

An Electronic Medical Record Intervention to Improve Inpatient Appropriate

VTE Prophylaxis

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BACKGROUND

Venous thromboembolism (VTE) constitutes a major issue in the United States health system, with a high mortality rate and significant economic toll. Despite the prevalence of VTE, clinicians have struggled with appropriately prescribing prophylactic agents in the inpatient setting. Trends have shown both underuse and overuse of prophylaxis despite multiple risk assessment models and guidelines.

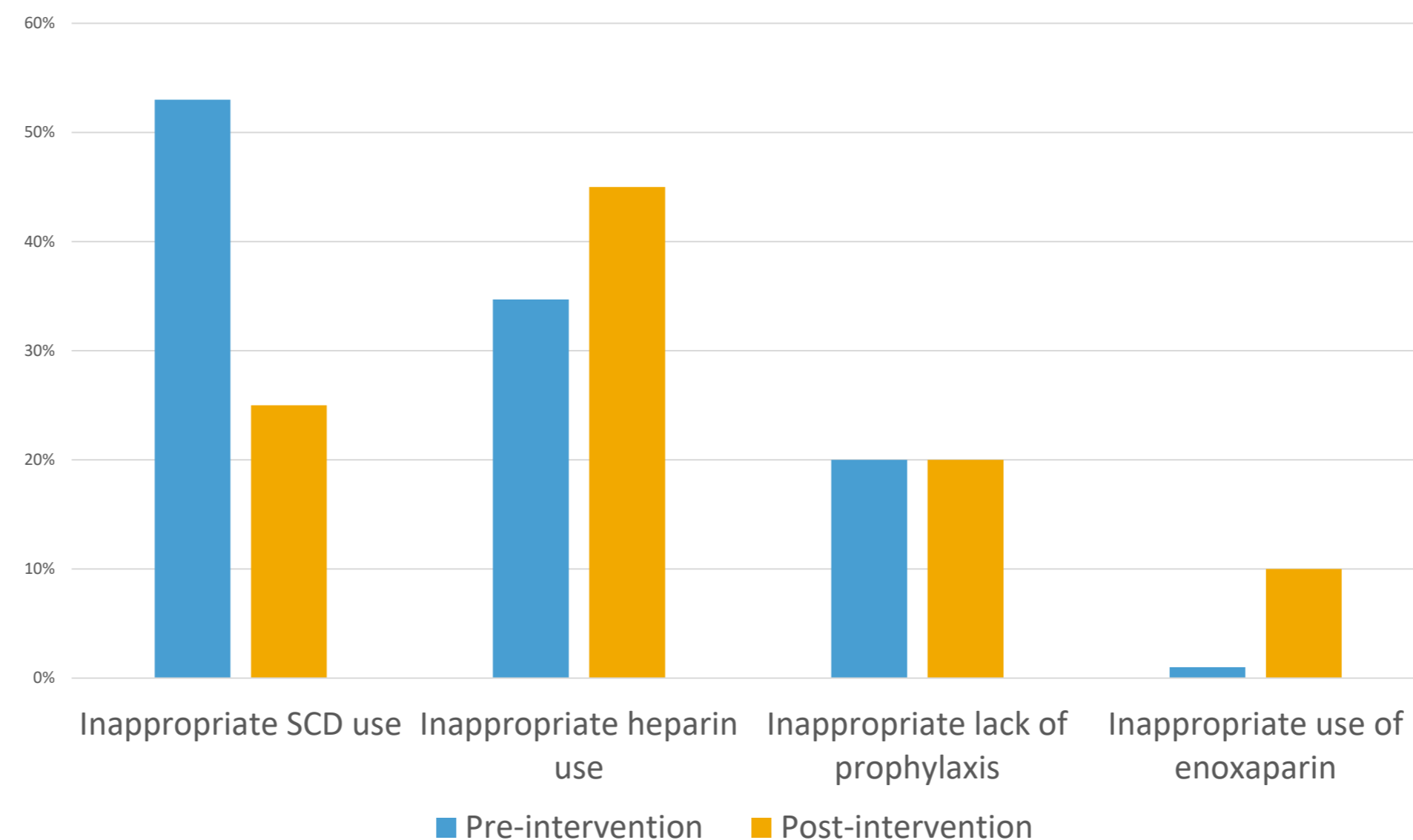
METHODS

Internal medicine resident team admissions at Abbott Northwestern Hospital were randomly sampled from June 2019 to December 2019 and assessed for appropriate selection of VTE prophylaxis. In September 2019 the Padua scoring tool was added to admission order sets and was used as a point of intervention. Retrospective calculation of Padua, IMPROVE, and IMPROVE Bleed scores were used to define appropriate VTE prophylaxis. Rates of appropriate prophylaxis, frequency of inappropriate prophylactic agent use, and omission of prophylaxis were compared pre- and post-introduction of the scoring tool.

