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Single clinic visit for distal radius buckle fractures discharged with wrist brace to clear up clinic slots

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Background

Distal radius Buckle (torus) fracture cases are commonly encountered in our clinical practice. It represents a spectrum of injuries from mild plastic deformation of one area of the cortex to complete fracture with buckled appearance. These fractures occur in the distal radius metaphysis and they are stable fractures. These cases seen in clinics are referred mainly from Children's Emergency or occasionally from polyclinics. They are usually treated in a below elbow cast and follow up in 2-3 weeks with x-rays after removal of cast and discharged after that. This would mean that patient must be seen in clinic within the stipulated time.

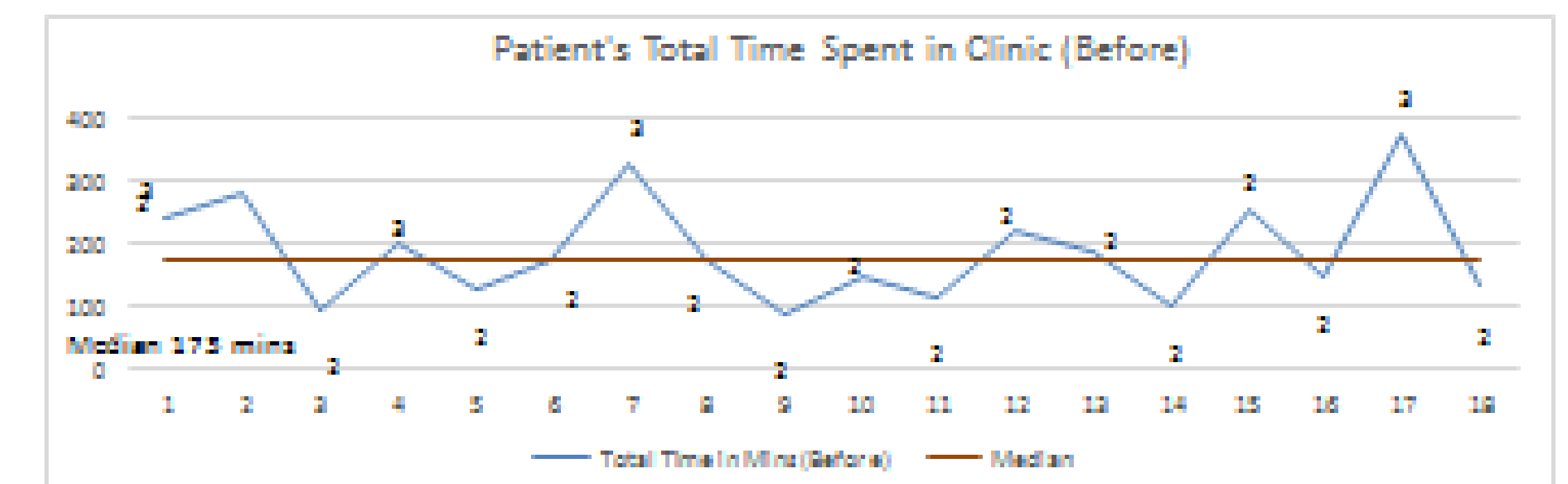
Aim and Objectives

The purpose of this project was to reduce the number of follow up visits for patients diagnosed with buckle fractures. To reduce the time spent in clinic by 50% in 6 months, thus free up the clinic slots

