

## Introduction

- Non-administration of pharmacologic venous thromboembolism (VTE) prophylaxis is linked to increased VTE events.
- An academic medical center discovered ~50% of non-administered VTE prophylaxis doses were associated with patient refusal.
- Real-time patient-centered education is shown to be effective in addressing this issue.

## Background and Significance

- VTE is one of the top **preventable** hospital-acquired conditions associated with: significant morbidity and mortality, increased length of stay, and increased healthcare expenditures.
- Guidelines for VTE prevention include anticoagulation medications (pharmacology), pneumatic compression devices (PCDs), and early ambulation.
- Pharmacologic VTE prophylaxis has the strongest body of evidence supporting its utility in preventing VTE in hospitalized patients.
- Although VTE prevention guidelines exist, this condition remains highly prevalent in hospitalized patients.

## Clinical Question

- In hospitalized patients at-risk for VTE, what was the impact of a real-time educational VTE prevention program, compared to usual care, on administration and patient adherence of prescribed pharmacologic VTE prophylaxis over 3 months?

## Benchmark Data

### Hospital VTE Data

- Recent Perioperative VTE rates at Hospital\*
  - 2019 - 4.91 per 1,000 cases
  - 2020 - 4.95 per 1,000 cases
- 2021 Perioperative VTE hospital goal is to keep rates < 4.65 per 1,000 cases.
  - There are unit specific goals as well.
    - Q1: 10 / 1,774 (5.64 per 1,000 cases)
    - Q2: 8 / 2,196 (3.64 per 1,000 cases)
    - Q3: 10 / 1,451 (6.89 per 1,000 cases)

## Methods

**Setting:** Major academic medical center located in New Brunswick, New Jersey.

**Design:** Program Evaluation of a VTE Quality Improvement (QI) pilot program

### VTE QI Pilot Program

- Hospital VTE Task Force initiative
- Implemented for 12 weeks on a surgical oncology unit
- Objectives were to improve patient education and communication, patient outcomes, and VTE rate reduction; and support staff nurses with patient education.
- Provided real-time patient education on VTE risk factors and prophylaxis for patients who refused pharmacologic VTE prophylaxis.

