

Discontinuing Prolonged VTE Prophylaxis in Inpatients with SCI: A Quality Improvement Initiative

Dr. Lauren Cormier, Dr. Ali Bateman, Dr. Heather Mackenzie
Centre for Quality, Innovation, and Safety, Schulich School of Medicine & Dentistry,
Western University, London, ON, Canada

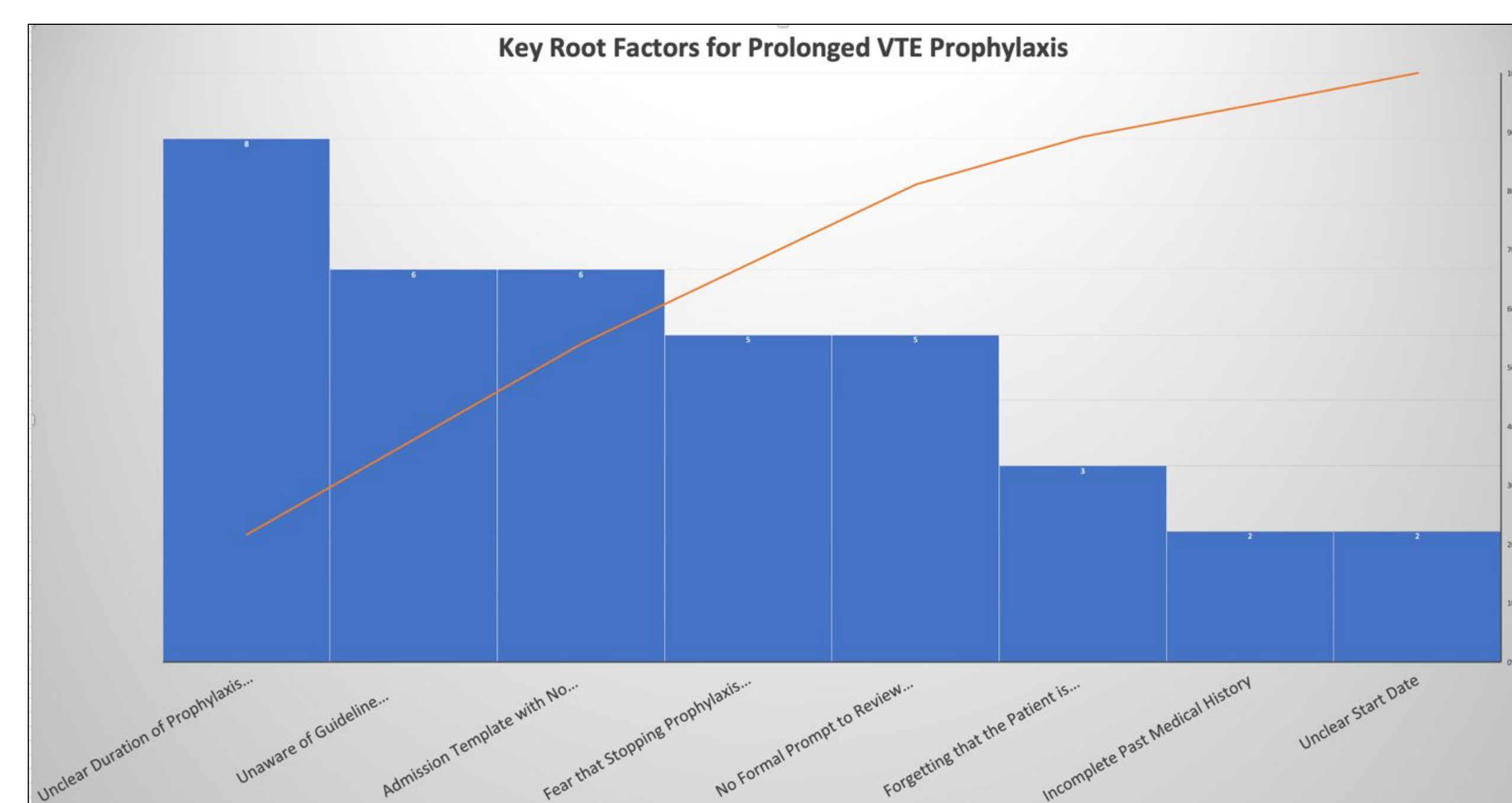
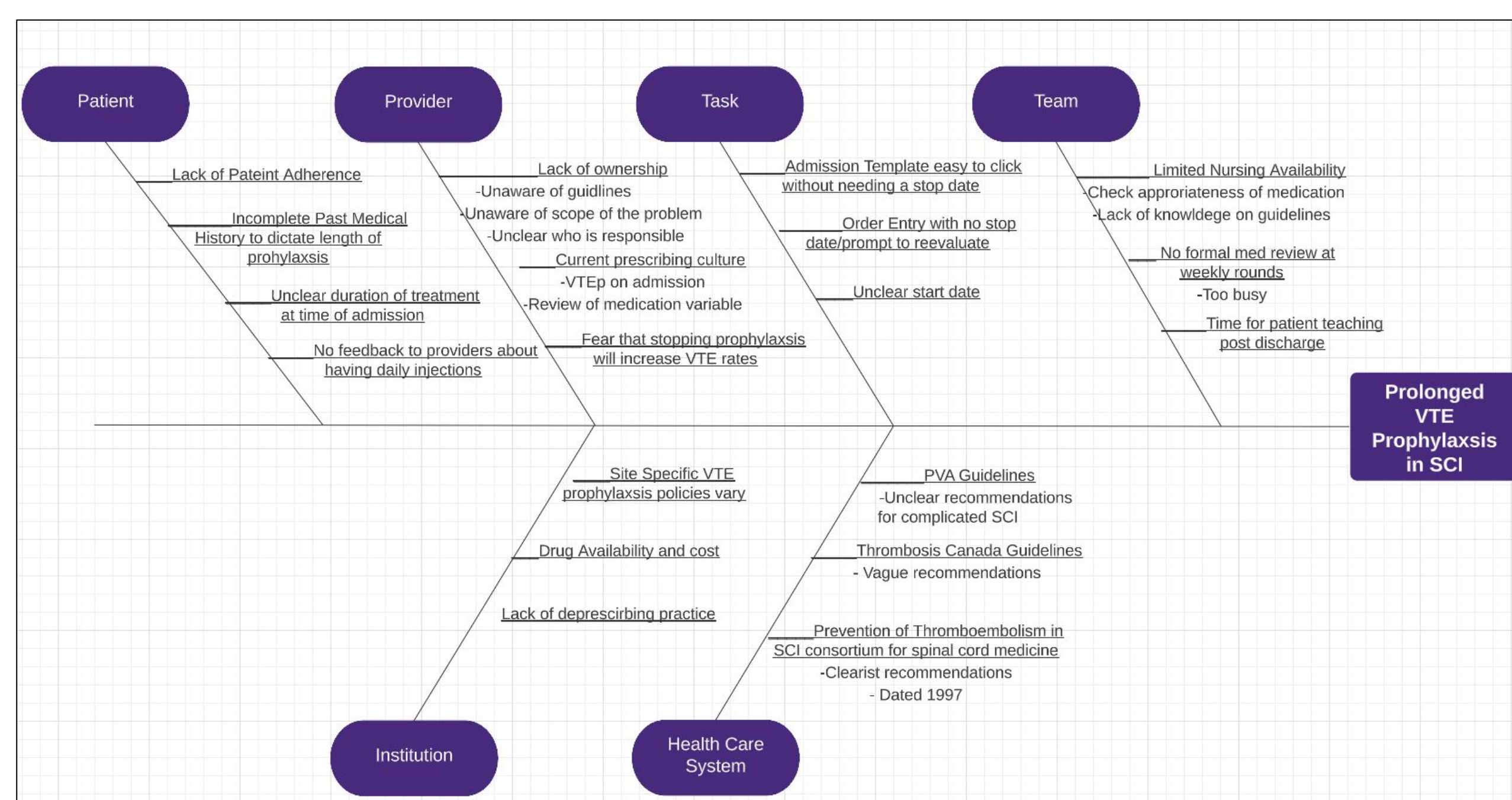
AIM Statement: To decrease the percentage of patients with newly diagnosed SCI admitted to 4AE SCI Parkwood Institute who receive prolonged VTE prophylaxis from 48% to 30% by May 30th 2023

