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Introduction

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.

How do paramedics interpret 'administer a fluid bolus'?

There is no existing literature describing this practice in the prehospital setting.

Objective

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.

Participants

Advanced Care and Primary Care paramedics from 8 ambulance services (3-ACP/PCP; 5-PCP) in south west Ontario, Canada.

Methods

Retrospective analysis of iMedic platform, electronic ACRs from 8 municipal paramedic services that serve an urban and rural population of 1.4 million between January 01, 2015 and June 30, 2015.

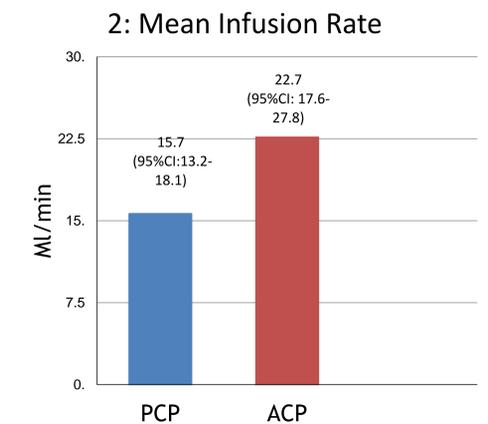
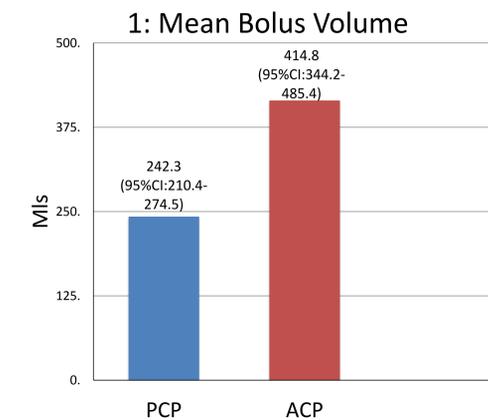
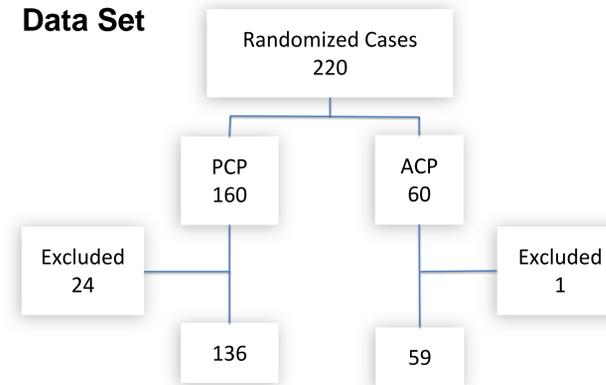
ACRs containing a procedure code 351 (intravenous fluid bolus) were identified.

A stratified, random sample of 20 cases per paramedic category (ACP and PCP) from each service was generated using a random number table.

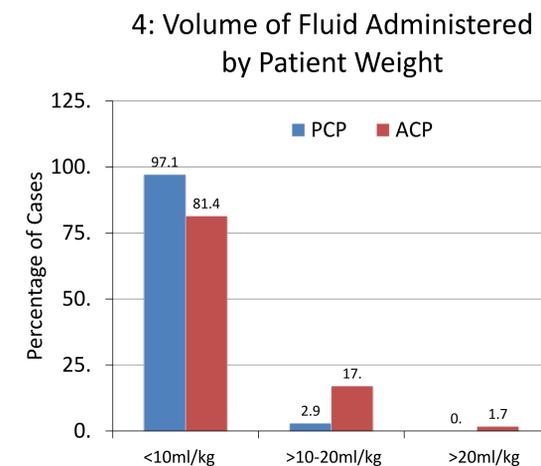
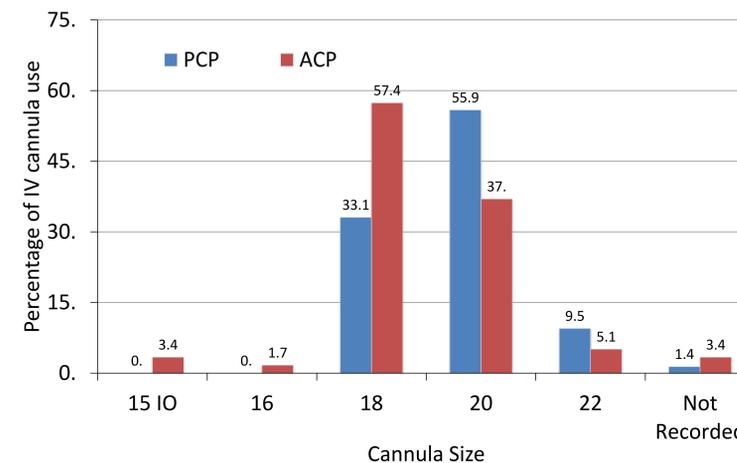
ACRs were manually searched, data abstracted onto spread sheets, and the results analyzed using descriptive statistics (Wizard ver 1.8.16 for Mac).

Results

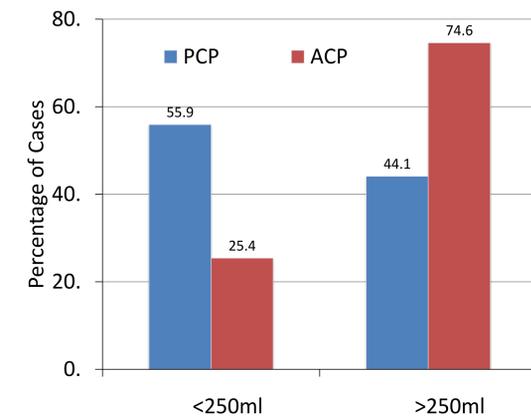
Data Set



3: Frequency of Cannula Size Used by Paramedic Category



5: Total Volume Given by Paramedic Category



Conclusions

Paramedics rarely gave to hypotensive patients the amount of IV fluid they were authorized to give.

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 seldom 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.