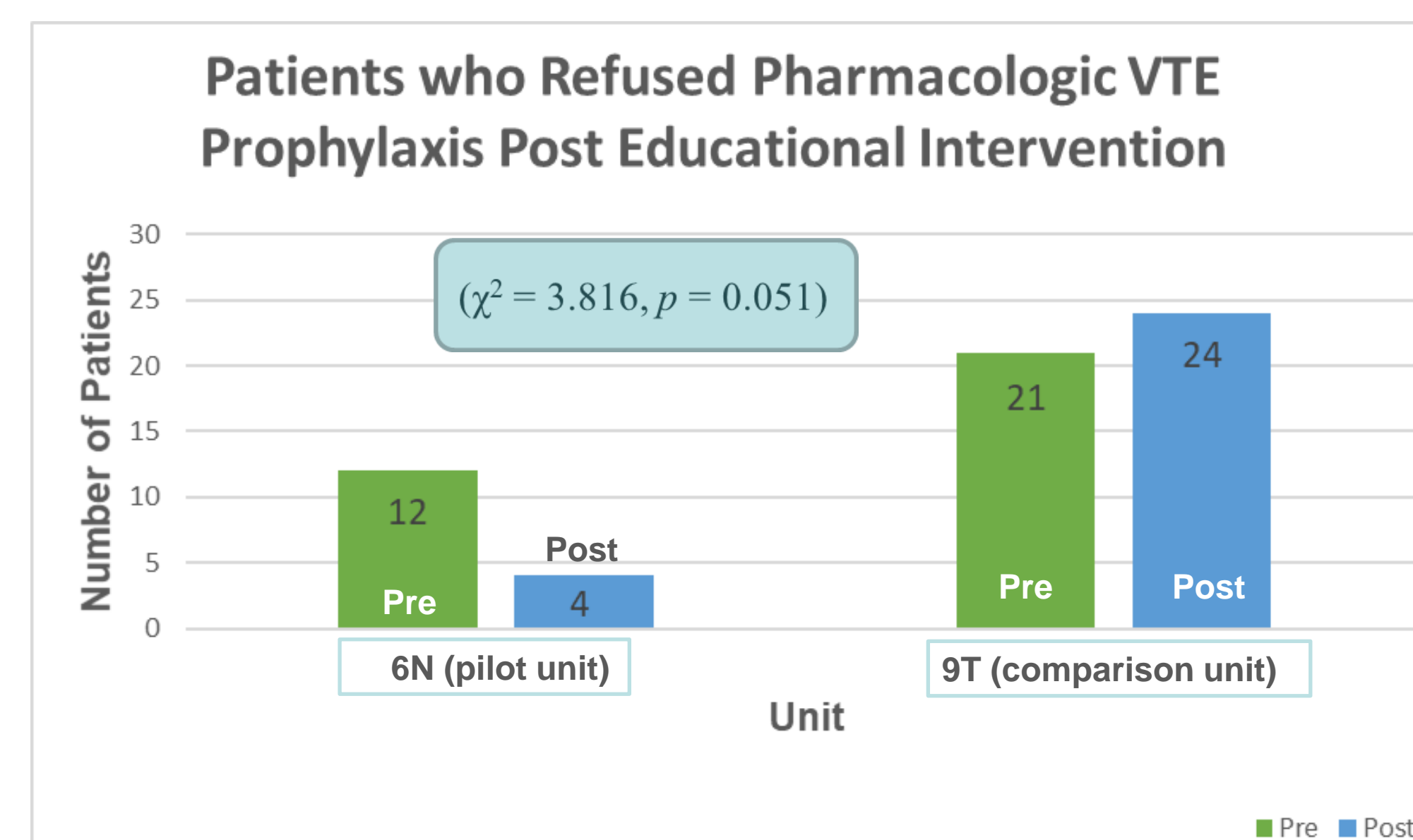
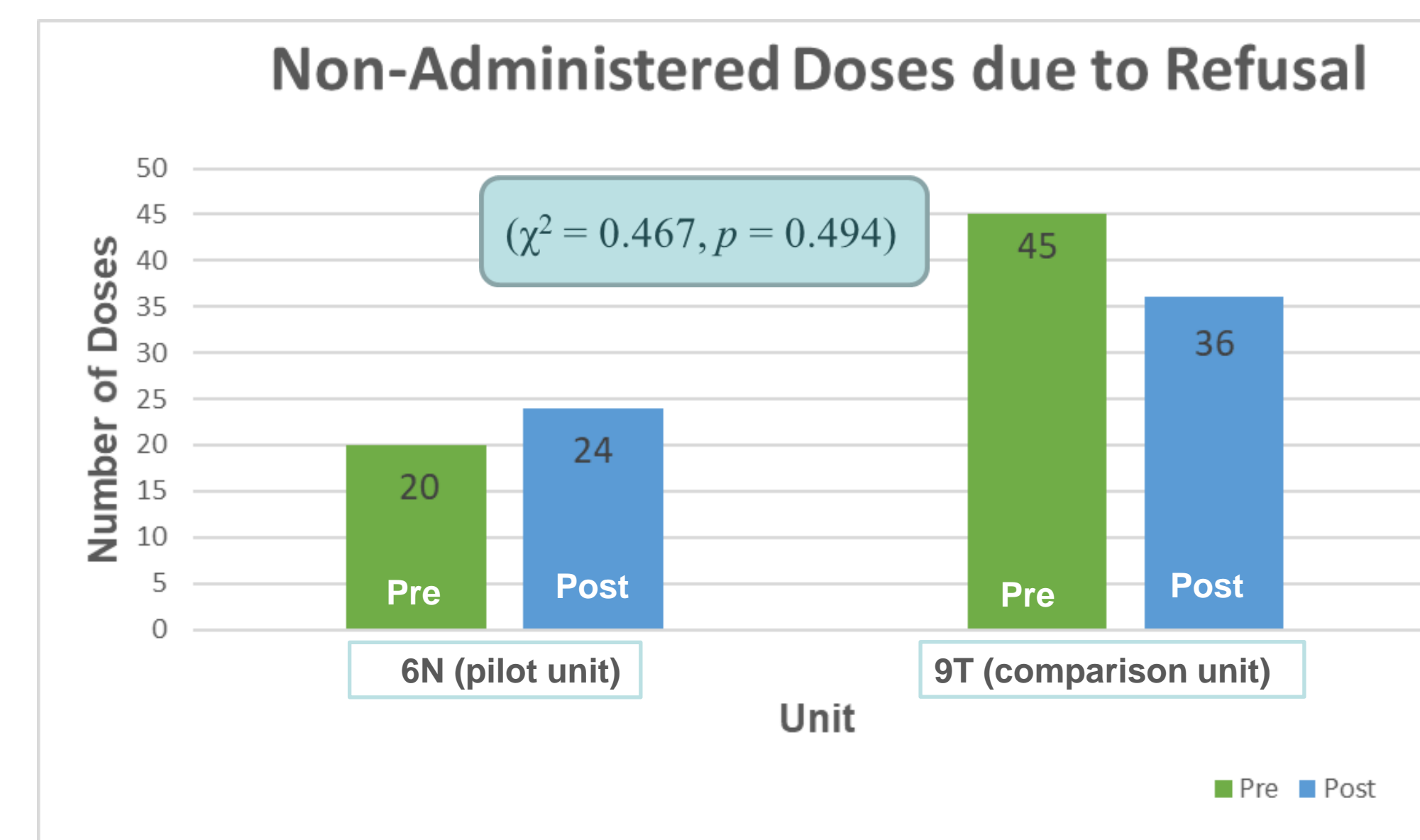