Materials and Methods

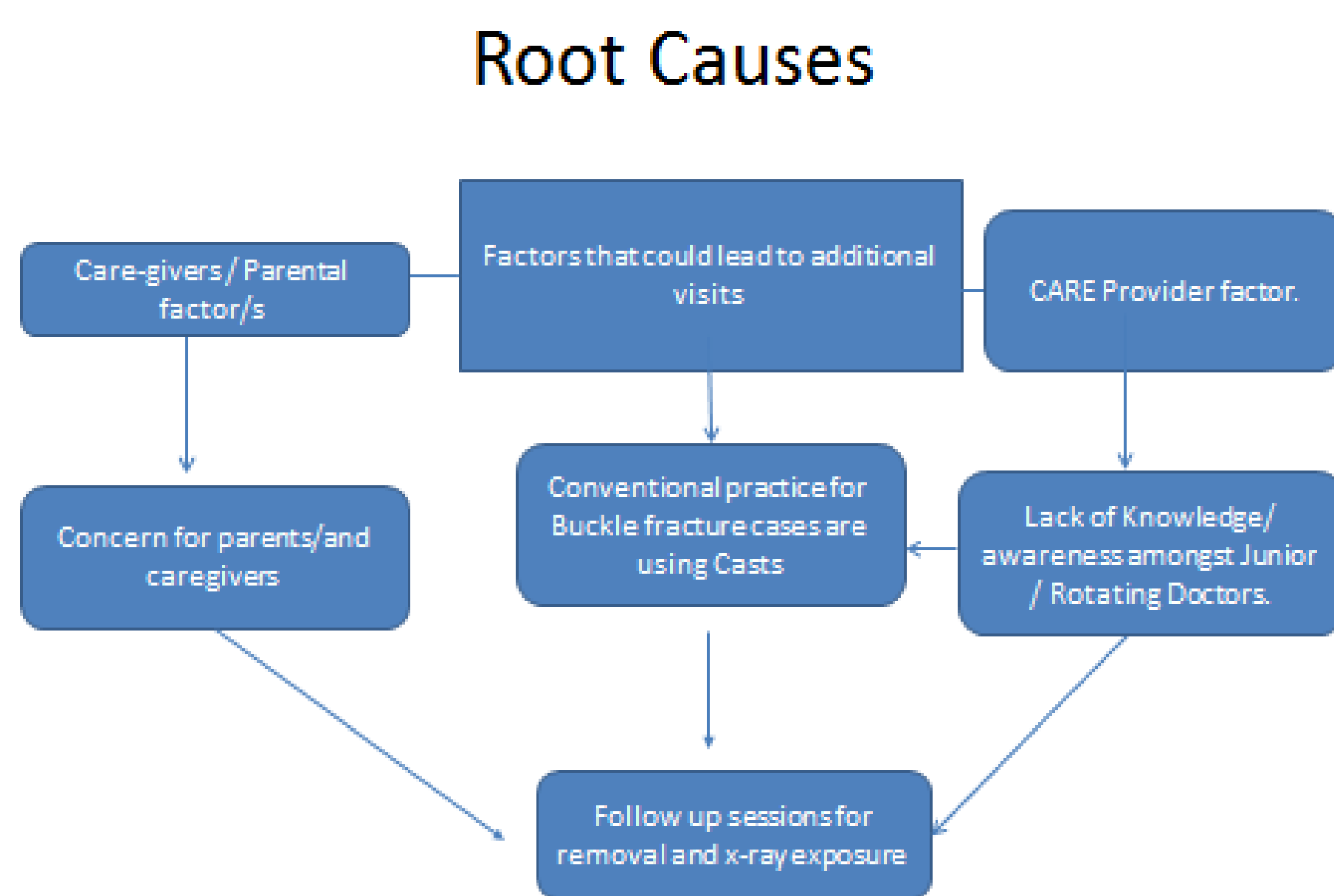
We identified buckle fracture as one of the condition which is amenable for single visit treatment in clinic. Due to the existing treatment protocol the patient must be reviewed in the stipulated time and this would lead to additional clinic sessions. By changing our existing practice we hope to free up the follow up slots and therefore reduce the waiting time.

- Buckle (torus) usually encountered in our clinical practice.
- Referred mainly from Children's Emergency (CE) or from polyclinics.
- Traditionally treated in a below elbow cast for 2-3 weeks followed by removal of cast and x-rays.
- Open appointment.



- There were 2-3 clinic visits for all patients in existing protocol/practice.
- There were 18 patients, who spent median of 173 mins in clinic.

Root Causes



Root causes	Solutions
Additional follow up session for removal and x-ray exposure	• Use wrist brace
Lack of Knowledge/ awareness amongst Junior / Rotating Doctors	• Educating our doctors • To standardize the workflow. • Confirm diagnosis with the senior staff supervising the clinic
Concern for parents/and caregivers	• Provide education material/ counselling. • Provide direct hotline to call for concerns if any.

Distal radius buckle fracture cases were identified from clinic.

