

Patterns of presentation and management for paediatric trauma presenting to a major trauma centre

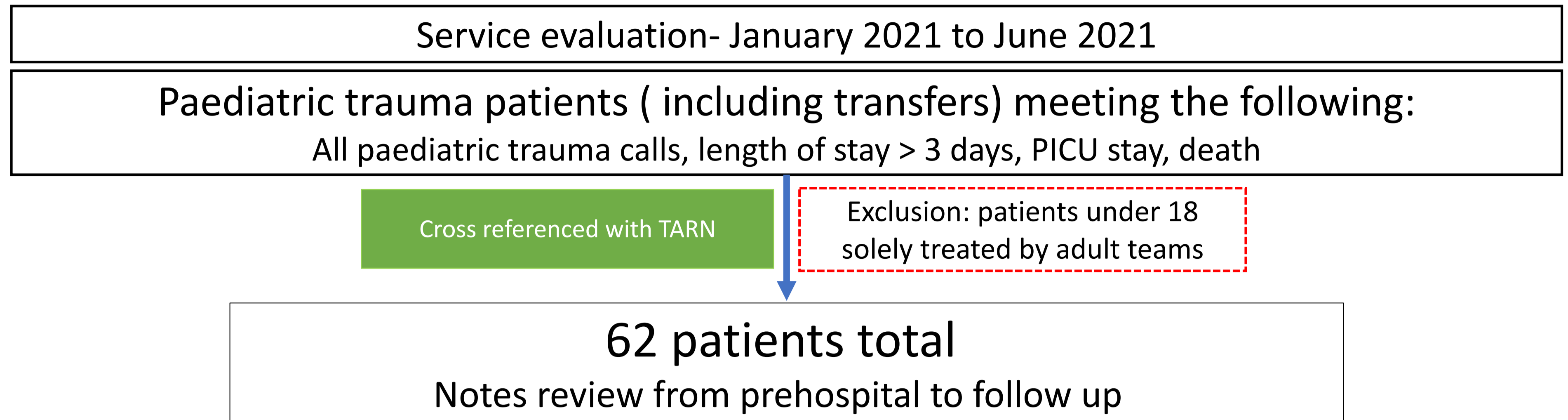
Tom Durham¹, Daniel Owens^{1,2}, Clarissa Chase³

1. NIHR Southampton Clinical Research Facility and NIHR Southampton Biomedical Research Centre, University Hospital Southampton NHS FT, United Kingdom, 2. University Hospital Southampton NHS FT, UK; University of Southampton Faculty of Medicine and Institute for Life Sciences, United Kingdom, 3. Children's Emergency Department, University Hospital Southampton NHS FT, United Kingdom

Introduction

- Paediatric trauma is a leading cause of mortality and morbidity in the UK (1)
- University Hospital Southampton (UHS) is a paediatric and adult major trauma centre
- We aimed to perform a service evaluation of paediatric trauma patients presenting to UHS to support future service development