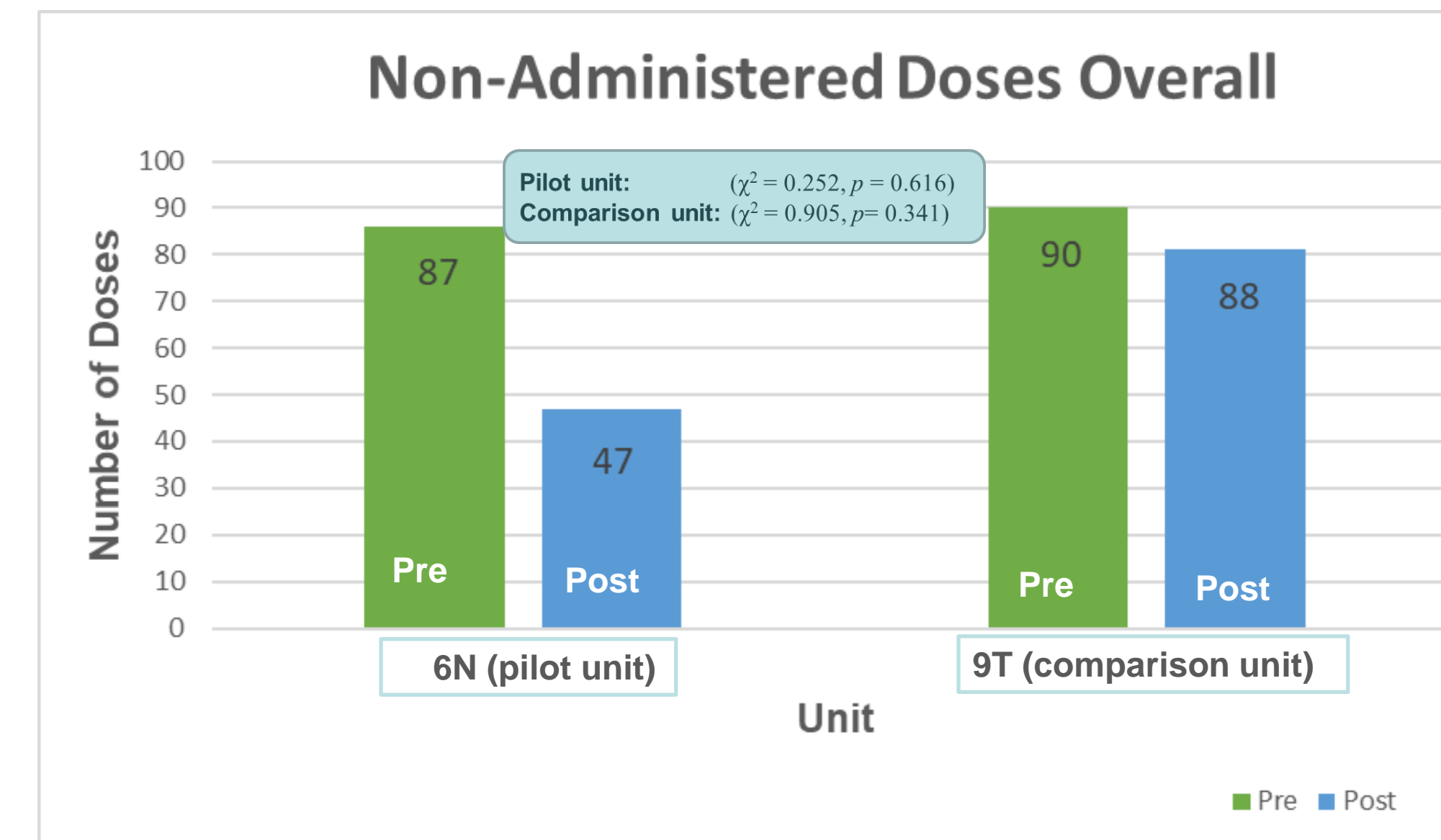
### DNP Project – Program Evaluation of Pilot

