

co-designed and patient-centred discharge handouts, we have found a marked improvement in patient understanding, and consequently safer discharge practices. Future efforts will focus on optimizing discharge communication, both verbal and written, tailored to individual patient preferences.

**Keywords:** emergency department discharge, communication, discharge handouts

#### MP09

##### Canadian Community Utilization of Stroke Prevention Pilot Study-Emergency Department (C-CUSP ED)

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**Introduction:** Atrial fibrillation (AF) is the most common sustained arrhythmia affecting 1-2% of the population. Oral anticoagulation (OAC) reduces stroke risk by 60-80% in AF patients, but only 50% of indicated patients receive OAC. Many patients present to the ED with AF due to arrhythmia symptoms, however; lack of OAC prescription in the ED has been identified as a significant gap in the care of AF patients.

**Methods:** This was a multi-center, pragmatic, three-phase before-after study, in three Canadian sites. Patients who presented to the ED with electrocardiographically (ECG) documented, nonvalvular AF and were discharged home were included. Phase 1 was a retrospective chart review to determine OAC prescription of AF patients in each ED; Phase 2 was a low-intensity knowledge translation intervention where a simple OAC-prescription tool for ED physicians with subsequent short-term OAC prescription was used, as well as an AF patient education package and a letter to family physicians; phase 3 incorporated Phase 2 interventions, but added immediate follow-up in a community AF clinic. The **primary** outcome of the study was the rate of new OAC prescriptions at ED discharge in AF patients who were OAC eligible and were not on OAC at presentation. **Results:** A total of 632 patients were included from June, 2015-November, 2016. ED census ranged from 30000-68000 annual visits. Mean age was  $71 \pm 15$ ,  $67 \pm 12$ ,  $67 \pm 13$  years, respectively. 47.5% were women, most responsible ED diagnosis was AF in 75.8%. The mean CHA<sub>2</sub>DS<sub>2</sub>-VASc score was  $2.6 \pm 1.8$ , with no difference amongst groups. There were 266 patients eligible for OAC and were not on this at presentation. In this group, the prescription of new OAC was 15.8% in Phase 1 as compared to 54% and 47%, in Phases 2 and 3, respectively. After adjustment for center, components of the CHA<sub>2</sub>DS<sub>2</sub>-VASc score, prior risk of bleeding and most responsible ED diagnosis, the odds ratio for new OAC prescription was 8.0 (95%CI (3.5,18.3)  $p < 0.001$ ) for Phase 3 vs 1, and 10.0 (95%CI (4.4,22.9)  $p < 0.001$ ), for Phase 2 vs 1). No difference in OAC prescription was seen between Phases 2 and 3. **Conclusion:** Use of a simple OAC-prescription tool was associated with an increase in new OAC prescription in the ED for eligible patients with AF. Further testing in a rigorous study design to assess the effect of this practice on stroke prevention in the AF patients who present to the ED is indicated.

**Keywords:** atrial fibrillation, oral anticoagulation

#### MP10

##### How dry I am: how much fluid do paramedics give when they administer an IV fluid bolus?

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**Introduction:** How is “administer a fluid bolus” interpreted by paramedics? There is no existing literature describing this practice in the prehospital setting. Paramedic medical directives authorize the administration of Normal Saline 20 ml/kg to hypotensive patients (systolic BP <90). Anecdotally, auditors of Ambulance Call Reports (ACRs) and paramedics report this amount of fluid is rarely administered. The aim of this study was to determine the amount and rate of IV fluid administered by Advanced Care (ACP) and Primary Care (PCP) paramedics when they give an IV ‘fluid bolus’ during an ambulance call. **Methods:** We conducted a retrospective analysis of iMedic platform, electronic, ACRs (January 01, 2015 to June 30, 2015) from 8 municipal paramedic services that serve an urban and rural population of 1.4 million. ACRs containing a procedure code 351 (intravenous fluid bolus) were identified. A stratified, random sample of 20 cases per paramedic category (ACP and PCP) from each service was generated using a random number table. ACRs were manually searched, data abstracted onto spread sheets, and the results analyzed using descriptive statistics (Wizard ver 1.8.16 for Mac). **Results:** The initial sample was 220 cases. 25 were excluded for incomplete documentation, leaving 195 cases (ACP 59, PCP 136) for analysis. The mean IV fluid bolus volume delivered was: ACP 414.8 ml (95%CI: 344.2, 485.4), PCP 242.3 ml (95%CI: 210.9, 274.5). The mean rate of infusion was: ACP 22.7 ml/min (95%CI: 17.6, 27.8) PCP 15.7 ml/min (95%CI 13.2,18.1). Percentage of cases where >250 ml was infused: ACP 74.6%, PCP 44.1%. Percentage of cases where at least 10 ml/kg of fluid was given: ACP 17.0%, PCP 2.9%. Percentage of cases reaching the maximum 20 ml/kg of fluid: ACP 0.5%, PCP 0%. IV cannula size: 18G-ACP 57.4%, PCP 33.3%; 20G ACP 37.0%, PCP 56.8; 22G ACP 0.6%, PCP 9.8%. **Conclusion:** Paramedics rarely gave the amount of IV fluid they were authorized to give to hypotensive patients. On average, Advanced Care Paramedics administered significantly more fluid and gave it significantly faster than Primary Care Paramedics. ACPs were more likely than PCPs to use 18G cannulas and rarely used 22G cannulas whereas PCPs preferred to use 20G IV cannulas. Further training is required to clarify and improve the paramedic practice of IV bolus administration.

**Keywords:** paramedic, fluid bolus, practice

#### MP11

##### A quality improvement initiative to decrease the rate of solitary blood cultures in the emergency department

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**Introduction:** Best practice guidelines recommend that at least two sets of blood cultures be sent when blood cultures are required. However, high rates of solitary blood cultures are still common in the emergency department. The aim of this study was to evaluate the efficacy of different quality improvement initiatives aimed at reducing the rate of solitary blood cultures being sent to the lab on patients ultimately discharged from our emergency department. **Methods:** This was a multi-centre, multi-phase, prospective study evaluating a comprehensive education-based intervention and a second intervention that combined a computerized forcing function along with a brief education-based intervention. The results were analyzed using segmented regression analysis, as well as statistical process control charts. **Results:** The baseline rate of solitary sets of blood cultures was 41.1%. The education intervention reduced this rate to 30.3%. The introduction of a forcing function with a brief educational intervention further reduced the rate to 11.6%. This represents an absolute reduction of 29.5% from baseline (relative reduction of 71.8%). According to segmental regression