

## INTRODUCTION

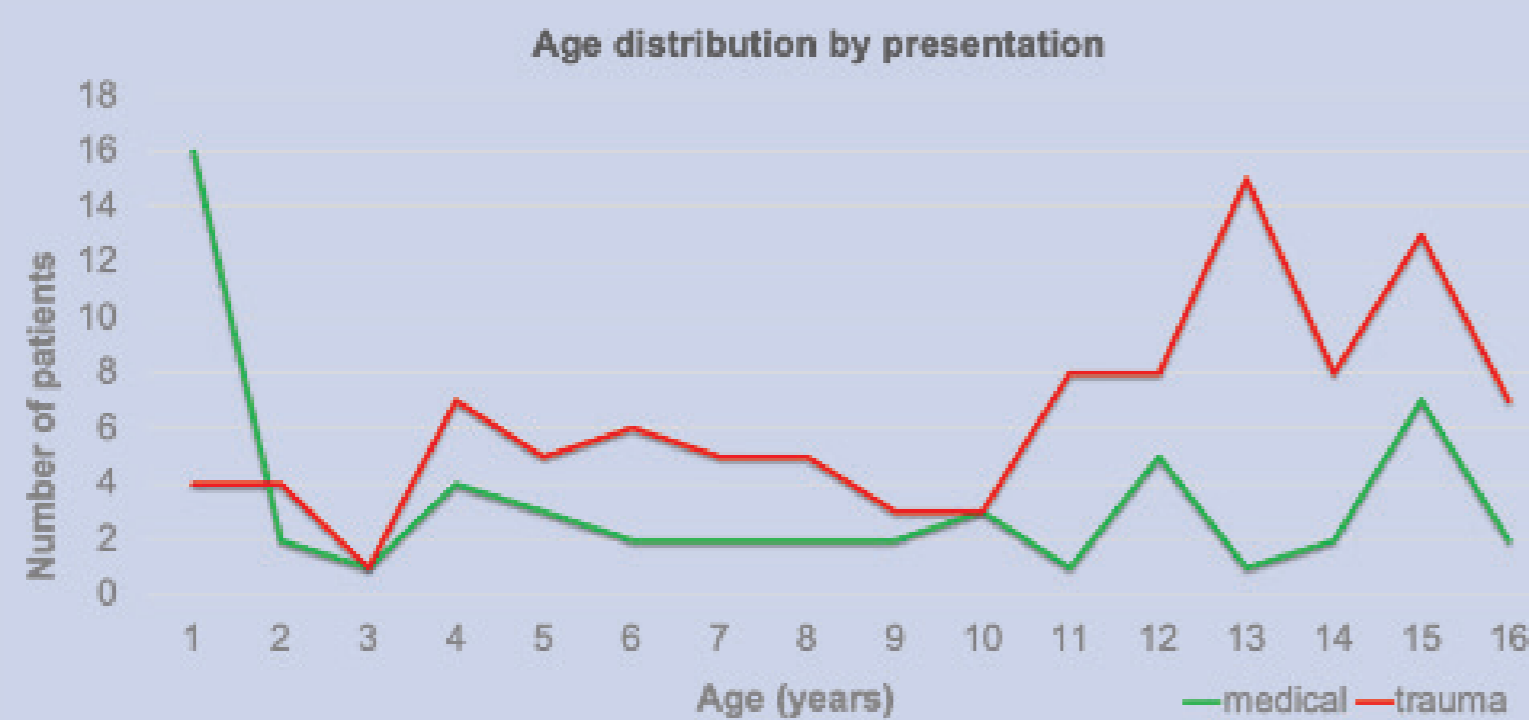
The aim was to describe the paediatric emergencies treated by Hampshire and Isle of Wight Air Ambulance (HIOWAA) during a two-year period. Analysing the type of emergency and nature of intervention performed has important implications in planning education and professional development within prehospital medicine.

## METHOD

A retrospective cohort study was performed from January 2022 to December 2023 of all patients under 16 years of age who were managed by HIOWAA. The data was obtained via two databases, HEMSbase and ARC-EMS.

