

# Stopping the Clot Through Integrated VTE Risk Screening



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## Background

In 2014, the Venous Thromboembolism (VTE) risk screening process was identified by executive as an organisational priority with completion rates of only 14%. The paper based form was considered to be labour intensive and non-user friendly amongst medical staff.

## Description

A multi-disciplinary VTE working group was established, and junior and senior medical staff consulted to identify barriers to VTE risk screening (see Figure 1).

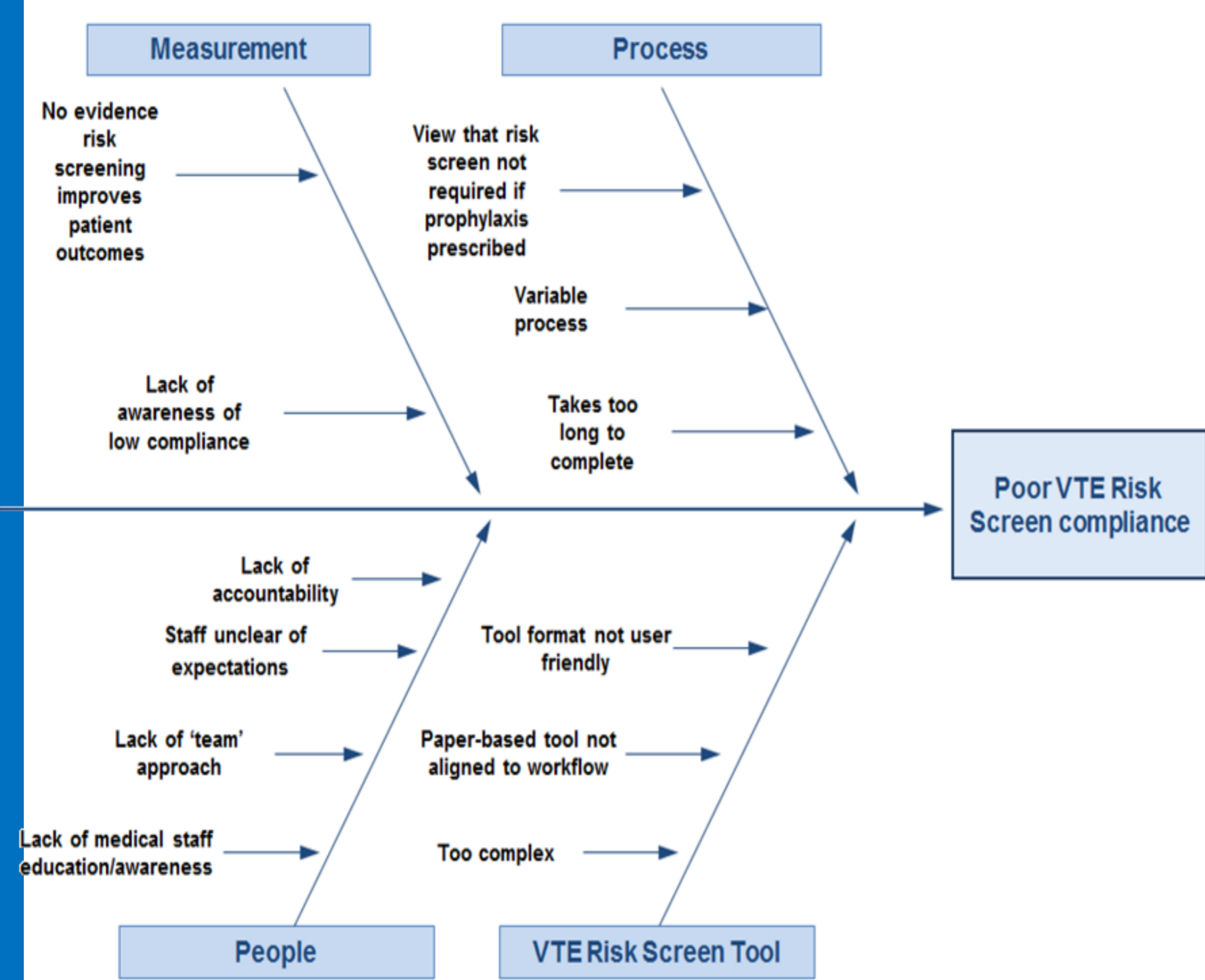


Figure 1: Analysis of barriers to VTE risk screening

The VTE risk screen tool was abbreviated and incorporated onto the front of the National Inpatient Medication Chart (NIMC) to improve usability and compliance (see Figure 2).

