

# Optimising Outcomes for Day Zero Hand Therapy



**Barts Health**  
NHS Trust

Melandi Brand<sup>1</sup>, Norbet Banhid<sup>1</sup>, Tamlyn Curry<sup>1</sup>, Grace Gibson<sup>1</sup>, Fawz Kazzazi<sup>1</sup>, Roxy Lord<sup>1</sup>, Lisa Newington<sup>1,2</sup>, Matthew Pywell<sup>1</sup>, Saheed Shabbir<sup>1</sup>, Selva Sundaram<sup>1</sup>

1. Hand Therapy, The Royal London Hospital, London Whitechapel, UK

2. Barts Bone and Joint Health, Queen Mary University of London, London, UK

## Background and Objectives

Post operative patients with zone 2 flexor tendon repairs and metacarpal ORIFs would typically have their first hand therapy appointment within 5-7 days of surgery. The wait for hand therapy was often extended due to high clinical demands from a small team. Clinical outcomes were often limited by stiffness and scar tissue adhesions as a result.

Our quality improvement project evaluates clinical outcomes of patients at a major trauma centre who started hand therapy on the day of surgery versus patients starting hand therapy between 5-7 days post-operatively.

The day zero hand therapy criteria included a broad range of operative procedures. Patients with zone 2 flexor tendon repairs and metacarpal ORIFs were selected for this evaluation because historically these procedures were treated in greater numbers and demonstrated limiting post operative complications such as adhesions.

## Method

Inclusion and exclusion criteria were established.

### Inclusion

All ORIFs, Flexor tendon repairs, Extensor tendon repairs (Z3-6), Tenolysis  
Washouts, Ligamentotaxor, Giden's frame, UCL thumb, Ligament repairs, Trigger finger release and Volar plate release.

