

Background

VTE prophylaxis (VTEp) prescribing is important for patient care with known high rates of VTE development for inpatients at risk. Pharmacological and non-pharmacological options can be appropriately charted or withheld via a supportive Powerplan in ieMR. Even with this inbuilt support, VTEp prescribing practices were very poor leaving patients at risk.

Aims

The project aim was to develop an integrated dashboard with a whole of hospital view of VTEp prescribing and demonstrate its use as a clinical ‘change of practice’ tool.

Methods

- ❖ A clinical dashboard was developed and refined over 1 year to show all VTEp prescribing at TUH.
- ❖ Medical and Pharmacy leads used the tool to make targeted phone calls to clinicians advising on individual patient VTEp prescribing.
- ❖ Discussions with clinical teams and education of junior medical officers occurred based on prescribing patterns. Interventions also targeted nurse initiated mechanical prophylaxis charting.
- ❖ Feedback was and is being sorted in real time from prescribers, pharmacists, and nurses with a view to a meaningful and sustainable improvement.

Results

❖ The dashboard was developed with the ability to see whole of hospital VTEp, along with the ability to drill down to individual wards, clinical teams and right down to specific individual patients. See figure 1 for example ward summary.

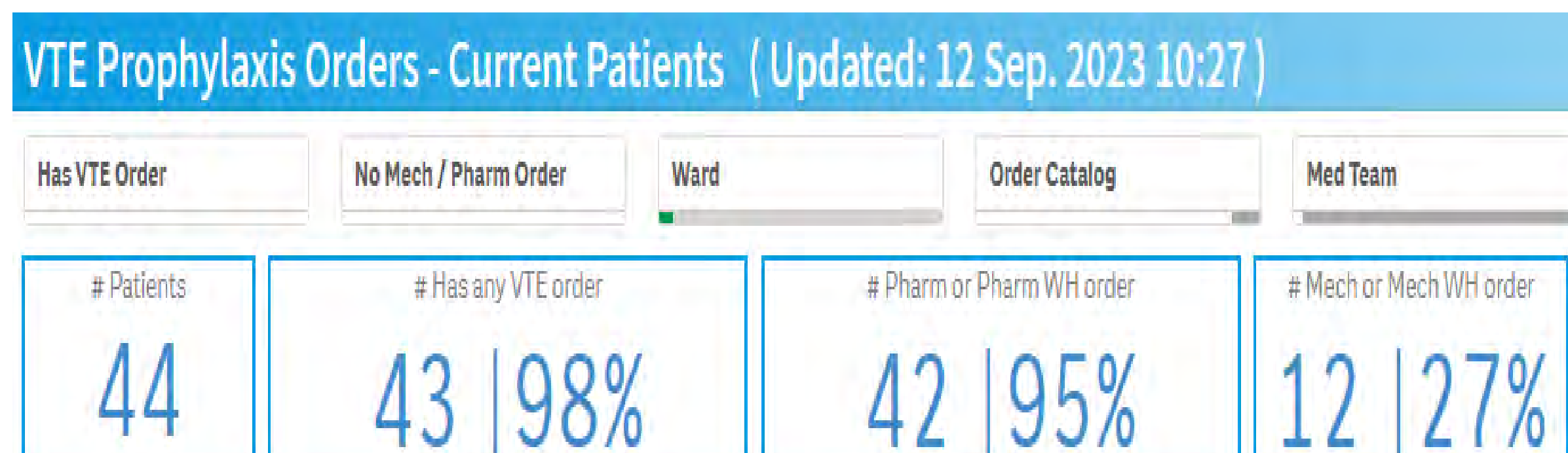


Figure 1: Example dashboard summary for ward demonstrating management of VTE pharmacological and mechanical prophylaxis

Results

❖ The VTEp management can be seen in tabulated form below the summary details. This includes any anticoagulation charted or withheld as well as aspirin.

Pharm Orders	Last aspirin dose	Pharm Withhold /suspended	Mech Orders	#VTE Alerts last 24hrs
enoxaparin (40 mg) @ 21/8/23 ...	-	enoxaparin	Below the Knee...	5
apixaban (2.5 mg) @ 9/9/23 19:...	100 mg @ 23/7/23 08:04	apixaban	-	5
-	75 mg @ 19/6/23 07:25	-	Below the Knee...	4
enoxaparin (40 mg) @ 3/5/23 1...	100 mg @ 5/4/23 20:02	enoxaparin	Below the Knee...	3
-	-	-	-	2
VTE Pharmacological Prophyl...	100 mg @ 8/7/23 09:05	**VTE Pharmacological Prophylaxis WITHHOLD	-	0
rivaroxaban (20 mg) @ 12/9/23 ...	-	-	-	0
apixaban (2.5 mg) @ 12/9/23 0...	-	-	-	0
enoxaparin (20 mg) @ 11/9/23 ...	-	-	-	0

Figure 2: Tabulated VTEp management details. (Redacted to exclude patient details)

❖ Over one-year the dashboard usability was refined and the intervention increased rates of documented VTEp management across the hospital from 57% up to 86%.