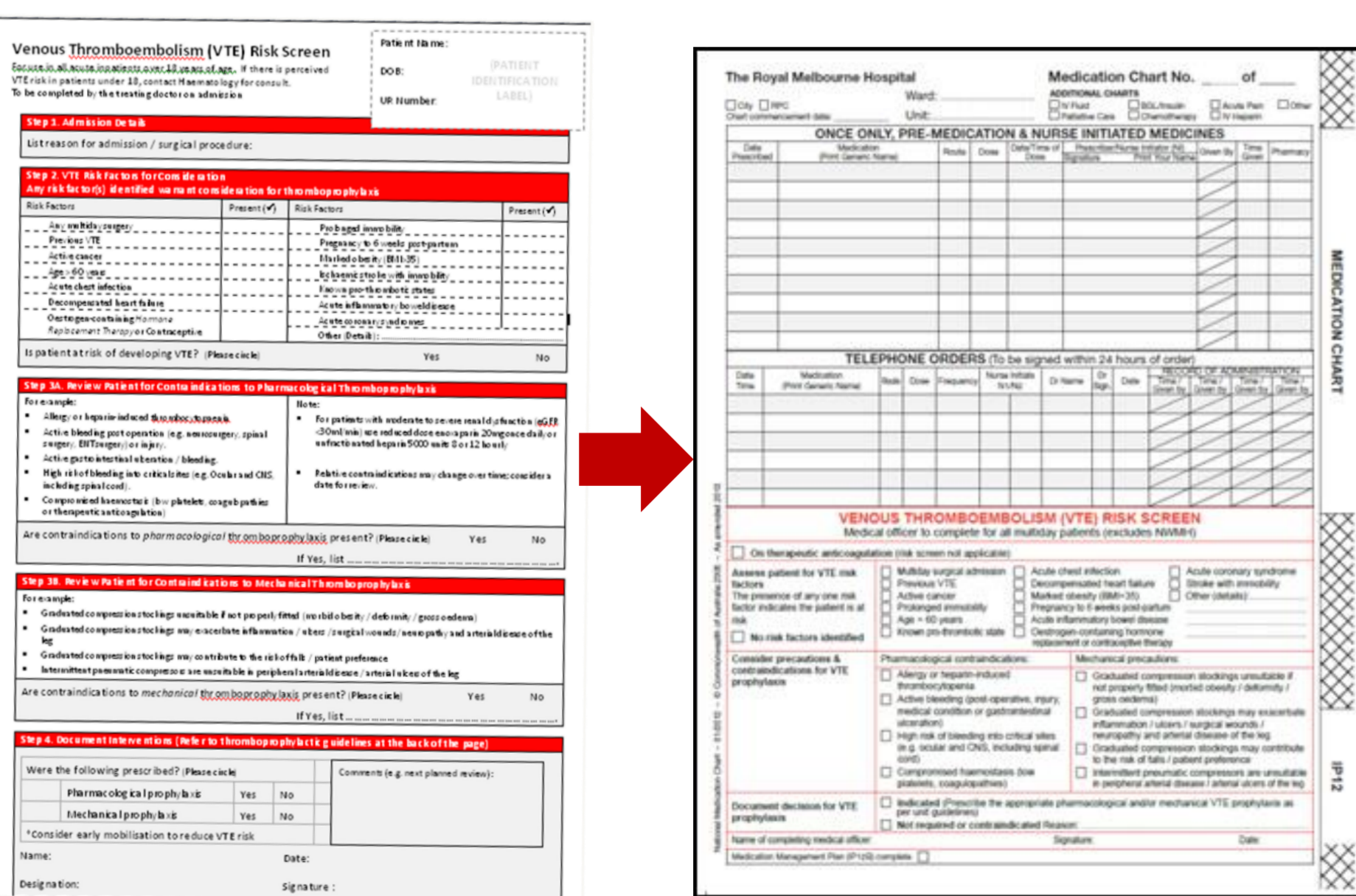


Figure 2: VTE risk screen changed from a separate form to integrated with the NIMC

## Action

### Intervention period (April – June 2016)

A multi-pronged approach was used to promote the updated risk screening tool and improve completion rates over a 10 week intervention period (see Figure 3).

Initial weekly hospital wide audits of VTE risk screening were completed in the intervention period which moved to quarterly audits in the sustain period (July 2016 to present).

**STOP the CLOT AWARENESS**

- Posters and newsletter
- Clinical Audit webpage on intranet
- Executive walk arounds,
- Unit clinical meeting
- 'Knowing How You're Doing' board

**EDUCATION**

- Multidisciplinary education – face-to-face; online for all clinical staff
- Patient Safety Heads of Units forums

**SPEAK UP FOR SAFETY AND OUR VALUES FEEDBACK**

- Weekly medication chart auditing and feedback at organisational, divisional, unit and ward level,
- Feedback to Divisional Directors, Heads of Units, Nurse Unit Managers, and Pharmacists
- Clinicians encouraged to 'Speak Up' if VTE Risk Screen incomplete

**ELECTRONIC**

- Electronic auditing system for data capture and analysis
- Audit data entry based on a pre-defined decision-tree
- Dashboard reporting - unit-based hospital-associated VTE events

Figure 3: Multi-pronged approach during intervention period

### Sustain period (July 2016 to present):

- Quarterly independent Pharmacist VTE audits
- Monthly Medical VTE audits
- VTE Prevention Intervention Bundle developed based on the multi-pronged approach used during the intervention period
- Continued results dissemination and visibility
- Peer to peer learning encouraged from high performing areas
- Multidisciplinary meetings with Executive for lowest performing units

## Evaluation

**Outcome measure:** Monthly coded data for hospital associated deep vein thrombosis (DVT) and pulmonary embolism (PE) rates.

**Process measure:** VTE Risk Screen compliance (%) was measured bimonthly at baseline, weekly during the intervention period and quarterly during the sustain period.

VTE risk screening compliance improved from 22% up to 84% in the intervention period (March – May 2016) and has remained stable during the sustain period (July 2016 – present) – see Figure 4. Throughout this time hospital acquired VTE rates have reduced by 30% (see Figure 5)