Methods



Results

Time of arrival in ED

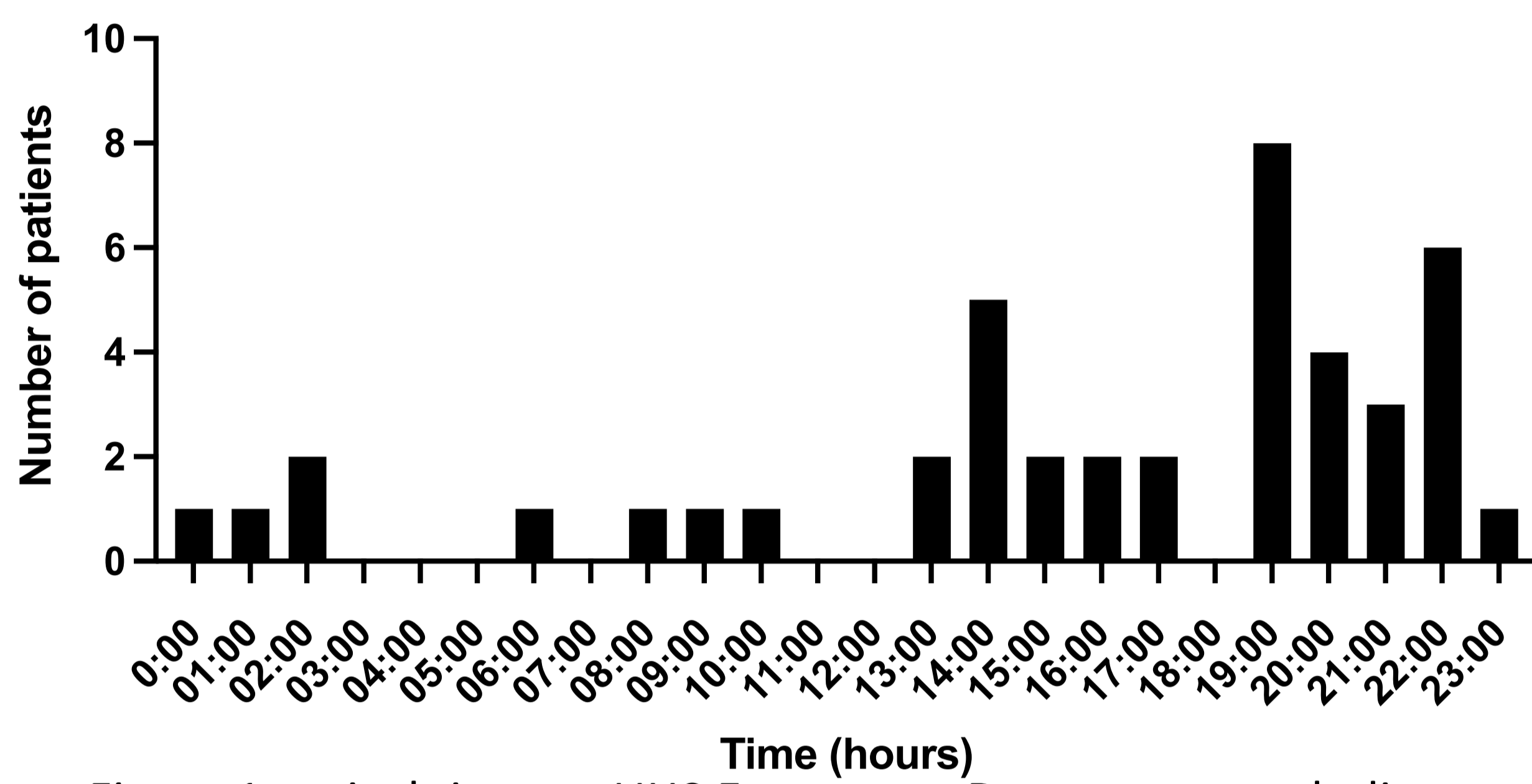


Figure 1: arrival time to UHS Emergency Department excluding transfers (n=41)