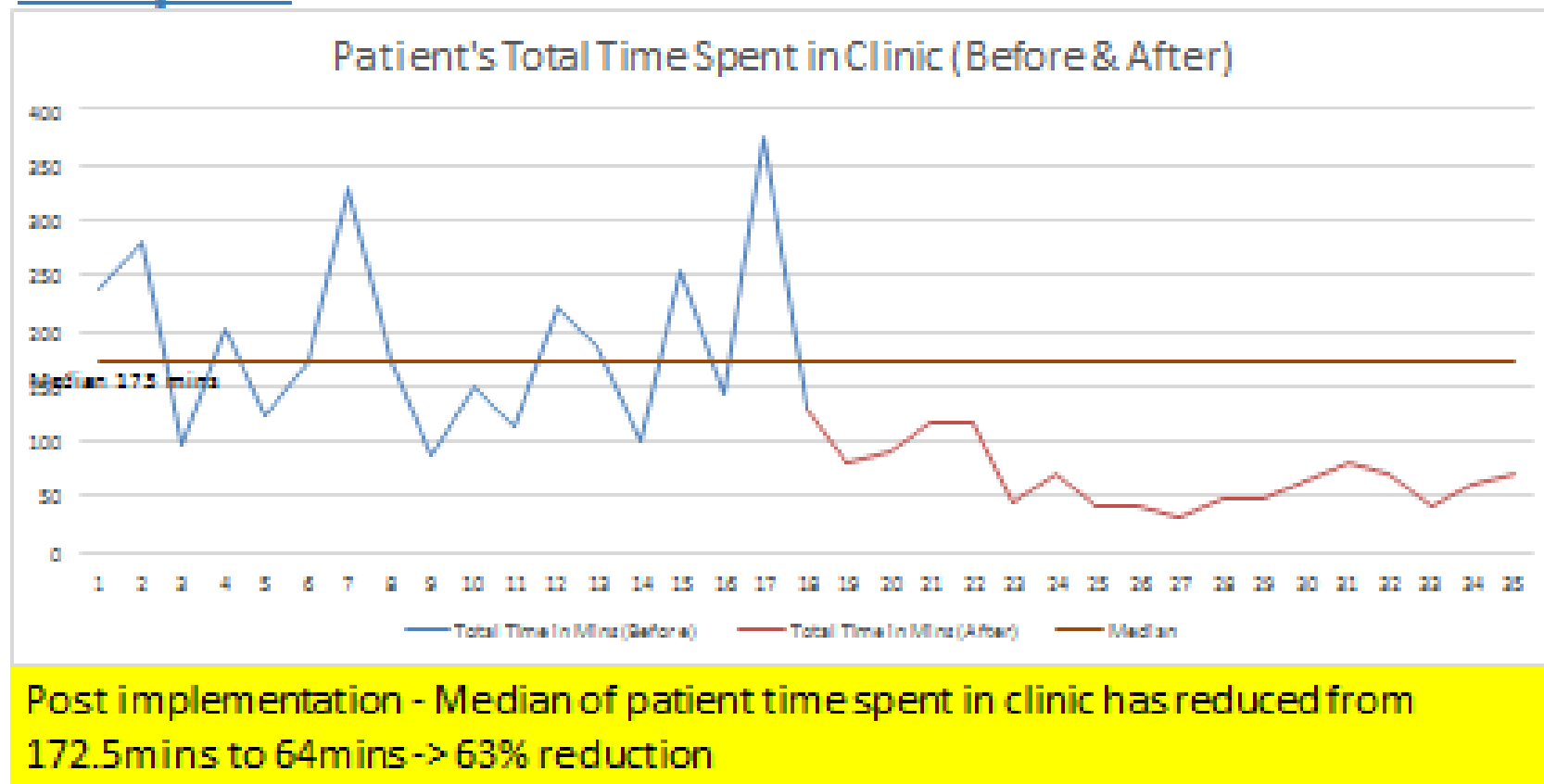
Parents / care givers were counselled regarding their child's condition.

They were immobilized in wrist brace and given an open appointment.

The care giver were also given an information booklet for their reference.

