

intravenous (IV) access and that IO was an effective and faster option compared to IV during a CBRN incident.

**Conclusion** Intraosseous access can be effectively and promptly achieved whilst wearing CBRN PPE. IO access took an additional 9.4 s whilst wearing CBRN PPE which can provide fast and efficient vascular access during a CBRN incident.

## REFERENCES

1. Garside J, et al. Intraosseous vascular access in critically ill adults: a review of the literature. *Nursing in Critical Care* 2016;**3**:167–177.
2. Suyama J. IO versus IV access whilst wearing personal protective equipment in a hazmat scenario. *Prehospital Emergency Care* 2007;**11**:467–472.

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## 32 TREAT-AND-RELEASE EMS PATIENTS IN THE NORTH DENMARK REGION: IDENTIFICATION AND VITAL SIGNS

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**Aim** Pressure on emergency medical services (EMS) and the emergency departments is increasing, thus focus is on the possibility to treat and release patients on the scene. However, data on treat-and-release patients is scarce and often incomplete due to lack of identity number. We aimed to identify treat-and-release patients in a regional EMS cohort and to describe the documentation of vital signs and/or Glasgow-Coma-Scale (GCS).

**Methods** All ambulances dispatched after an emergency call in the North Denmark Region (approx. 5 80 000 inhabitants) from 2007 to 2014.<sup>1</sup> We excluded cancelled ambulances and defined treat-and-release as the ambulances dispatched without subsequent hospital contact, including patients registered dead (registration of prehospital deaths is inconsistent because death declaration requires a doctor consultation). Patients were ‘identified’ or ‘unidentified’ based on the civil registration number.

**Results** We identified 31 087 ambulances dispatched to treat-and-release patients out 2 03 205 ambulance (15.3%). The number of identified versus unidentified patients was 10 272 (33.0%) and 20 815 (67.0%) respectively. A prehospital doctor was sent to 10 690 (34.4%) of the treat-and-release patients, 2354 (22.9%) to identified and 8336 (40.0%) to unidentified patients. Vital signs and/or GCS was registered in 13 678 (44.0%), 8240 (80.2%) of identified and 5438 (26.1%) of unidentified patients.

**Conclusion** Treat-and-leave patients constituted 15.3% of all emergency ambulances, and the documentation of civil registration number was poor. Vital signs and/or GCS were documented in less than half of the patients, only partly explained by including death on scene.

## REFERENCE

1. Christensen EF, Larsen TM, Jensen FB, Bendtsen MD, Hansen PA, Johnsen SP, et al. Diagnosis and mortality in prehospital emergency patients transported to hospital: a population-based and registry-based cohort study. *BMJ Open* 2016;**6**(7): e011558.

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## 33 CHARACTERISTICS OF PATIENTS UNDERGOING PRE-HOSPITAL RAPID SEQUENCE INTUBATION BY INTENSIVE CARE FLIGHT PARAMEDICS IN VICTORIA, AUSTRALIA

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**Aim** Rapid sequence intubation (RSI) is an advanced airway procedure for critically ill or injured patients. The role of RSI in the pre-hospital setting, and who should perform the procedure remains controversial. In Victoria, Intensive Care Flight Paramedics (ICFPs) have a broad scope of practice for RSI, including high Glasgow Coma Score ( $\geq 10$ ). We sought to describe the success rates and characteristics of patients receiving RSI by highly trained ICFPs in Victoria, Australia.

**Methods** A retrospective data review was conducted of adult ( $\geq 16$  years) patients who received RSI by an ICFP between the 1st January 2011 and 31st December 2016. Data were sourced from the Ambulance Victoria data warehouse. Patients  $< 16$  years of age and physician retrieval cases were excluded.

**Results** A total of 777 cases were included in analyses with a mean age of 45 years (SD 19.6). Most patients were male (69.5%) and the majority of cases involved trauma (72.3%). The overall success rate of intubation was 99.4%. Of the five failed intubations (0.6%), two patients were managed via bag valve mask and oropharyngeal airway, and one patient via supraglottic airway. No surgical airways or cardiac arrests occurred. The most common clinical indication for RSI was traumatic brain injury (50.5%), followed by non-traumatic intracranial pathology (9.5%). A total of 226 (29.1%) patients had a pre-induction GCS  $\geq 12$ .

**Conclusion** A very high RSI procedural success rate was observed across the study period. This supports the growing recognition that appropriately-trained paramedics/clinicians can perform RSI safely in the pre-hospital environment.

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## 34 CHARACTERISTICS OF REPEATED EMS USERS IN THE NORTH DENMARK REGION

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**Aim** In the light of increasing demand for emergency medical services (EMS)<sup>1</sup> and a scarcity of studies about repeated EMS users,<sup>2</sup> we aimed to examine the extent of repeated users and