

## Emergency Medical Services Congress 2019 Abstracts

### 1 SOILED AIRWAY TRACHEAL INTUBATION AND THE EFFECTIVENESS OF DECONTAMINATION (SATIATED) BY PARAMEDICS: A RANDOMISED CONTROLLED MANIKIN STUDY

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10.1136/bmjopen-2019-EMS.1

**Background** In more than 20% of out-of-hospital cardiac arrests, the patient's airway is soiled.<sup>1 2</sup> If the airway cannot be cleared, the patient will die. A new method of clearing the airway, suction assisted laryngoscopy and airway decontamination (SALAD) has been developed, but it's not known whether this method can assist paramedics to intubate.<sup>3</sup> This study aims to determine whether paramedics can intubate a simulated soiled airway more often on their first attempt, using SALAD.

**Method** A modified airway manikin, with the oesophagus connected to a reservoir of 'vomit' and bilge pump, was used to simulate a soiled airway. The intervention was a brief SALAD training session with a demonstration and opportunity to practice. Participants were randomly allocated into two groups: AAB who made two pre-training intubation attempts and one post-training attempt, and ABB, who made one pre-training and two post-training attempts, to adjust for improvement due to repetition.

**Results** 164 paramedics took part in the study. First-pass intubation success with and without SALAD was 90.2% and 53.7% respectively, a significant difference of 36.6% (95%CI 24%–49.1%,  $p < 0.001$ ). The mean successful intubation time for each attempt and patient group (AAB and ABB) was as follows: 61.8 (95%CI 55.8–67.8) and 59.4 (95%CI 53.6–65.1) s on the first attempt, 50.8 (95%CI 45.7–55.9) and 51.5 (95%CI 48.6–54.4) s on the second attempt and 53.5 (95%CI 50.4–56.6) and 46.6 (95%CI 44.0–49.1) s on the third attempt.

**Conclusion** In this study, paramedics were able to intubate a simulated soiled airway on their first attempt, significantly more often when using the SALAD technique.

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**Conflict of interest** R. Pilbery is a research paramedic at Yorkshire Ambulance Service NHS Trust. MD. Teare has no conflicts of interest.

**Funding** This research was funded by a College of Paramedics small research grant.

### 2 AMBULANCE NON-CONVEYANCE TIME

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10.1136/bmjopen-2019-EMS.2

**Background** The aim was to describe time consumption when patients are non-conveyed by the ambulance service. Ambulance assignments have increased over time worldwide and 16%–31% of the care seekers encountered by the ambulance service have been assessed as not being in need of its services. To meet this growing demand for ambulance services in relation to a limited amount of resources there is a need for prioritization. This study was conducted in the Region Örebro County, Sweden with a population of 295 000 spread over 8504 km<sup>2</sup>. There are three emergency departments in the region with 90 000 visits a year. The ambulance service attends about 26 000 patients per year where about 10 percent were non-conveyed during the study period.

**Method** A prospective descriptive design and a consecutive sample was used. All ambulance journal data concerning time aspects on non-conveyed patients by the three ambulance departments in the Region, from February 2016 until February 2017, were included in the study.

**Results** A total of 2615 patients were included in the study, 50.0% male, 48.9% and 1.1% unknown. The age ranged between 0–99 years (mean 49.6 years). In total the mean non-conveyance time was 26 min, median 25 min (Q1=18, Q3=32, min 4 - max 169 min). Patients involved in traffic accidents took the least and patients with epistaxis the most amount of time to non-convey.

**Conclusion** The results might guide ambulance organizations and policy makers in revising non-conveyance guidelines so that the ambulance service can be available for patients with greater need of care.

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**Conflict of interest** The authors declare no conflict of interest.

**Funding** This research received funding support from the Research Committee and the county council of Örebro.

### 3 CPR BY FIRST RESPONDERS IMPROVES ACID-BASE BALANCE AND PROGNOSIS IN OUT-OF-HOSPITAL NON-TRAUMATIC CARDIAC ARREST

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10.1136/bmjopen-2019-EMS.3

**Background** Early basic-CPR has been shown to be effective. However, its effect on homeostasis in non-traumatic out-of-hospital cardiac arrest (OHCA) is unknown. We analyze pathophysiological and prognostic consequences of basic-CPR performed by first responders (FR) previous to EMS arrival.

**Method** Prospective observational cohort study including all patients treated for OHCA by an EMS from 2015 to 2017. Basic-CPR by FR and venous blood gas by Epocal (Ottawa, Canada) at the beginning of advanced-CPR were covariates.