Mechanism of injury

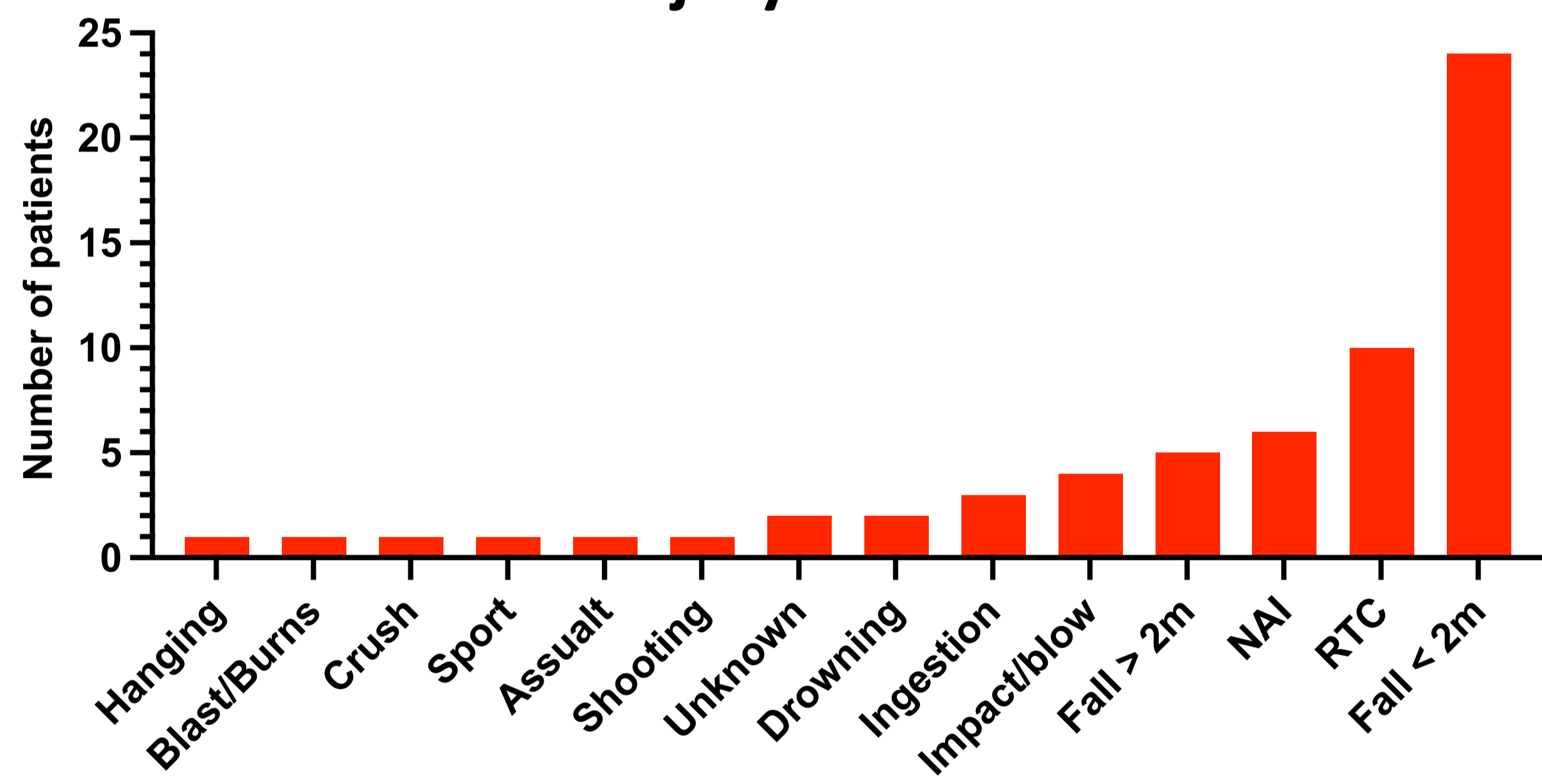


Figure 2: mechanism of injury data for paediatric trauma patients presenting or transferred to UHS (n=62)