- Tracked patient refusal rates, outcomes of the educational intervention in patients that refused anticoagulation, and VTE events in the intervention unit and a comparison surgical unit without the intervention.
- Survey sent to staff on each unit to identify barriers and facilitators to administration of subcutaneous anticoagulation.

**Data Analysis:** Descriptive and inferential statistics



## Results



### Real-time Patient Education Outcomes

- 18 patients refused heparin or enoxaparin
- 14 patients received real-time education
- 10 out of 14 patients (71%) agreed to take anticoagulation after education!

### VTE Events

- 6N (pilot) Pre 2\* Post 3\*  
- 9T Pre 0 Post 0  
(\*VTE not due to missed doses)

### Staff Survey

Communication between ordering practitioners and patients had the strongest influence (both positive and negative) on administration and patient adherence with pharmacologic VTE prophylaxis.

## Recommendations

Trial pilot on another unit with increased rates of patient refusal that have designated APPs and nurse educator.

Present non-administration data with unit leadership and practitioners

Train staff nurse representatives, nurse educators, and APPs/practitioners on delivering real-time education.

Encourage and educate nurses to bring VTE risk and prophylaxis into bedside report

Encourage APPs, residents and physicians to exchange refusal of pharmacologic VTE prophylaxis in report

Debunk the misconception that ambulation on its own is enough in prophylaxis in ambulatory patients

## Discussion & Implications

**Clinical Practice:** Practitioners have the responsibility to make sure that VTE prophylaxis is administered.

**Healthcare Policy:** Interventions to improve administration of VTE prophylaxis should be added to hospital policy.

**Quality and Safety:** There are NO quality measures locally or nationally that monitor administration of prescribed pharmacologic VTE prophylaxis. This project lends support to development of quality measures that monitor administration practices.

**Education:** Real-time patient-centered education can engage and empower patients to make informed health-care decisions.

**Economic/Cost Benefit:** Prevention of VTE in at-risk patients can ensure better reimbursement as Medicare does not reimburse for preventable issues such as VTE.

## Summary

- This DNP project lends support to importance of patient education, demonstrates ways to engage and empower patients to make informed health decisions, improves patient outcomes, and has the potential to improve reimbursement for this academic medical center.
- Engaging patients in their own healthcare decision making improves patient satisfaction.
- Advanced practice providers (APPs) such as NPs, are in a unique position to implement interventions to reduce VTE rates in hospitalized patients including starting the conversation about VTE prophylaxis on admission, identification of patients refusing VTE prophylaxis on patient rounds, and real time patient education upon refusal.

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## References



Decreasing VTE rates is one of the top indicators used to measure patient safety and quality care among healthcare organizations.