PROBLEM DEFINITION

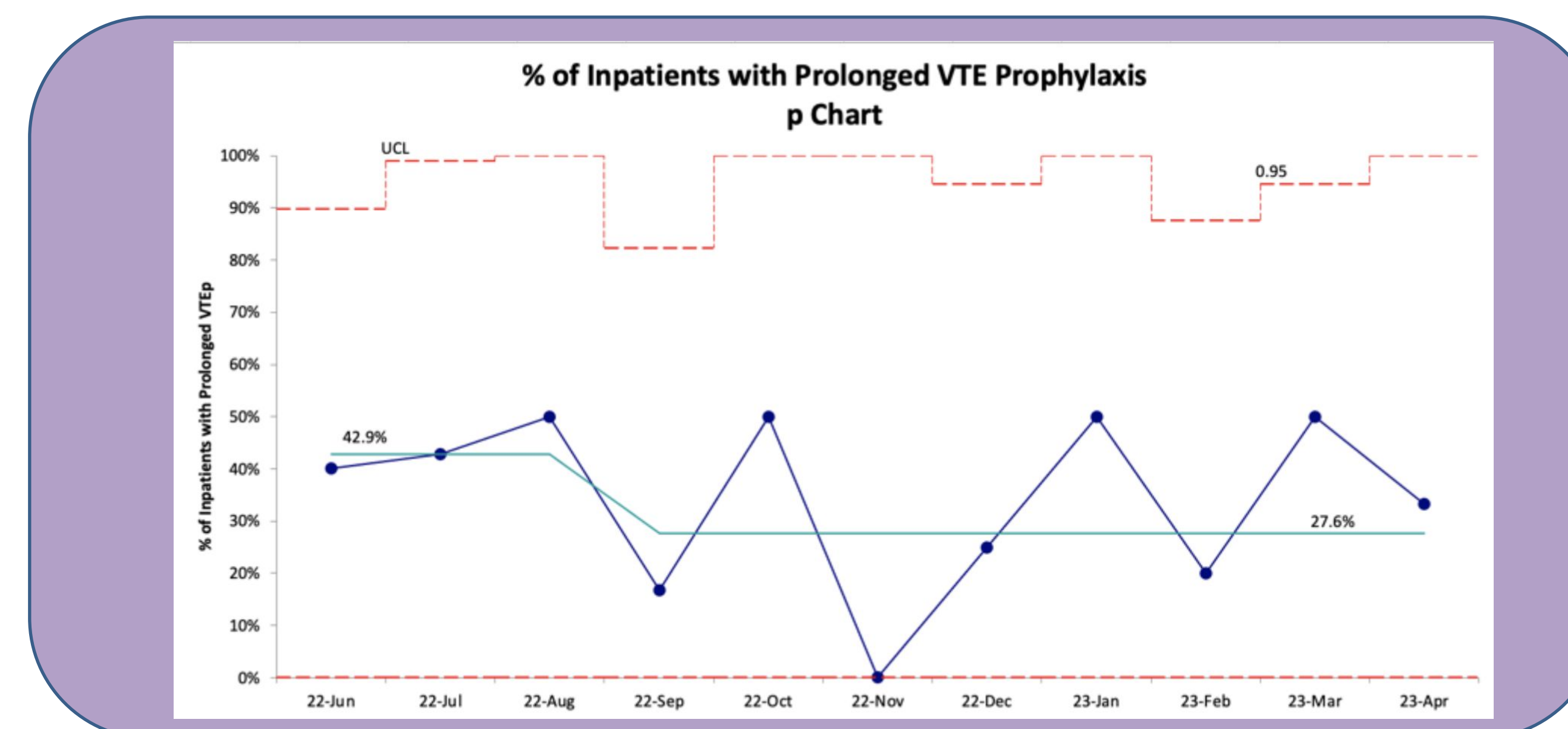
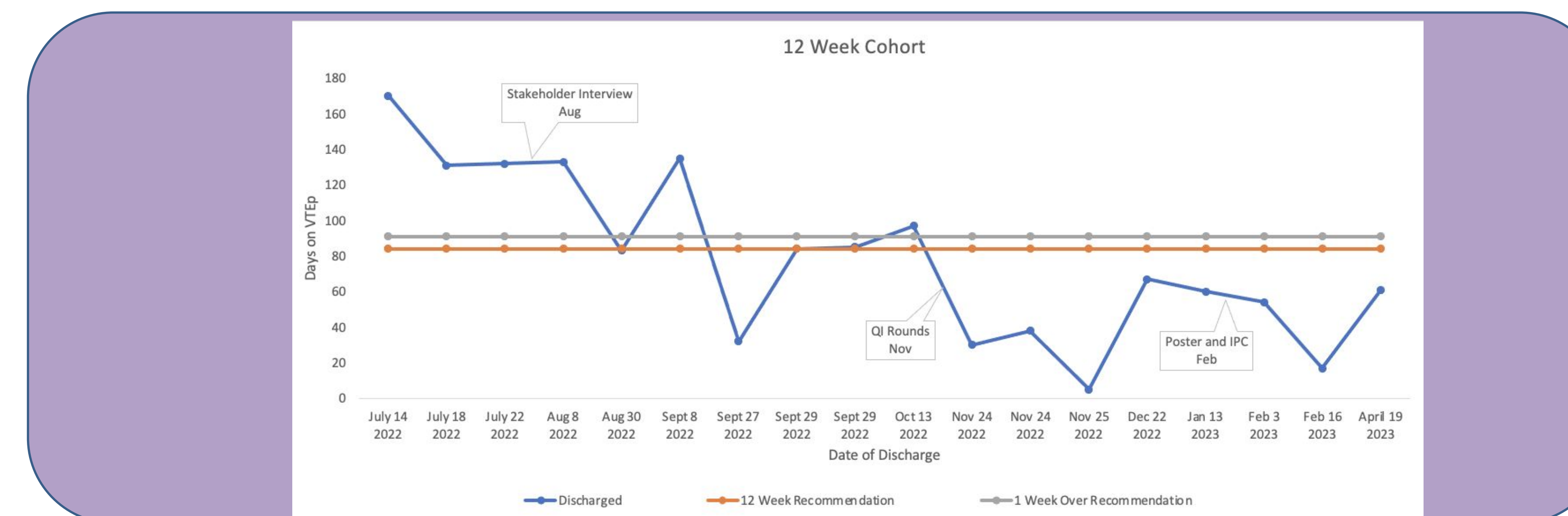
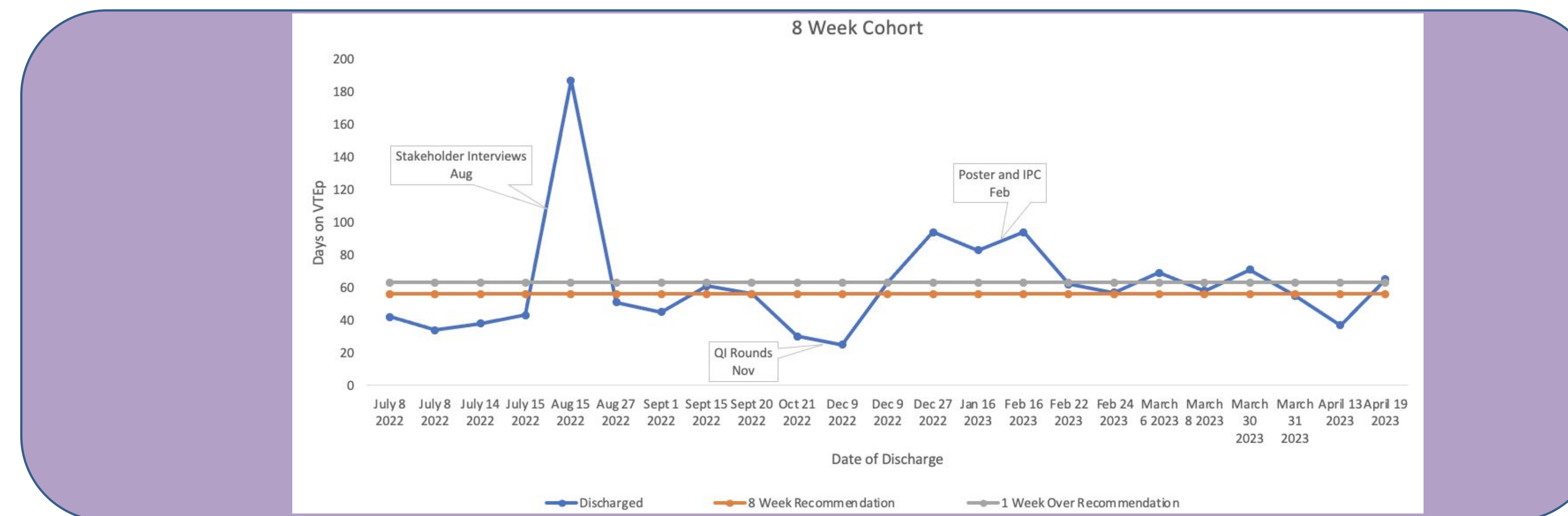
- 80% of venous thromboembolism events (VTE) occur within the first 2 weeks of spinal cord injury (SCI) followed by a substantial decrease after 8 weeks and similar to baseline risk years post injury at 12 weeks.
- The average length of stay in hospital for a patient with a SCI is 3 months
- Preliminary data showed 48% of inpatients were over the recommendations for VTE prophylaxis at the time of discharge.