Region of injury

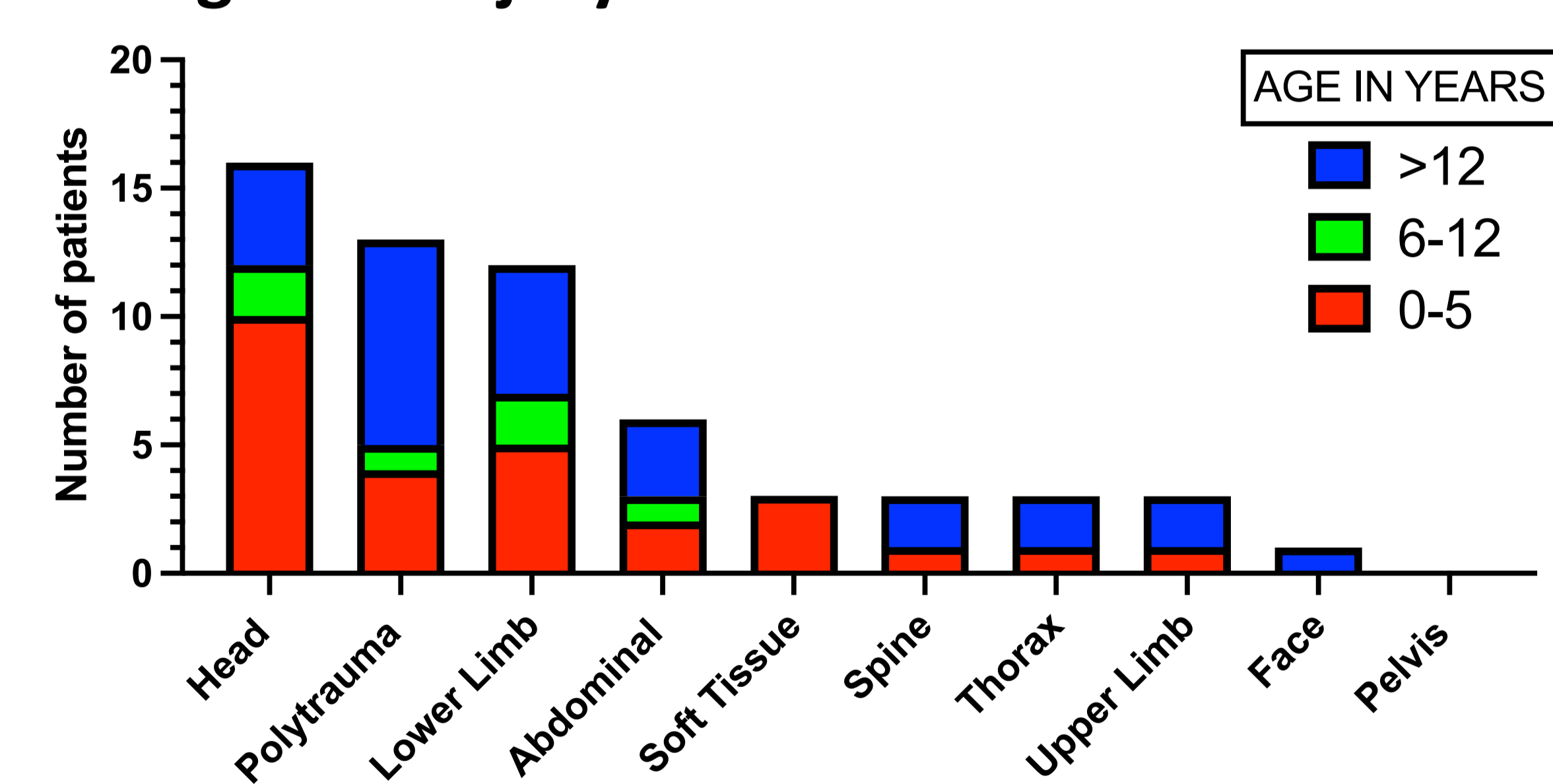


Figure 3: region of body injured (polytrauma defined as >1 region, not including soft tissue (2) (n=62)

