

# OVERNIGHT TRAUMA : A REVIEW OF PATIENTS PRESENTING TO A REMOTE TRAUMA UNIT ED



\*Dr Michael Penn, EM ST4 ; Dr Laura Duffy EM + PHEM Consultant

## Introduction

- The Great North Air Ambulance Service (GNAAS) offers a Friday and Saturday out-of-hours service in the Cumbria area from 2000 -0800. There is currently no Sunday – Thursday cover.
- This covers primary HEMS jobs and a Hot Retrieval service for NCIC patients.
- With a drive towards providing 24-hour cover, 7 days a week, data is required to determine whether the demand is high enough to warrant this service

## Aims

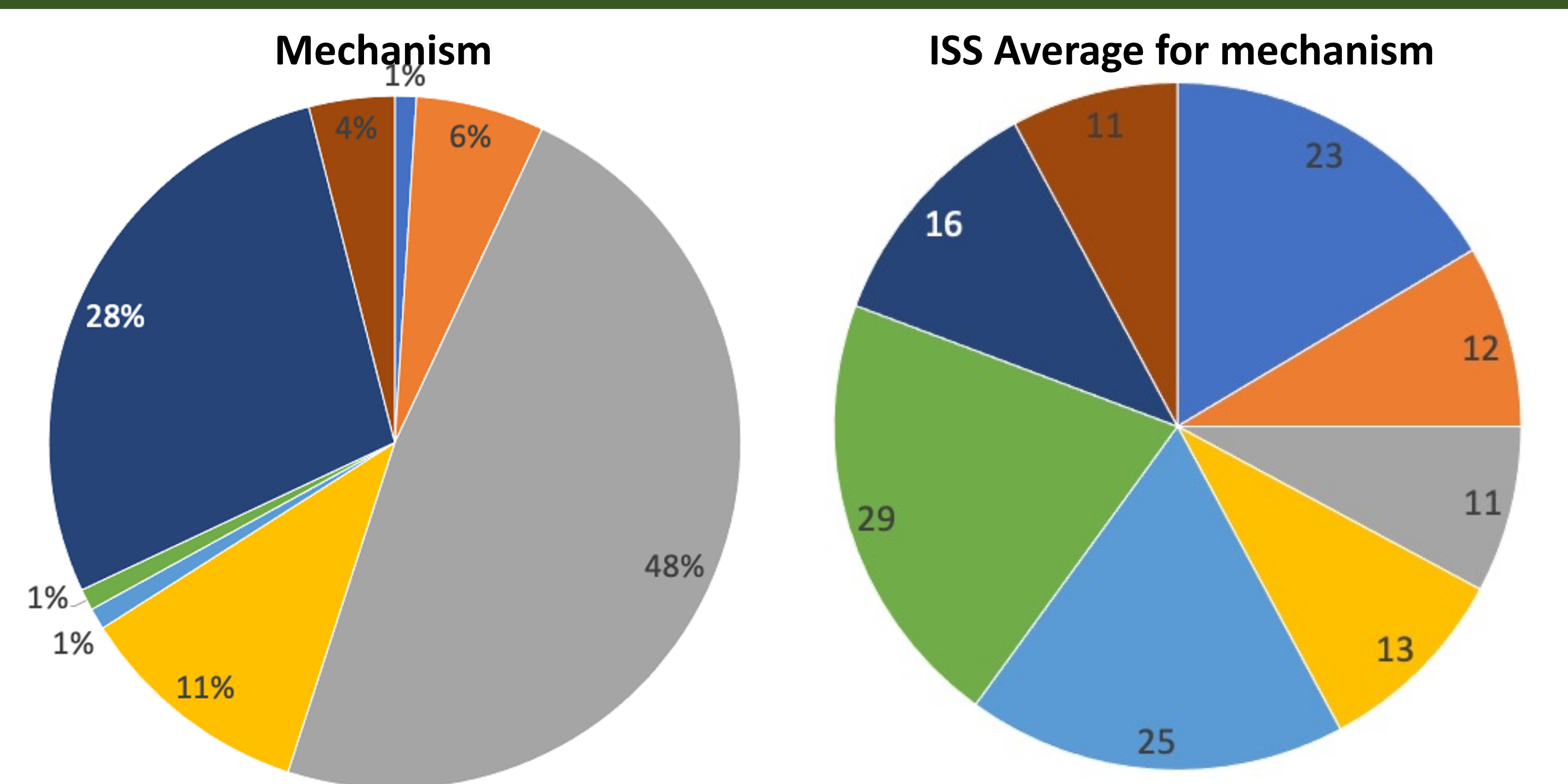
- Review data on trauma patients presenting to the Cumberland Infirmary out-of-hours
- Determine whether demand for a more regular service is increasing, based on numbers of major trauma presentations and severity of patients requiring transfer