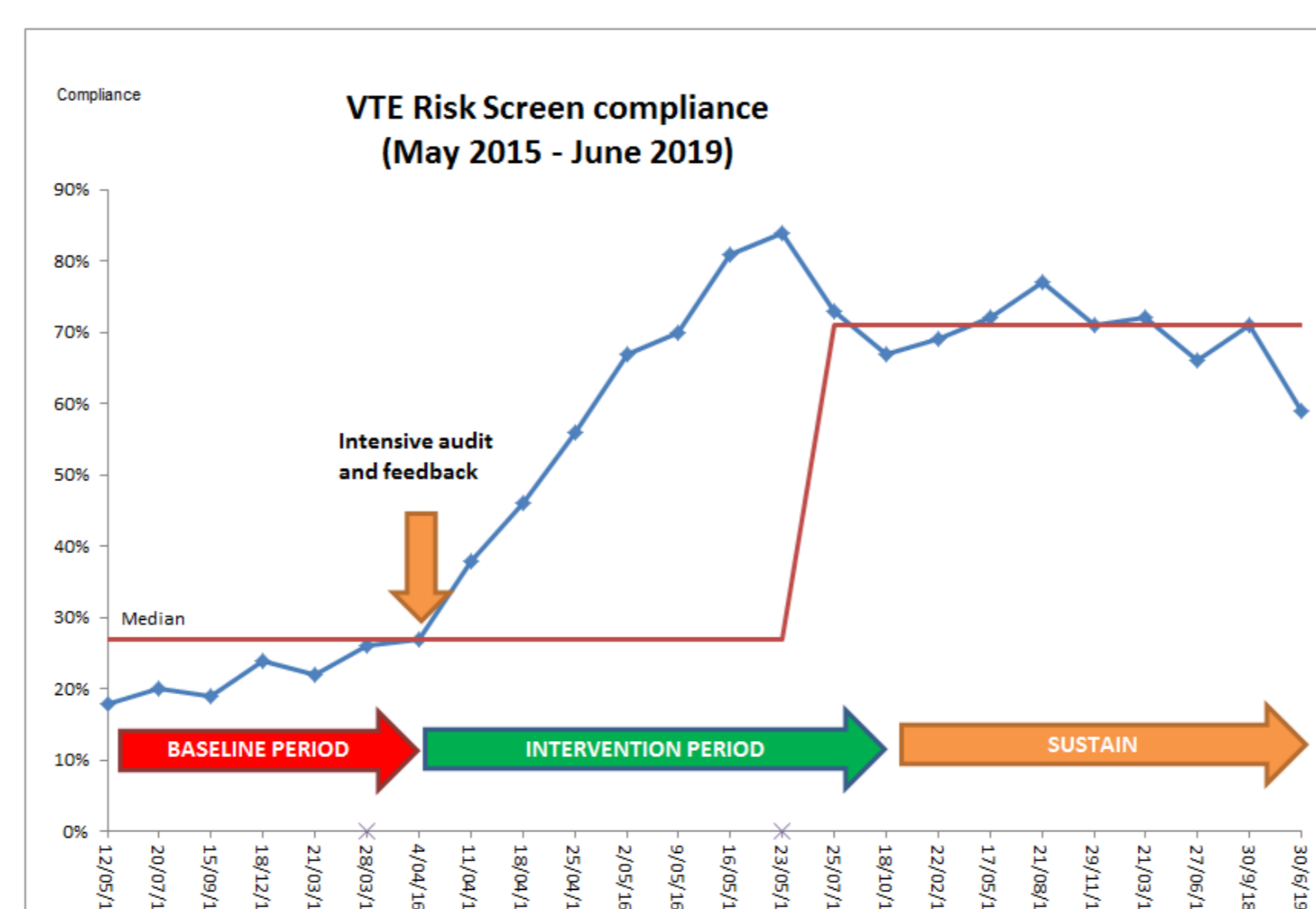


Figure 4: VTE Risk Screen Compliance

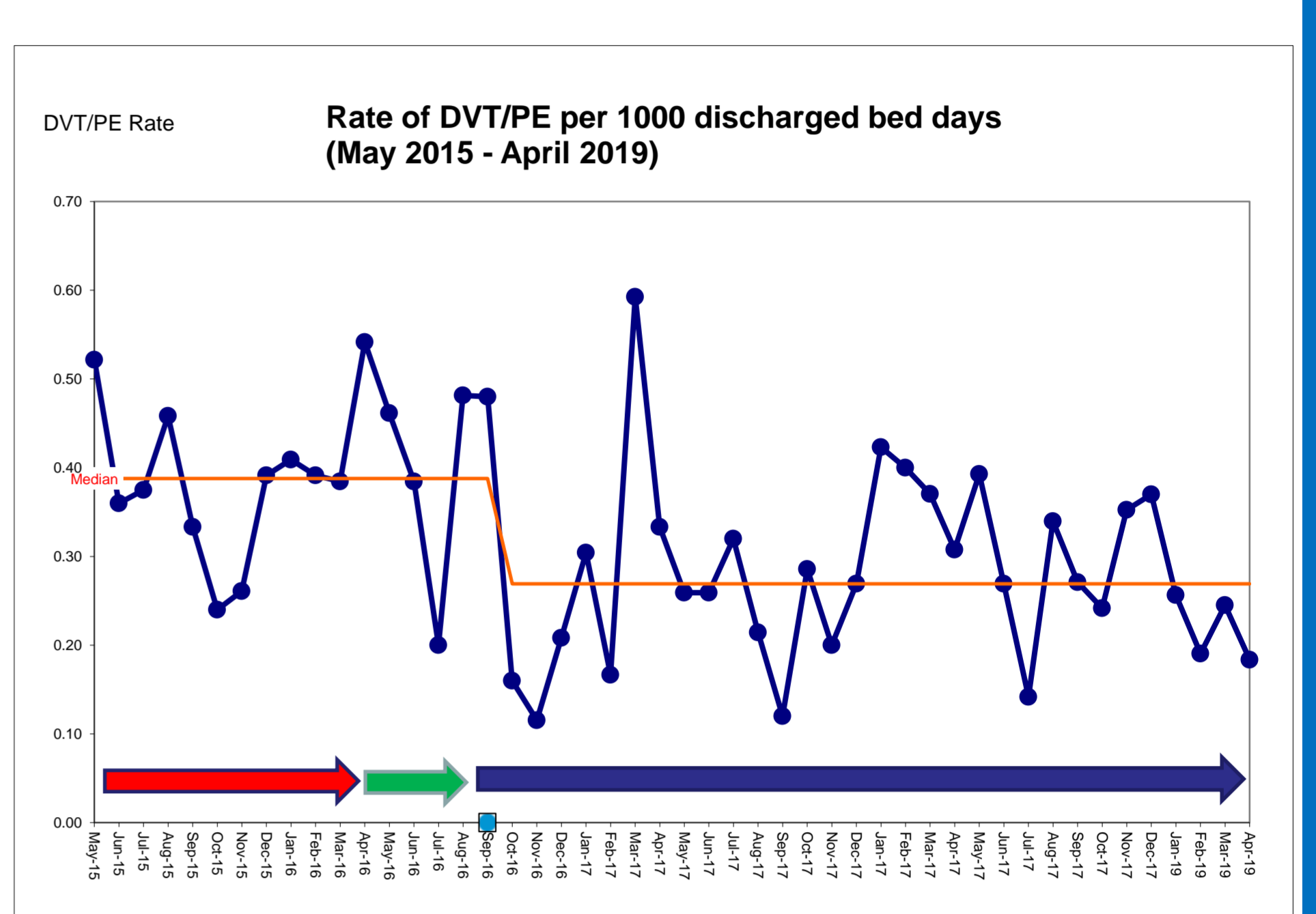


Figure 5: Rate of DVT/PE per 1000 discharged bed days

An audit was completed in high risk/high volume areas to quantify the impact of VTE risk screening on appropriateness of prescribing of VTE prophylaxis. This audit demonstrated incomplete/absent VTE risk screening was associated with higher incidence of inappropriate VTE prophylaxis. When the VTE risk screen was incomplete, patients were more likely to NOT have VTE prophylaxis prescribed (see Table 1).

Table 1: Results of VTE prophylaxis prescribing appropriateness audit

Patients who have completed VTE risk screen with appropriate prophylaxis	81%
Patients who have NO completed VTE risk screen but with appropriate prophylaxis	70%

## Implications

This innovation has improved adherence with VTE risk screening, increased appropriate prescribing of VTE prophylaxis, and reduced hospital-acquired VTE rates.

Key success factors were:

- Strong medical leadership and commitment
- Executive support and directive to improve compliance with VTE Risk Screening
- A dedicated resource to drive the improvement process
- Timely feedback
- Continuing focus and monitoring to ensure sustainability.

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