ROOT CAUSE ANALYSIS

Stakeholders including physicians, pharmacists and allied health have been crucial for helping to define cause and effect and key root causes. The top 3 factors that contributed to prolonged VTE prophylaxis included; Unclear Duration of Prophylaxis at Time of Admission, Unaware of Guideline Recommendations, Admission Template with No Prompt for an End Date.



MEASUREMENT & RESULTS



- The average length of stay in hospital is 3 months. Therefore we anticipate to see a 2-3 month delay after the intervention
- There was a drop in the mean percentage of prolonged VTE prophylaxis in Sept which may be due to early and ongoing discussions of guideline recommendations and stakeholder interviews in Aug
- The mean began to rise in Dec-March when there was less presence on the ward from the QI team and before the use of posters and new IPC sheets in Feb.
- To date only one patient has been discharged with use of the new IPC sheet
- On further analysis we have seen an improved compliance to the recommendations in the 12 week cohort
- Although the 8 week group is still above target in 50% of cases the number of days over recommendation has

IMPLEMENTATION

PDSA cycles:

1. Education sessions for stakeholders, including a presentation at PM&R Quality Improvement Rounds, emails and a short talk before rounds describing the project. - An educational session may be low impact and not sustainable by itself however is still key in using it in combination with the other strategies. It was key to have the SCI team involved in the process and input on implementations that would be the most practical and effective.
2. Posters which summarized the VTE prophylaxis recommendations for quick reference. This is in addition to the education sessions addressed one of the root causes regarding awareness of guideline recommendations
3. New Interdisciplinary Plan of Care (IPC) sheets used in weekly team rounds with a section to determine 8 vs 12 weeks with a predicted end date or if early mobilization was achieved. The new IPC sheet was only used for new admissions starting in February. This addressed 2 the root causes identified

BALANCING MEASURES

The rate of VTE events after prophylaxis was stopped

- This was done by looking at therapeutic doses of Dalteparin or the start of a DOAC which would prompt a chart review to confirm the diagnosis.
- To date there have not been any VTE events after stopping prophylaxis.

The rate of inappropriate early discontinuation

- To date there has been 1 incidence of inappropriate discontinuation out of a total of 19 early discontinuations

Reasons for appropriate early discontinuation included discharge or early mobilization

SUSTAINABILITY

1. Process owner: SCI pharmacist
2. A report documenting the results of this initiative and the new standard was created and will be presenting at the next PM&R QI rounds in June 2023
3. Monitoring plan: The pharmacist will continue to monitor compliance to guidelines and to the IPC sheets at time of discharge.
4. There will be an audit in the fall of 2023 to follow up on sustainability