### Exclusion

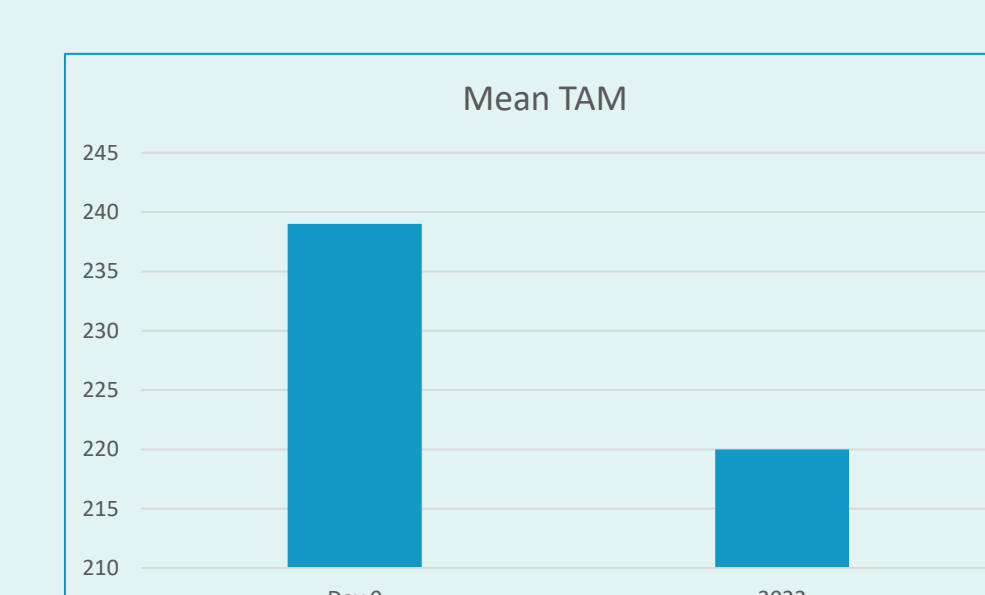
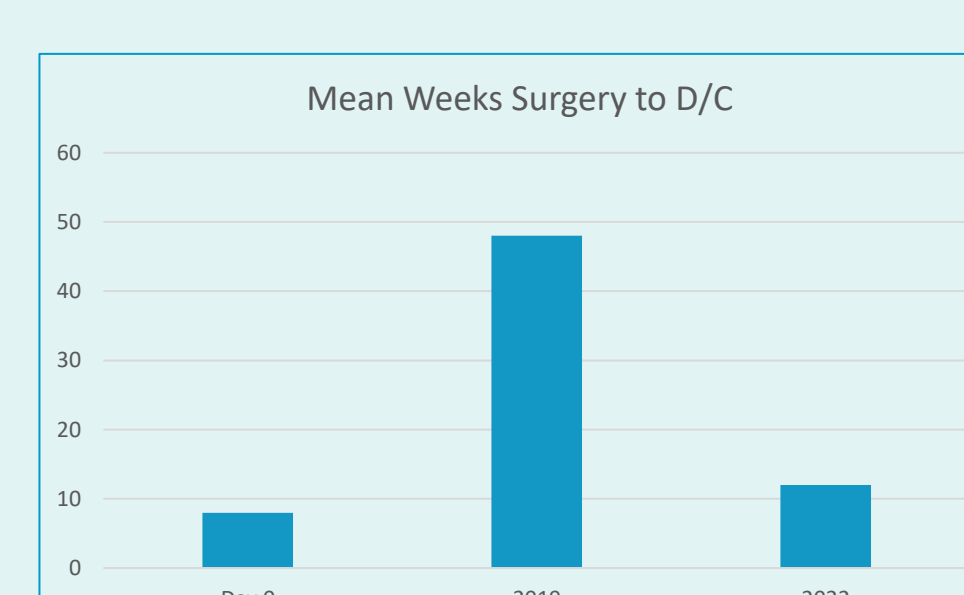
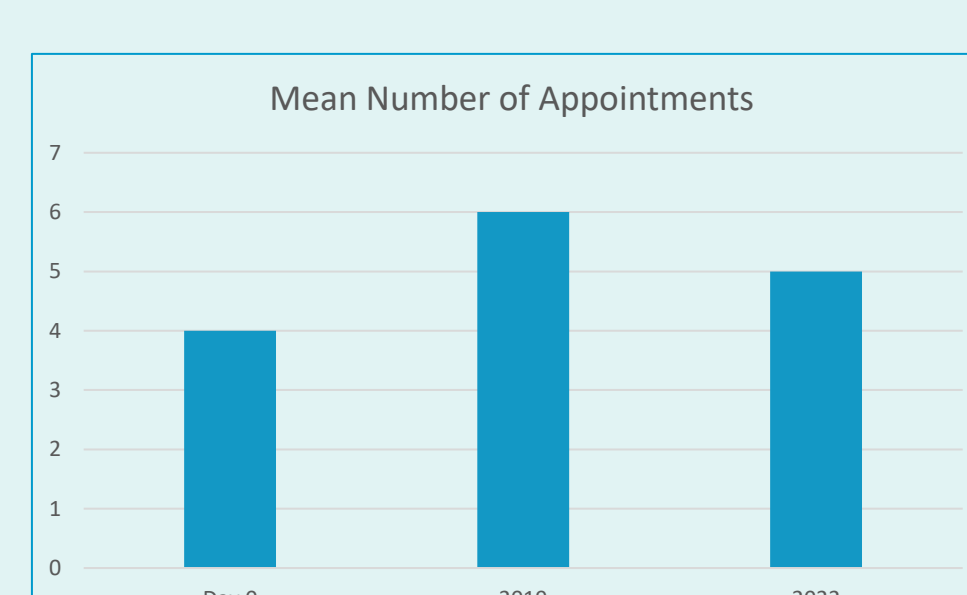
MUA, All K-wires (including ishiguru), Extensor tendon repairs (Z1-2), Carpal tunnel decompression, Nerve repairs  
Complex trauma (eg full house).

In April-December 2022, patients received hand therapy straight after surgery for splint fabrication and optimal hand and wrist positioning; education about proprioceptive rehabilitation; wound care and dressings. Patients were advised to rest from day 0-3 and commence taught exercises between day 3-5. Number of appointments, length of time from surgery to discharge and total active motion (TAM) was collected.

This data was compared to records from 2019 and 2022 for patients who started hand therapy between 5-7 days post-operatively.

## Results

20 patients received hand therapy straight after their surgery. 10 patients attended all appointments, completed treatment and were discharged. 10 patients did not complete their treatment. For patients who completed their treatment, the mean number of appointments was 4; mean time from surgery to discharge from hand therapy was 8 weeks; and TAM was 239 degrees. Retrospective data from records in 2019 for patients who started hand therapy between 5-7 days after surgery showed 9 patients received a mean of 6 appointments over 48 weeks. For 10 patients in 2022, this was a mean of 5 appointments over 12 weeks with a TAM of 220 degrees.



## Conclusions

Commencing hand therapy treatment on the day of surgery for patients undergoing these procedures appears to reduce number of therapy appointments, shorten the duration from surgery to discharge and improves TAM. Limitations are incomplete retrospective data to draw comparisons and high number of patients not completing treatment.

