

## **AFTER (Ankle Fracture Treatment Enhanced Recovery) project: a multi-disciplinary and cost effective approach to improve patient out- come with ankle fractures**

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**Statement of the problem:** Treatment of unstable ankle fractures is often very challenging to manage and puts a significant economic constraint on the healthcare budget in the United Kingdom. If not treated within the first 12 hours, it often gets delayed for days because of swelling or soft tissue conditions and also due to limited theatre space, leading to an increased hospital stay and a decrease in patient satisfaction and outcome. This project aims to improve the decision making for unstable ankle fractures, safety, reduce in-hospital stay and improve patient outcome.

**Assessment of the problem:** To assess the cause of the problem we pulled out clinical data from 2018 for all unstable ankle fracture who underwent surgery and we analysed their medical notes for reason for the delay in surgery, time from injury till surgery and measured outcome score.

We found out that 73.4% of ankle surgeries are getting delayed of which 48.9% because of limited space in the trauma list and 44.6% because of soft tissue swelling. The average stay in hospital for ankle fracture patient was about 4.5 days and the average delay in surgery was

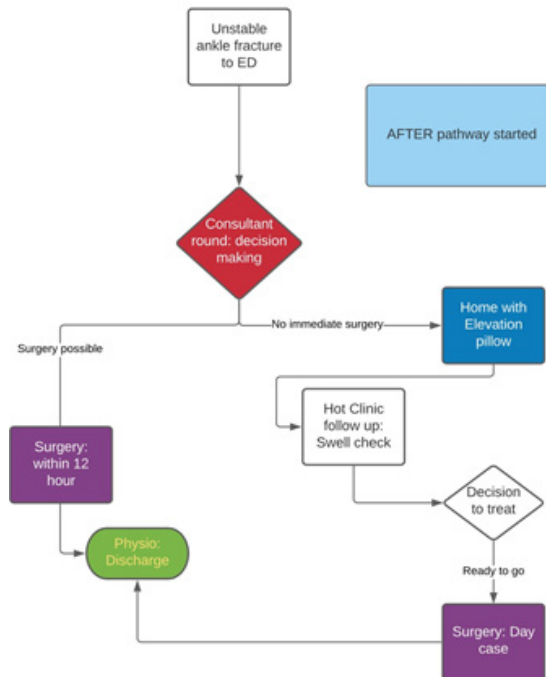
3.4 days resulting in an estimated loss of £5 million a year for delayed surgeries only.

**Intervention:** We implemented the AFTER pathway in 2019, which essentially mandates clear documentation of initial presentation, morning consultant input regarding the swelling and time of surgery.

If surgery is not possible immediately, the patient will be assessed by the IDT team and encouraged to go home with a leg elevation pillow (Ortholove™, Huntington, UK) and clinic follow up in 72 hours for swelling assessment, the decision regarding the date and time of surgery.

Finally, the surgery is done as a daycare admission and discharge with an elevation pillow

(OrthoLove). After surgery, a team of dedicated foot and ankle physiotherapist will guide these patients for early weight-bearing and rehabilitation and follow up in the clinic for 3 months.



**Result:** The outcome was measured in terms of total in-hospital stay for all unstable ankle fracture, time from ED presentation to surgery and post-surgery OMAS score. The data were analysed in SPSS software and the Student-T test was applied to find out the statistical difference.

We have seen a significant reduction in hospital stay from 4.5 days to 1.4 days. And a reduction in healthcare cost without any increase in the complication rate

Patient satisfaction also increased significantly because of reduced hospital stay (averageOMASscore78)

AFTER project is a dedicated and cost-effective pathway to treat unstable ankle fractures, however, structured rehabilitation and a multi-disciplinary team approach are essential for its success.

**Conflicts of interest:** Ortholove™ (LEDA orthopaedics, UK) has supported this project by providing free leg elevation pillows for the patients to take home.