regularly performed in ED patients presenting with these symptoms. Our objective was to determine the prevalence of positive screening for depression/anxiety in individuals presenting to the ED with generalized/vague complaints of pain, weakness and fatigue.

Methods: A cross-sectional observational study was performed in an academic emergency department of a Level 1 trauma center in eastern North Carolina. A convenience sample of patients presenting to the ED with generalized complaints of pain, weakness and/or fatigue were enrolled. ED status boards were reviewed to identify patients with chief complaints of non-localized abdominal pain, generalized chest pain not suspected to be cardiac in origin, headache, fatigue, and weakness. Patients were excluded if they were <18 years, had a physical injury, life-threatening condition, or a medical history of mental illness. After obtaining consent, NIH PROMIS scale surveys were administered to determine the presence and degree of depression, anxiety and fatigue. Descriptive statistics of the prevalence of positive screening and the chief complaints associated with positive screenings are reported.

Results: 72 patients have been enrolled in the study to date. The most common chief complaints were non-localized abdominal pain (n=38), chest pain (n=9) and weakness (n=7). Of the patients enrolled, 40.2% screened positive for either depression (mild n=6; moderate n=1; severe n=0), anxiety (mild n=15; moderate n=5; severe n=2) or fatigue (mild n=10; moderate n=5; severe n=2). Patients with moderate or severe screening on any finding were most likely to present with a complaint of abdominal pain.

Conclusions: ED patients with vague presenting complaints frequently screen positive for depression, anxiety and fatigue which may complicate other existing medical conditions. Administering screening for these conditions may help ED clinicians to appropriately manage these patients. Future research should investigate if the ED course of care differs for patients who screen positive vs. those who screen negative, and whether psychiatric consultation for these patients improves outcomes.

349 Utilization of an Antibiogram and a Pathway for Urinary Tract Infections in a Pediatric Emergency Department to Improve Empiric Antimicrobial Treatment: A Quality Improvement Project



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Study Objective: *Escherichia coli* is the most common cause of pediatric urinary tract infections (UTI). Antimicrobial resistance including extended spectrum beta-lactamase (ESBL) has increased alarmingly since the early 2000s, leaving antibiotics such as penicillins and cephalosporins ineffective. Overutilization of third generation cephalosporins (3GC) can add selective pressure and serve as a risk factor for development of an ESBL infection. An antibiotic review at our institution demonstrated children with community-acquired UTIs were receiving a 3GC as a part of treatment from the emergency department (ED). A UTI-specific antibiogram demonstrated good