## Methods

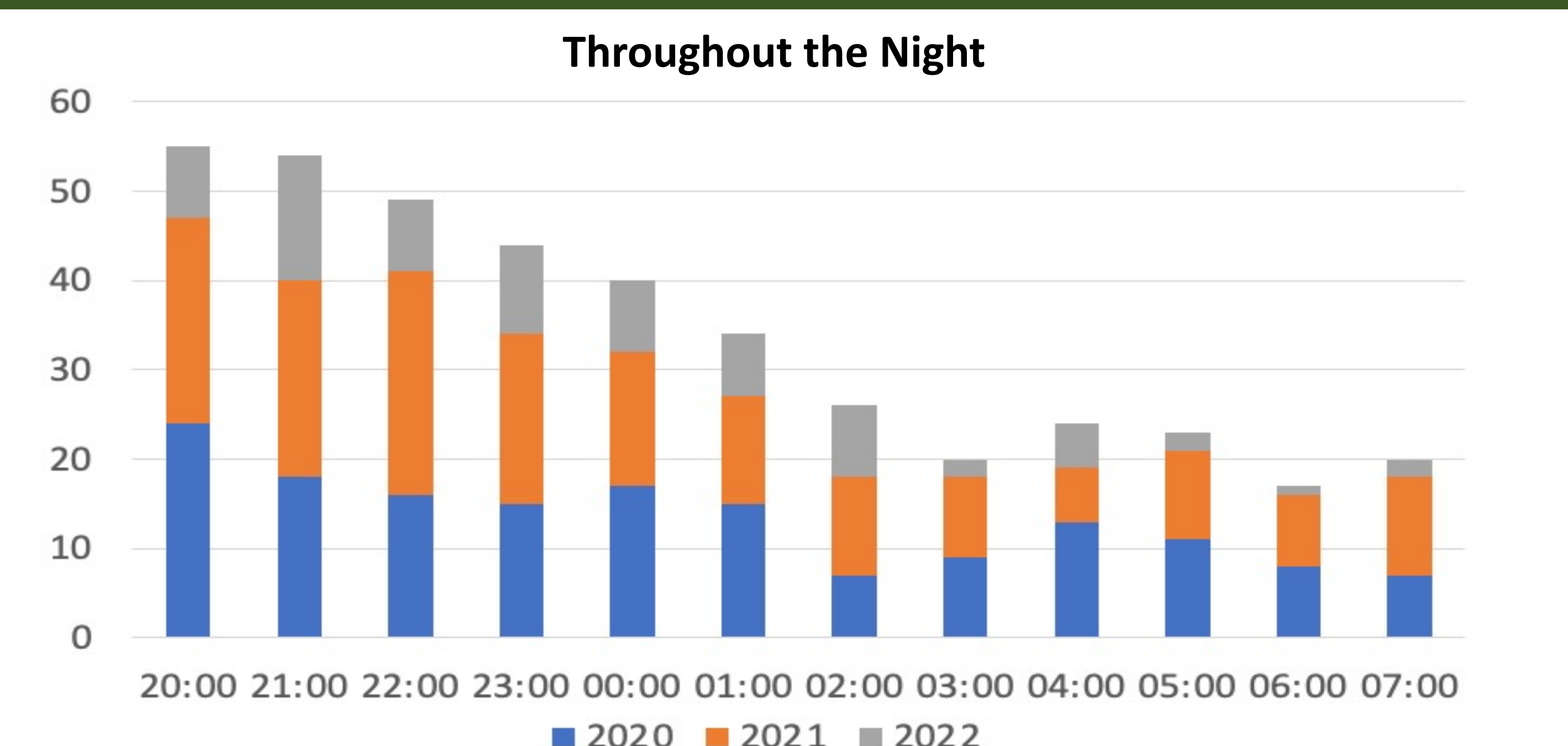
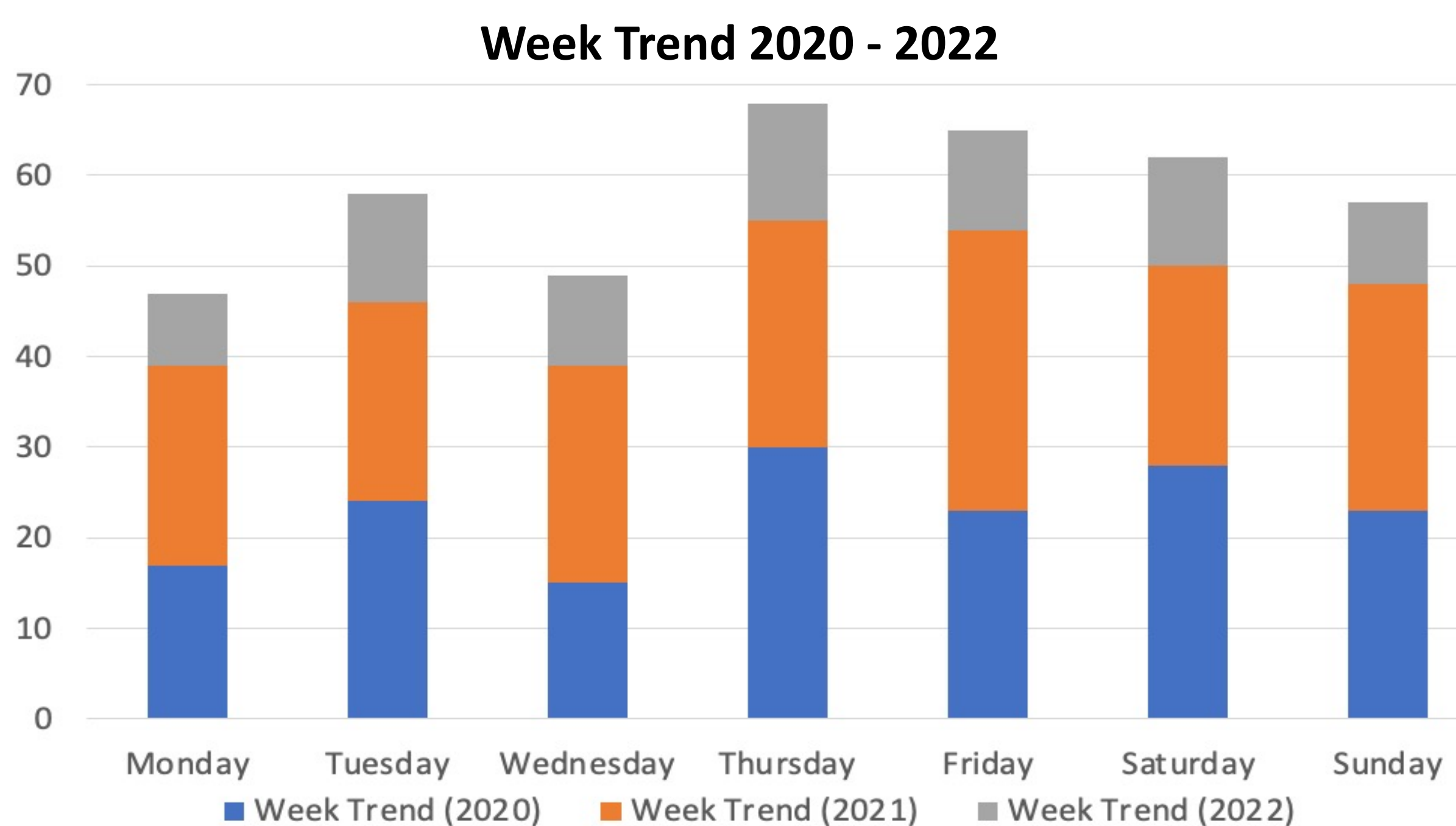
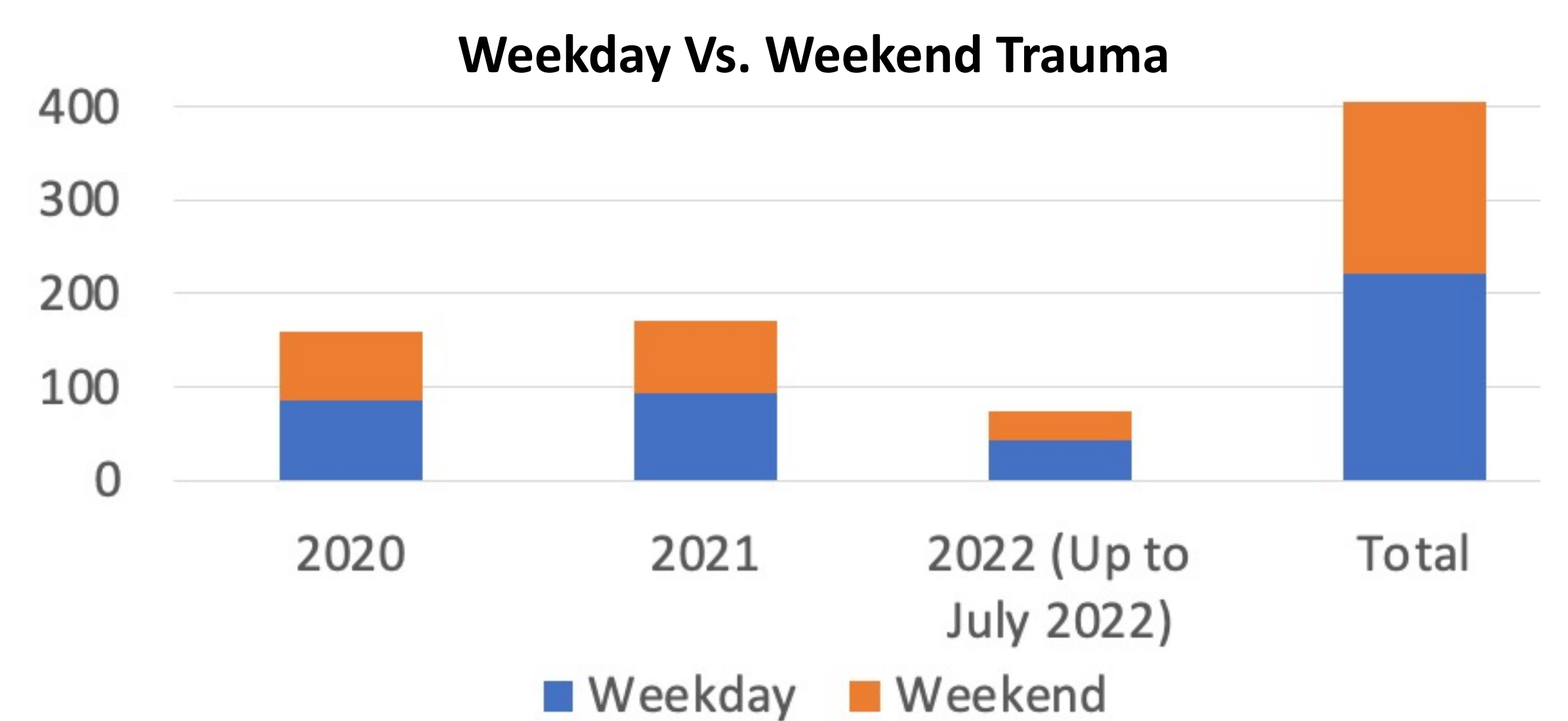
- All trauma patients presenting out-of-hours to the Cumberland Infirmary Carlisle (CIC) over the period January 2020 – July 2022 were included
- Out-of-hours was defined as 2000 – 0800
- Data was extracted from the Trauma and Research Network (TARN) database