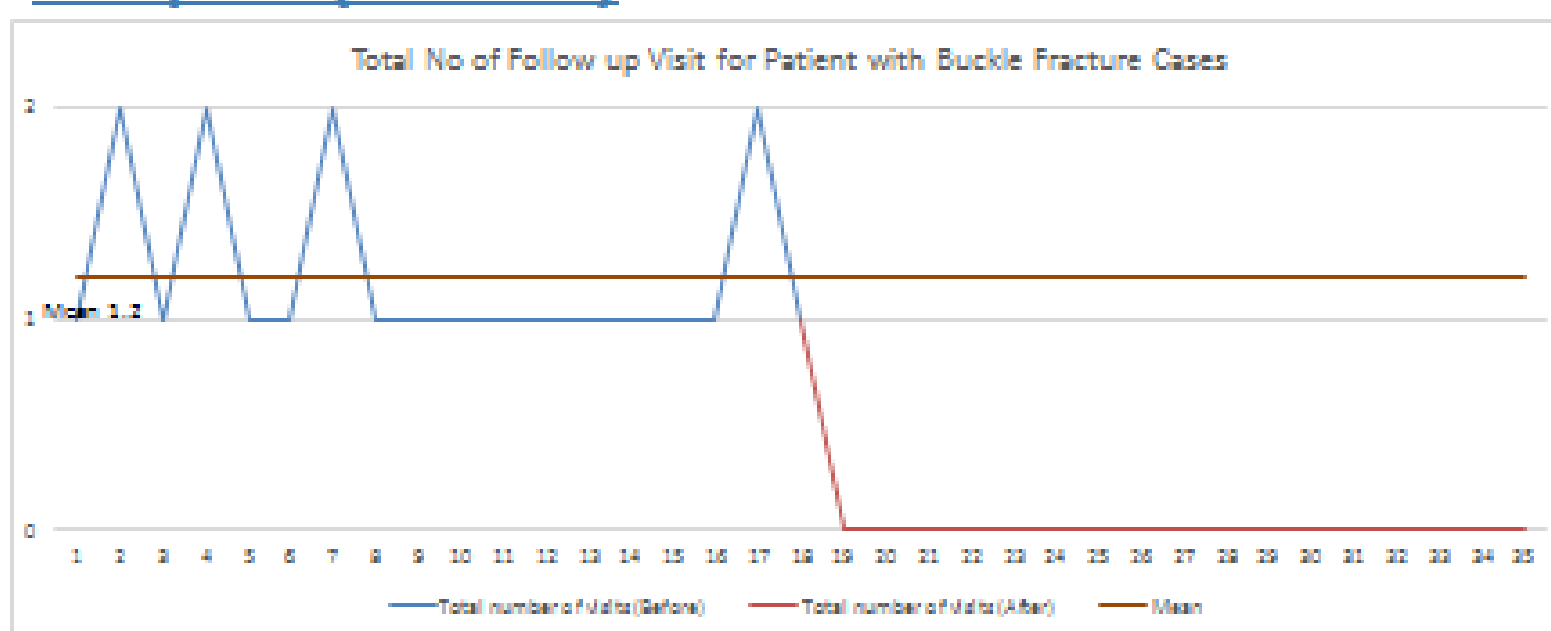
Results

Post Implement, monitor, measure (after), compare



Post implementation - Median of patient time spent in clinic has reduced from 172.5mins to 64mins->63% reduction

Post Implement, monitor, measure (after), compare (Dec-Jan)



- Follow up sessions have been reduced from average 1.2 to 0,
- On an average 40 buckle fracture cases seen/year by reducing to 0 follow up sessions it will free up 48 more slots for other patient.

Conclusion

Follow up visits were sustainably reduced from 2 visits to 0 visits for buckle fracture cases. Since implementation there were 17 patients, who were managed according to this treatment protocol. None of them required any further assistance or follow up visits.

References

A randomized, controlled trial of removable splinting versus casting for wrist buckle fractures in children. Lint AC1, Perry JJ, Correll R, Gaboury I, Lawton L. Pediatrics. 2006 Mar;117(3):691-7.

Cast versus splint in children with minimally angulated fractures of the distal radius: a randomized controlled trial, Kathy Boutis, MD, Andrew Willan, PhD, Paul Babyn, MD, Ron Goeree, MA, Andrew Howard, MD, CMAJ October 5, 2010 vol. 182 no. 14 1507-1512

Benefits

Tangible

- Reduced number of follow up visits
- Freeing up follow up visit slots
- No more medical leaves needed for the patient.
- Time saved for the family and the patient.

Intangible

- Reduces cast related stiffness.
- Save additional radiation exposure.
- Reduce the cost factor involved for the family as well.

