Preventing Perioperative Venous Thromboembolism

Lindsay M. Brown BSN, RN, DNP Student
University of Iowa Hospitals and Clinics

Introduction

- Venous thromboembolism (VTE) is a blood clot in a vein
  - Types include deep vein thrombosis (DVT) and pulmonary embolism (PE)[1]
  - Greater than 50% of all VTE are related to surgery[2]
  - Lead to hospital readmissions, recurrent blood clots, pulmonary hypertension, postthrombotic syndrome, chronic pain, and death[2,3]
- Treatment costs are 1.5 times greater for patients with VTE, totaling more than $10 billion annually[1]
- Quality initiatives significantly reduce VTE incidence[2,3]

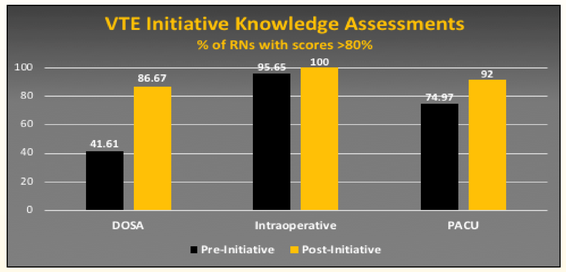
Purpose

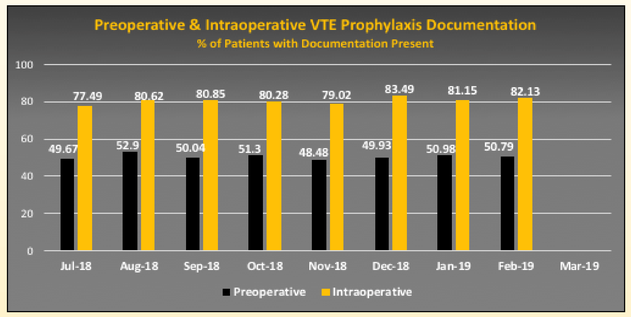
- Reduce preventable perioperative VTE at the University of Iowa Hospitals and Clinics (UIHC)
- **Objectives:**
  1. Increase perioperative nursing staff knowledge of VTE prophylaxis
  2. Achieve a 75% rate of compliance with VTE prophylaxis measures within 6 months
  3. Reduce VTE diagnoses by 15% within 6 months

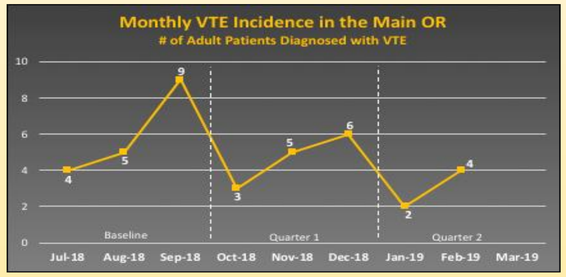
Methods

- Deemed not human subjects research by the Institutional Review Board
- **Setting:** UIHC Main Operating Room
- **Population:** Adult surgical patients
- A perioperative quality initiative focusing on mechanical VTE prophylaxis was developed and approved by the perioperative nursing management team
- Surgical, anesthesia, and perioperative nursing staff were educated about the initiative via:
  - Live education sessions, emails, meetings, posters, handouts
  - Knowledge assessments provided to nursing staff
- Clinical, Quality, Safety, and Performance Improvement (CQSPI) department tracking VTE incidence and documentation

Outcomes





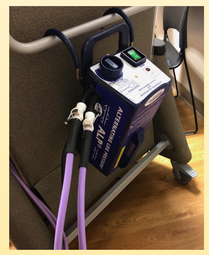


Evaluation

- Over 80% of the nurses in each perioperative area received a passing score (>80%) after 3 months
- VTE prophylaxis documentation did not show significant change after project implementation
  - Approximately 50% of patients had preoperative documentation
  - Approximately 80% of patients had intraoperative documentation
- Compliance was difficult to measure through documentation
  - Possibly due to various documentation locations
- Different methods of measuring compliance and improving documentation are being considered
- The number of patients who developed VTE decreased by 22.22% from Baseline to Quarter 1

Conclusions

- Quality initiative provided more consistent and evidence-based care for surgical patients regarding VTE
- Other teaching hospitals can implement a perioperative VTE prophylaxis quality improvement project
- A method of tracking perioperative VTE incidence and documentation was established
- Perioperative staff were educated about recommended mechanical VTE prophylaxis interventions
- Project served as an initial step for establishing a hospital-wide VTE prophylaxis protocol at UIHC
- Results of the quality initiative will be disseminated to:
  - Other surgical locations at UIHC
  - Iowa Association of Nurse Anesthetists at the Spring 2019 Meeting



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2. Maynard, G. (2016). *Preventing Hospital-Associated Venous Thromboembolism: A Guide for Effective Quality Improvement* (2nd ed.). Rockville, MD: Agency for Healthcare Research and Quality. AHRQ Publication No. 16-0001-EF
3. Wood, A. (2018). Guideline For Prevention of Venous Thromboembolism. In R. Conner (Ed.), *Guidelines for Perioperative Practice*. Denver Colorado: Association of periOperative Registered Nurses (AORN), Inc.

Acknowledgements

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