Stop the Drop: Tracking Adherence to Multi-Podus Boot Wear in the Traumatic Fasciotomy Population

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References

Problem

- Patients with traumatic lower extremity fasciotomy are at high risk for plantarflexion contractures and foot drop, which can lead to long-term functional impairments1
- Existing research supports the importance of a long-duration, low-intensity stretch to promote dorsiflexion (DF) range of motion. This is often achieved with the use of orthotic devices, such as a multi-podus boot (MPB)2
- MPB are commonly provided to this population by therapy, however, we hypothesized that adherence to the specified wearing schedule is variable and may contribute to poor outcomes

Goal

- Track patient adherence to MPB use every weekday
- Measure ankle range of motion (ROM) throughout hospital stay 3x/week
- Assess if patient adherence impacted ROM outcomes
- Identify barriers to adherence

Intervention

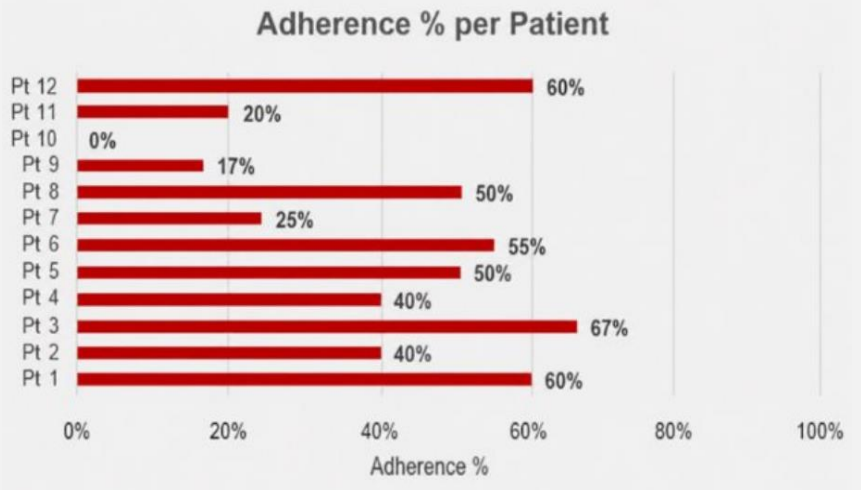
- Identified patients with traumatic fasciotomy
- Provided MPB, educated patient regarding wearing schedule/purpose
- Assessed ankle ROM, skin integrity, sensation
- Tracked MPB adherence:
- Daily goal: use >/= 12/24 hours
- Hospital stay goal: 80%/days admitted
- Documented outcomes in EMR

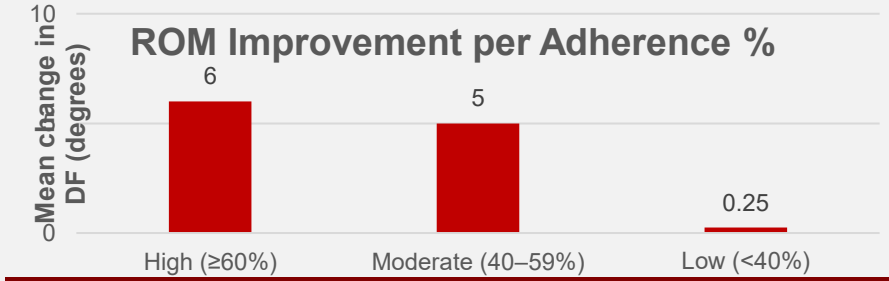


Results

- Recorded data for 12 patients:
  - 100% of patients were non-compliant with goal MBP wear
  - Patients who were more adherent showed the greatest improvements in DF ROM
  - Mean ROM gain was 3.7 degrees (MCID 3-5 degrees)[3]
  - No skin integumentary issues were noted
  - Common reasons for non-adherence:
    - In OR/off unit, discomfort, forgot or lost boot, communication breakdown with RN

Results





Next Steps

- Create standard order set for RNs in Epic
- Provide targeted RN education at bedside and huddles
- Update patient fasciotomy handout to include information regarding importance of MPB use
- Complete ongoing data tracking
- Collaborate with Trauma Clinic to assess for long-term outcomes

Acknowledgements

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