



Improving the process for paediatric wrist & forearm closed fractures

Mr Anoop Anand, Mr Brijesh Ayyaswamy, Angela Mason and Caroline Gomery

Introduction

Historically, paediatric patients with upper limb fractures that need manipulation and plaster application have been admitted to an inpatient ward and taken to theatre the next day (rarely the same day) and to have a procedure performed under anaesthesia. This resulted in increased admissions, bed utilisation, overnight stays, theatre time consumption and difficulties for the children admitted and their families.

The team identified that there would be multiple advantages of undertaking procedures for forearm and wrist fractures in the ED, as reduction without admission at the first attendance and discharge from ED is much better for children and families and also confers benefits to the hospital, reducing costs, free up theatre time and reduce bed days.^{1,2}

Aim

To reduce the number of children, aged 5-16 with appropriate forearm fractures, who have upper limb fracture manipulations in theatre by 50% by September 2022

Initial Assessment

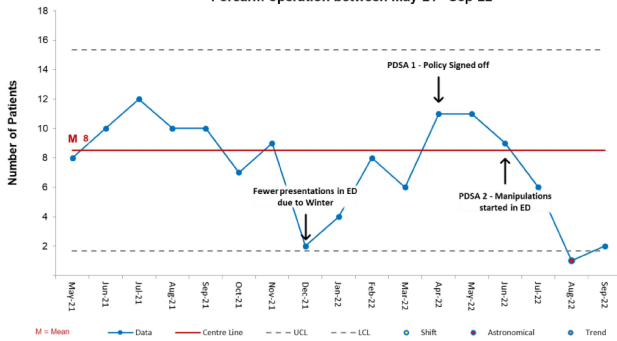
Intranasal diamorphine/ fentanyl and Entonox can be used for analgesia and sedation. In the last Paediatric Trauma & Orthopaedics GIRFT visit to BVH, it was highlighted that in a 3-year period from 2016 – 2019, there were 189 paediatric patients who went to theatre for manipulation and plaster application alone.

Change ideas

- Develop and ratify a policy for procedure for manipulation of closed fracture or dislocations for Children in ED
- Education for all staff on procedure
- Manipulation performed

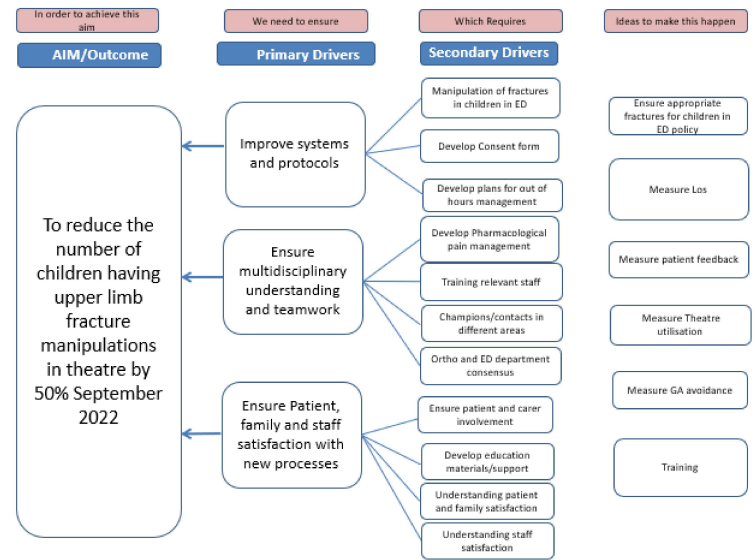
Results

Chart to show number of patients who were taken to theatre for a Wrist / Forearm operation between May-21 - Sep-22



Since the interventions began, **16 of 25 paediatric patients (64%)** with wrist/forearm fractures have been treated in the ED, reducing the; theatre time & resource, need to undergo general anaesthesia and the need to be admitted to an inpatient bed. Most importantly, it has allowed the patient and their families to return home sooner than if they were treated in theatre.

Driver Diagram



*Children with appropriate forearm fractures aged 5-16

Patient & parent feedback

Everyone was absolutely fantastic – Parent 1

Everyone was very caring and explained everything to me. There was nothing they could have done better have done better. –Child 1

The care was given very quickly and kindly. Everything was explained to us. I felt very safe and in capable hands when I was feeling upset – Parent 2

I would tell my friends that I received very good service and they helped me feel better - Child 2

Lessons learned

- Collect data and analyse early to be able to show the impact of the interventions
- Involvement of Key Stakeholders is key from the beginning
- Adapting the principles of QI can be beneficial to start any project related to improving systems for patients.

Next Steps

- Continue with manipulations in ED for patients
- Train more team members on the manipulation procedure
- Be available for staff to call if require assistance
- Continue collecting data to measure impact

References

1. BOASTs guidelines May 2021 - <https://www.boa.ac.uk/standards-guidance/boasts.html> (accessed 29.09.2022)
2. Paediatric T & O Surgery, GIRFT Programme National Speciality report, April 2022 <https://www.gettingitrightfirsttime.co.uk/reports/paediatric-trauma-and-orthopaedic-surgery-girft-report/> (accessed 29.09.2022)