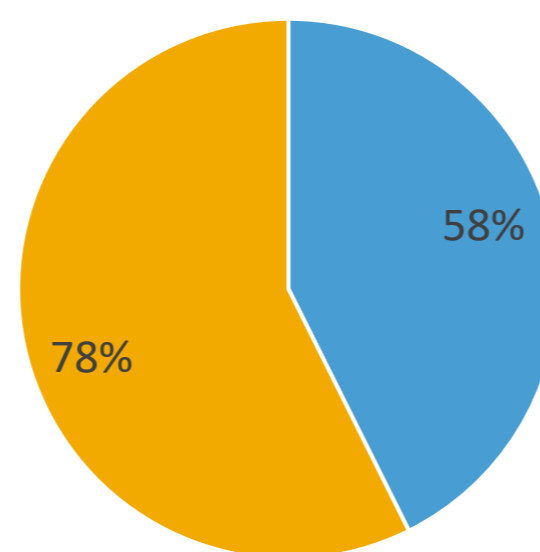
INTERVENTIONS

- Padua Scoring Tool in admission order sets
- Resident Education

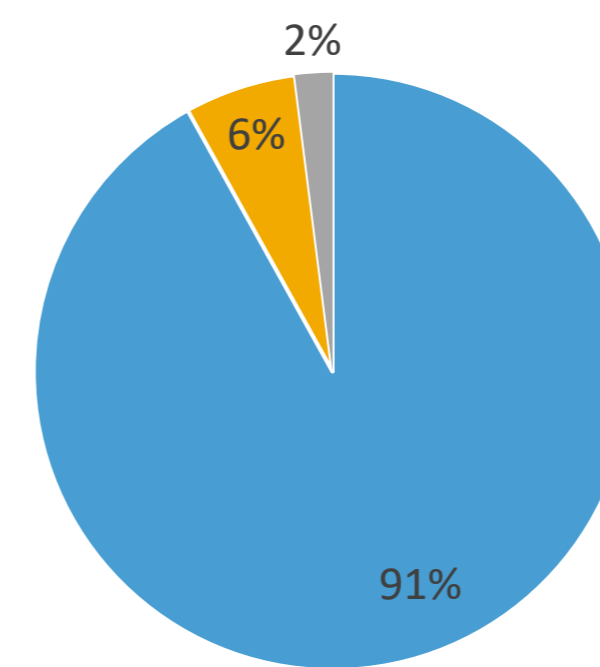
VTE Prophylaxis Inappropriate Use Pre- vs. Post-intervention



Appropriate VTE Prophylaxis Selection (n=208)



Padua Scoring Tool Accuracy



■ Pre-intervention ■ Post-intervention ■ Correct Score ■ Over Score ■ Under Score

RESULTS

Appropriate VTE prophylaxis increased from 58% to 78% post-intervention. Inappropriate sequential compression device (SCD) use decreased from 53% to 25%. Inappropriate use of heparin and enoxaparin increased from 35% to 45% and from 1% to 10%, respectively. Rate of inappropriate lack of prophylaxis did not change (20%).

CONCLUSIONS

Introduction of the Padua scoring tool to admission order sets was associated with an improvement in appropriate VTE prophylaxis and inappropriate SCD use overall, however, there was an unexpected increase in inappropriate heparin and enoxaparin use.

FURTHER INTERVENTIONS

- Further adjustment to Padua Scoring Tool in order to optimize increased alignment in hand vs. tool score assessments
- Continued education to medical professionals