

additional or new home care resources are required prior to ED discharge; however, few patients returned to the same ED during the one month study period. Given the high proportion of patients assessed, further evaluation of outcomes is warranted.

Keywords: transitions in care, elderly

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Interventions aimed at improvement in emergency department related transitions in care for adult patients with atrial fibrillation and flutter: a systematic review

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Introduction: Introduction: Transitions in care (TiC) interventions have been proposed to improve the management and outcomes of patients in emergency departments (ED). The objective of this review was to examine the effectiveness of ED-based TiC interventions to improve outcomes for adult patients presenting to an ED with acute atrial fibrillation or flutter (AFF). **Methods:** Methods: A comprehensive search of eight electronic databases and various grey literature sources was conducted. Comparative studies assessing the effectiveness of interventions to improve TiC for patients presenting to the ED with acute AFF were eligible. Two independent reviewers completed study selection, quality assessment, and data extraction. When applicable, relative risks (RR) with 95% confidence intervals (CIs) were calculated using a random effects model and heterogeneity was reported among studies using I-square (I²) statistics. **Results:** Results: From 744 citations, seven studies were included, consisting of three randomized controlled trials (RCT), three before-after (B/A) studies, and one cohort study. Study quality ranged from unclear to low for the RCTs according to the risk of bias tool, moderate in the BA trials according to the BA quality assessment tool, and high quality of the cohort study according to the Newcastle Ottawa scale. The majority of interventions were set within-ED (n=5), including three clinical pathways/management guidelines and two within-ED observation units. Post-ED interventions (n=2) included patient education and general practitioner referral. Four studies reported a decreased overall hospital length of stay (LoS) for AFF patients undergoing TiC interventions compared to control, ranging from 26.4 to 53 hours; however, incomplete and non-standardized outcome reporting precluded meta-analysis. An increase in conversion to normal sinus rhythm among TiC intervention patients was noted, which may be related to increased utilization of electrical cardioversion among the RCTs (RR=2.16; 95% CI: 1.42, 3.30; I²=%), B/A studies (RR=2.69, 95% CI: 2.17, 3.33), and cohort study (RR=1.39; 95% CI: 1.24, 1.56). **Conclusion:** Conclusions: Within-ED TiC interventions may reduce hospital LoS and increase use of electrical cardioversion. However, no clear recommendations to implement such interventions in EDs can be generated from this systematic review and more efforts are required to improve TiC for patients with AFF.

Keywords: atrial fibrillation, transitions in care

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An international, interprofessional investigation of the podcast listening habits of emergency clinicians: a METRIQ study

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Introduction: Emergency medicine clinicians (physicians, nurses, paramedics, physician assistants) utilize podcasts for learning. However,

their versatility produces variability in the ways they are used (e.g. their speed can be increased or decreased, unrelated activities can be performed simultaneously, or they can be accompanied by active learning methods). This study investigated how and why podcasts are used by an international cohort of clinicians. **Methods:** An international sample of medical students, residents, physicians, nurses, physician assistants, and paramedics was recruited to complete a survey hosted on FluidSurveys software using social media (Twitter and Facebook), direct contact from our international authorship group, infographics, and a study website (<https://METRIQstudy.org/>). Participants who indicated interest in the study were sent an email containing the study survey. Reminder emails were sent every 5-10 days a maximum of three times. **Results:** 462 clinicians expressed interest and 397 completed the survey (86.0% completion rate). Participants hailed from 34 countries (38.8% Canada, 30% United States, 31.2% outside of North America) and a majority (61.9%) were physicians. Approximately half (45.8%) of the participants listened to podcasts weekly. Podcasts were used to learn core material (75.1%), refresh memory (72.3%), or review new literature (75.8%). Most listened on iPhones (61%) and the native Apple App (66.1%). The preferred Android apps were Pocket Casts (22.8%) and Google Play (18.5%). Many listened to podcasts while driving (72.3%). Active learning techniques such as pausing, repeating segments, taking notes, or listening to a podcast more than once were rarely used (1/4 of the time or less) by the majority of participants. **Conclusion:** This study describes how and why medical education podcasts are used by emergency medicine clinicians and should inform both podcast producers and future research investigating the impact of various listening habits on retention. Further analysis of the data will elucidate differences in listening habits.

Keywords: podcasts, online educational resources, medical education

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Non-invasive measurement of the central venous pressure using near-infrared spectroscopy versus point-of-care ultrasound

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Introduction: A fundamental hemodynamic parameter, the central venous pressure (CVP) is rarely available in the emergency patient due to the delay and risks inherent to central vein cannulation. Recently, two non-invasive strategies have emerged: a) point-of-care ultrasound to supplement traditional inspection of the internal jugular waveform; or b) near-infrared spectroscopy (NIRS) of the external jugular vein. **Methods:** Five medical students underwent standardized training on both NIRS device (Venus 2000 CVP; Mespere Life Sciences, Waterloo ON) and ultrasound-assisted CVP assessment. During prescheduled, randomly permuted and balanced shifts, a pair of students obtained blinded independent measurements using each device within 10 minutes of each other. High priority subjects likely to have abnormal CVP (e.g. vomiting, dehydrated, heart failure, sepsis) were approached preferentially, followed by a convenience sample of other eligible patients in the emergency department. Secondary outcomes were stopwatch-recorded time from device ready to stable measurement, as well as operator ease, operator confidence and patient discomfort. The blinded treating physician rated each subject's volume status on an ordered scale: depleted, neutral and overloaded. **Results:** We enrolled 104 patients (median [IQR] age 68 [53, 78] years; 50% male; BMI 27.6 [17.0, 47.7] kg/m²; admission rate 27%) in June-August 2017. Treating physicians classified 17 as volume depleted and 12 overloaded. CVP measurements differed widely between techniques: ultrasound 8 [7, 9] cmH₂O (3 cases