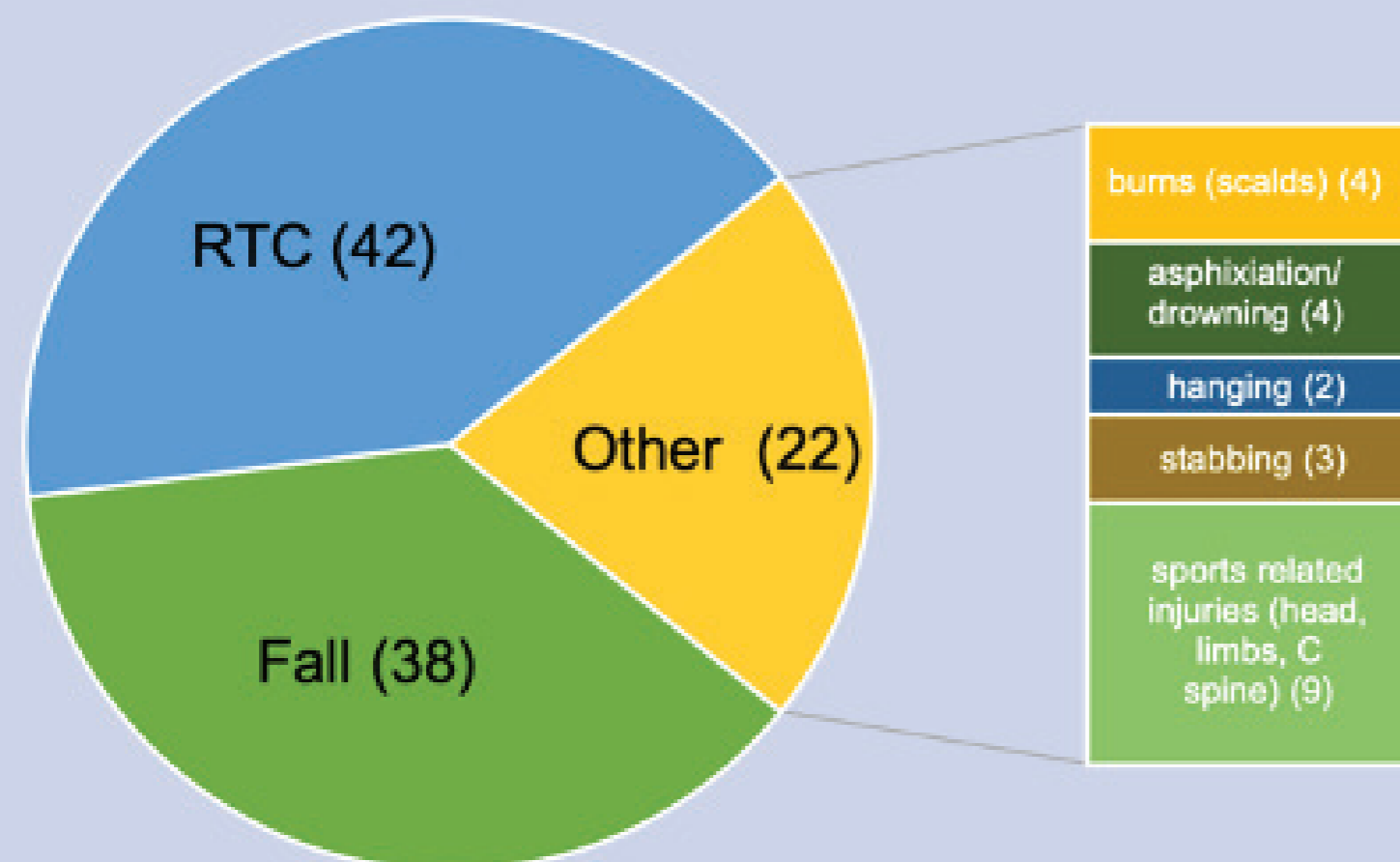
## RESULTS

A total of 157 paediatric patients were managed, of these 64.96% (102) were trauma and 35.03% (55) were medical presentations. Medical emergencies were prevalent in the younger population whereas trauma was prevalent in children above 13 years old.



## RESULTS - TRAUMA

Among traumatic presentations, RTC's 41.17% (42) and falls 37.25% (38) were the most common.