Trauma calls

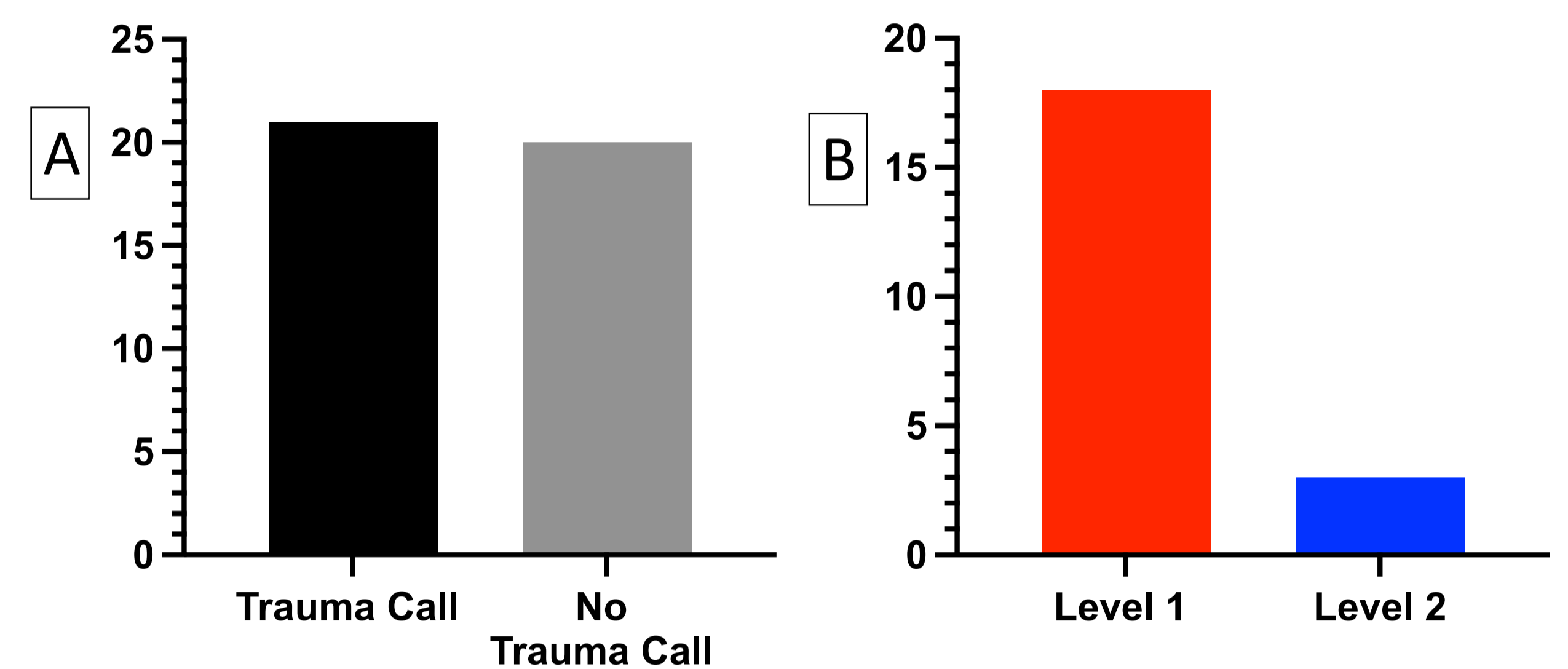


Figure 4: A) Trauma calls vs non trauma calls in Emergency department presentations, B) Trauma call level (A: n=41, B: n=21)

Time to imaging

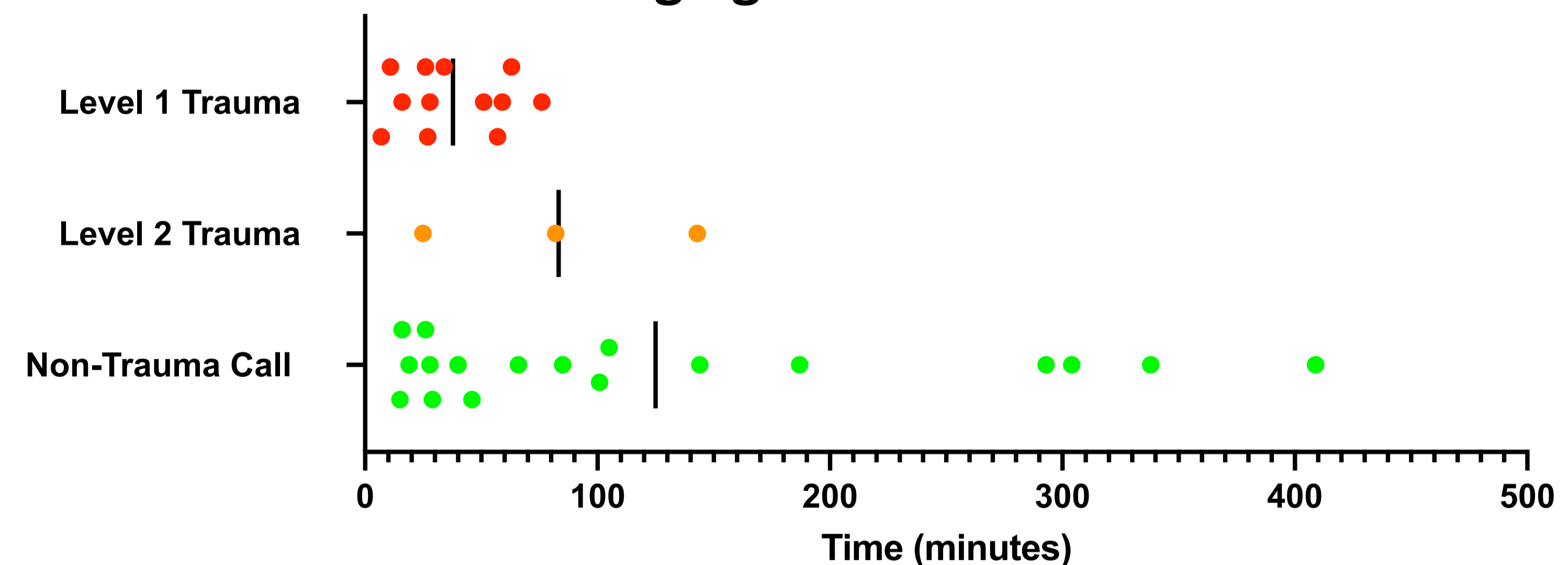


Figure 5: time to imaging in patients presenting to the Emergency Department stratified by level of trauma call (n=41)

