

Buckle up & splint it, don't POP it!

– A Quality Improvement Journey

Patient story

An 8 year old girl attends the Emergency Department (ED) after a fall. She is put in a plaster cast (POP) for a distal dorsal buckle fracture of her wrist. Her mum is concerned as she will not be able to apply the creams that help with her daughters severe eczema.



Question: Is there an alternative?

Answer: A literature review and local/national practice said YES!

Aim

To develop a pathway that uses splints for distal dorsal buckle fractures in children, that is safe, acceptable to patients/parents and cost effective.

Methods

- Literature review and review of local/national practice
- Driver diagram to identify drivers, outcome and balancing measures
- Stake holder analysis and change matrix
- Process mapping
- PDSA cycles including questionnaires, local feedback, pathway development and simulated testing, departmental teaching, and audit of implemented pathway

Outcomes (March 2015-16)

- **Preference:** 84% would prefer a splint.
- **Pathway/patient information leaflet:** developed after multiple PDSA cycles
- **Pathway use:**
 - 195 buckle fractures of which 92 were suitable for the pathway
 - Of those suitable, 96% (88) were put on the pathway
- **Balancing measures**
 - 5 (6%) returns in splint group compared to 8 (9%) in the POP group
 - 5 volar fractures, 2 were inappropriately managed with a splint. Delay in identification due to failure of safety net system. No concerns regarding morbidity
- **Follow up questionnaire:**
 - 20% (18) were followed up
 - All satisfied with splint, felt it more convenient and would prefer this over a POP
- **Financial savings:**
 - £7920
- **Nursing time saved:**
 - 26 hours
- **Time in department:**
 - 51 (splint) vs 68 minutes (POP)

References

- Abraham A, Handol H, Khan, T. (2009). Interventions for treating wrist fractures in children (Review). *Evid.-Based Child Health* 4:294-377.
- NHS improving quality. <http://www.nhs.uk>
- Quality Improvement Made simple. Health Foundation. www.health.org.uk/publications/quality-improvement-made-simple

Challenges:

- How to prevent splinted volar buckles?
- How to ensure safety net working?
- Introduction of new NICE guidance after implementation – does this change things?
- Poor follow up, particularly of those managed inappropriately

Reflection on the journey

- A largely successful QI project:
 - Safely managed and satisfied patients
 - Time and financial savings for patients, staff and departments
- Don't underestimate the power of the MDT to make things happen!
- An awareness of your own personality type can help you identify the skills you bring