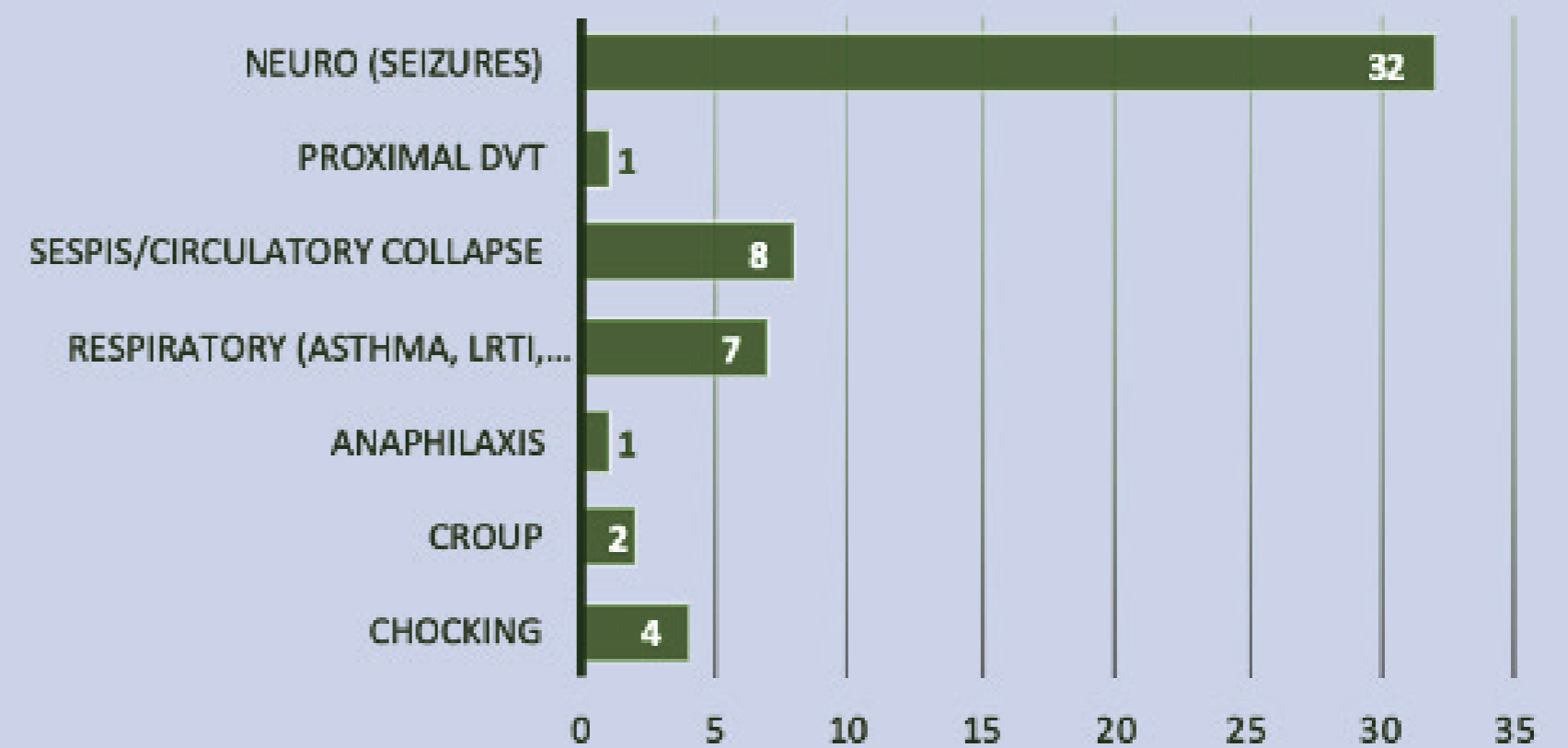


A total of 8 out of hospital traumatic cardiac arrests were attended to, where drowning and hanging were the predominant causes. 7 were over the age of 7yrs old, 1 was 2 year old.

OUTCOME		CAUSES
ROSC	3	1 Fall from height 2 Hanging
Died at scene	3	1 asphyxiation 2 RTC
Died at hospital	3	3 Drowning

## RESULTS - MEDICAL

Seizures 58.18% (32) were the most common medical emergencies and advanced airway management was required in 7 of these patients.



A total of 10 medical cardiac arrests were attended to, where 7 were under the age of 1 yr.

OUTCOME		CAUSES
ROSC	6	5 Primary Respiratory 1 Cardiac
Died at scene	1	3 Unclear Cause
Died at hospital	3	1 hypoglycaemia

## WHERE THE PATIENTS ARE TAKEN?



## CHALLENGES

### Airway - doing the basics well

- Migration of tube balloon
- ETT displaced during transfer

### Equipment - importance of having a back-up

- ETT too big - swapped for smaller size
- Desaturation – identified problem with ambulance cylinder
- Decision making and maintaining situational awareness
- Deteriorating GCS on route – pull over for RSI x2

### Vascular Access

- IO extravasation
- Cannula tissue Keppra

### Drug Dosing

## RESULTS - PROCEDURES

Intubations were performed in 30 cases, more prevalent in those under 1 year of age and over 15. In under 1s, all intubations were during an arrest, whereas for those aged 15, 7 out of 8 were Prehospital emergency anaesthesia. Intraosseous access was used in 15 patients, with an increased number of failures in those <3 years of age. 10 patients required Sedation, all for limb injuries.

## CONCLUSION

Understanding the precise case-mix and clinical challenges faced by the critical care team has allowed the development of a bespoke training package for HIOWAA clinicians. Prehospital management of paediatric cases can be complex and requires a variety of skills. Within this region, traumatic and non-traumatic arrests have similar prevalence and training of prehospital practitioners should be titrated to these needs.