## Results

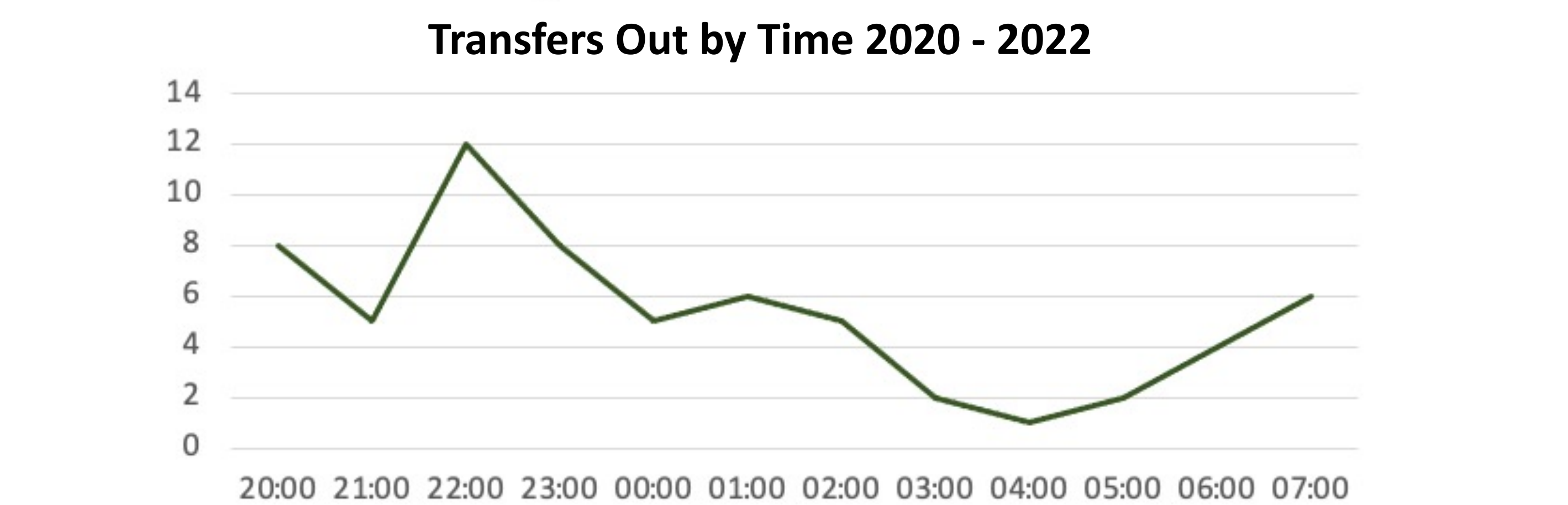
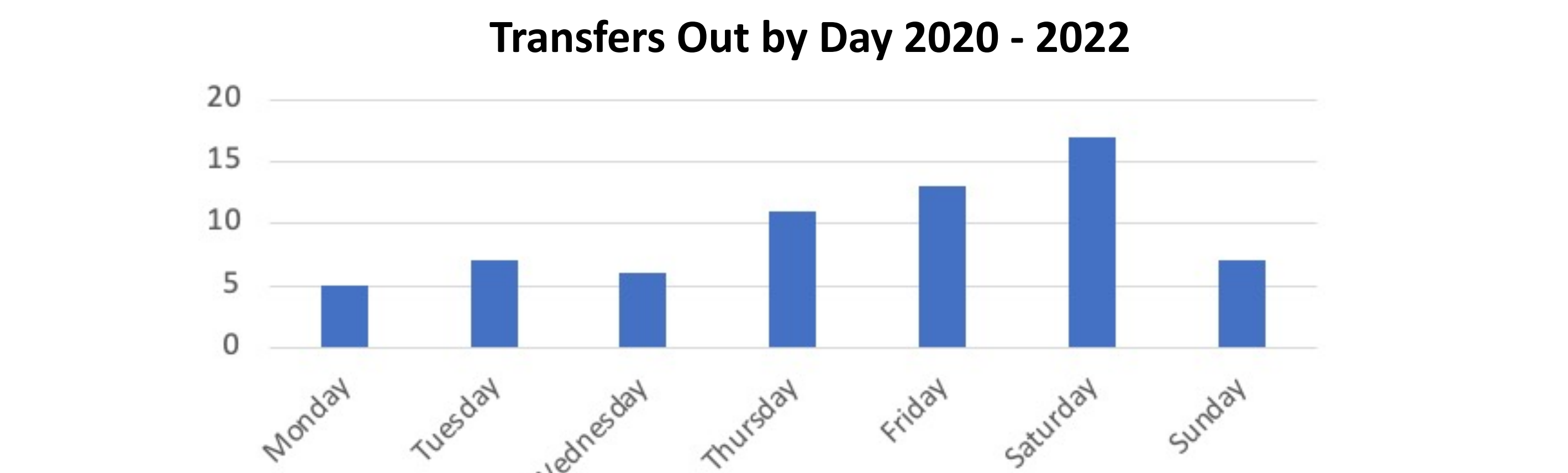
- A total of 406 patients presented to CIC out-of-hours with trauma between January 2020 – July 2022
  - 2020: 160
  - 2021: 171
  - 2022 (Up to July): 75
- For major trauma cases in those aged <65yo (excluding silver trauma), the majority of presentations were related to falls, followed by vehicle incidents
- There was a trend of similar, if not increased, weekend trauma workload compared to during the week
- There was a year-on-year increase in overall out-of-hours trauma presentation between 2020 and 2022
- Out-of-hour trauma cases remained consistently high during the winter, spring, and early summer months
- There was a trend of increasing trauma presentations in the first few hours of the night



■ Blow(s) with weapon    ■ Blow(s) without weapon    ■ Fall less than 2m  
■ Fall more than 2m    ■ Other    ■ Shooting  
■ Vehicle incident/collision    ■ Stabbing



- A total of 66 trauma patients were transferred out-of-hours to the Royal Victoria Infirmary (nearest MTC)
- Overall trends show higher trauma transfer numbers over the weekend period, peaking on Saturday
- Timings of trauma transfers correspond well with the peak times of out-of-hour trauma presentations
- The ISS was higher in those patients being transferred out, compared to those not requiring transfer – 20 Vs. 11 respectively



## Conclusion

- There are increasing volumes of trauma patients out-of-hours between years 2020 – 2022; with an average ISS of 17.5, these qualify as major trauma cases
- Patients requiring transfer had an average ISS of 20, suggesting the need for specialist transfer input
- This data recognises increased numbers of high severity patients overnight, supporting the need for an increase in prehospital service provision