Secondary and Tertiary survey in Level 1 Trauma

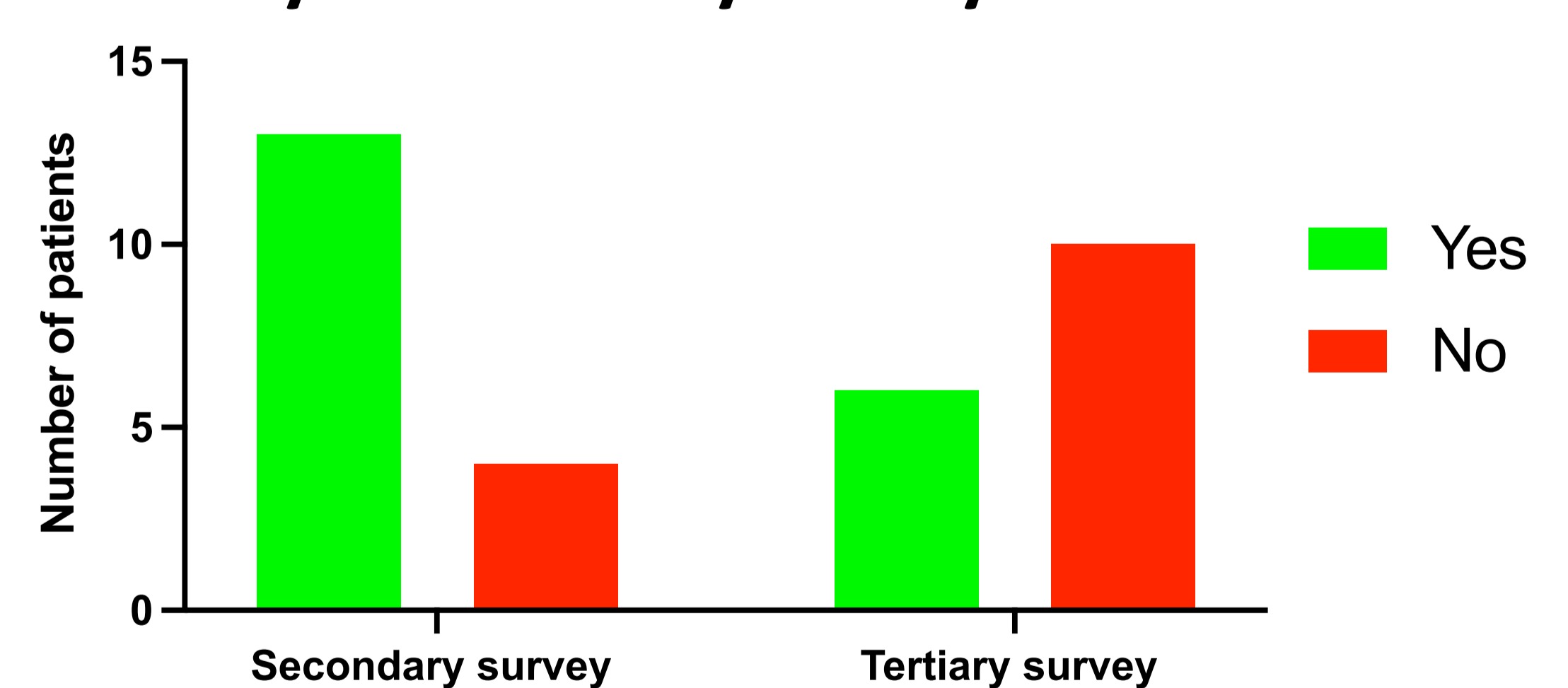


Figure 6- evidence of documentation of secondary survey (76%) and tertiary (37.5%) survey in paediatric level 1 trauma patients (n=17, exclusion if cardiac arrest with no ROSC beyond ED)

Discussion

- Patient demographics (fig 1,3) mode of arrival (not shown), injury patterns and time of arrival reflect national TARN data (1)
- Mechanism of injury (fig 2) showed proportionally higher falls than national data- potentially due to national reductions in RTC due to COVID-19 restrictions
- Time to imaging was expectedly faster in level 1 trauma, data of inappropriate level of trauma calls showed 6 cases of inappropriately low level of trauma call
- The low percentage of level 1 trauma patients with tertiary survey completion (37.5%) is an area to improve
- In data not shown here: follow up showed multiple pathways, with no dedicated trauma follow up

Conclusion

- Our service evaluation provides a baseline for current/future development of the UHS trauma service
- We have identified areas for future work: trauma call criteria, tertiary survey, streamlined follow up