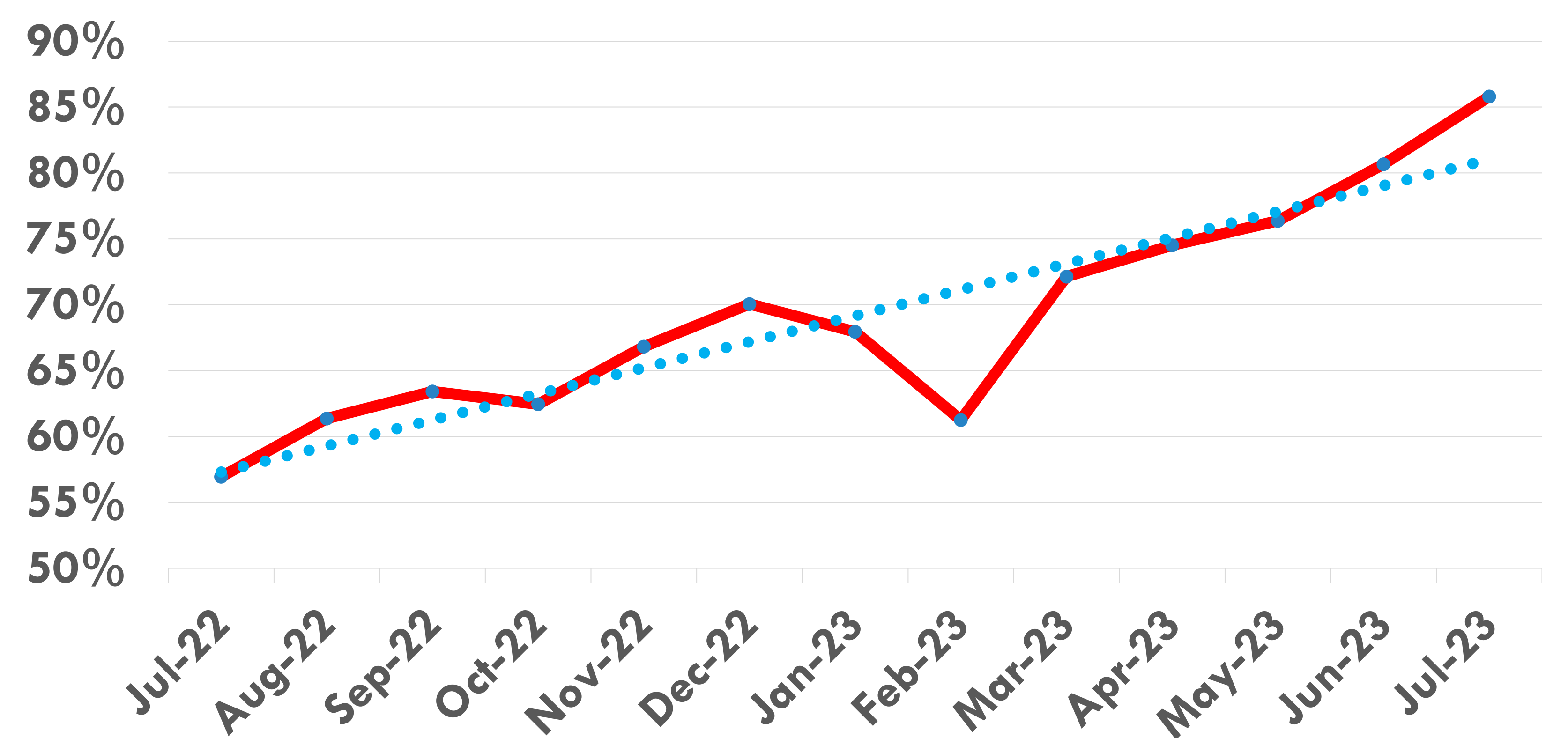


Figure 3: Percentage of patients with pharmacological or mechanical prophylaxis charted or documented as withheld

Conclusions

- ❖ The VTEp dashboard, and associated interventions have seen an increase in VTEp management across the health service
- ❖ Over this timeframe the THHS has seen a decrease in hospital acquired VTE complications, with the rates falling over the last 2 reporting quarters, evidencing improved patient safety and success of the intervention

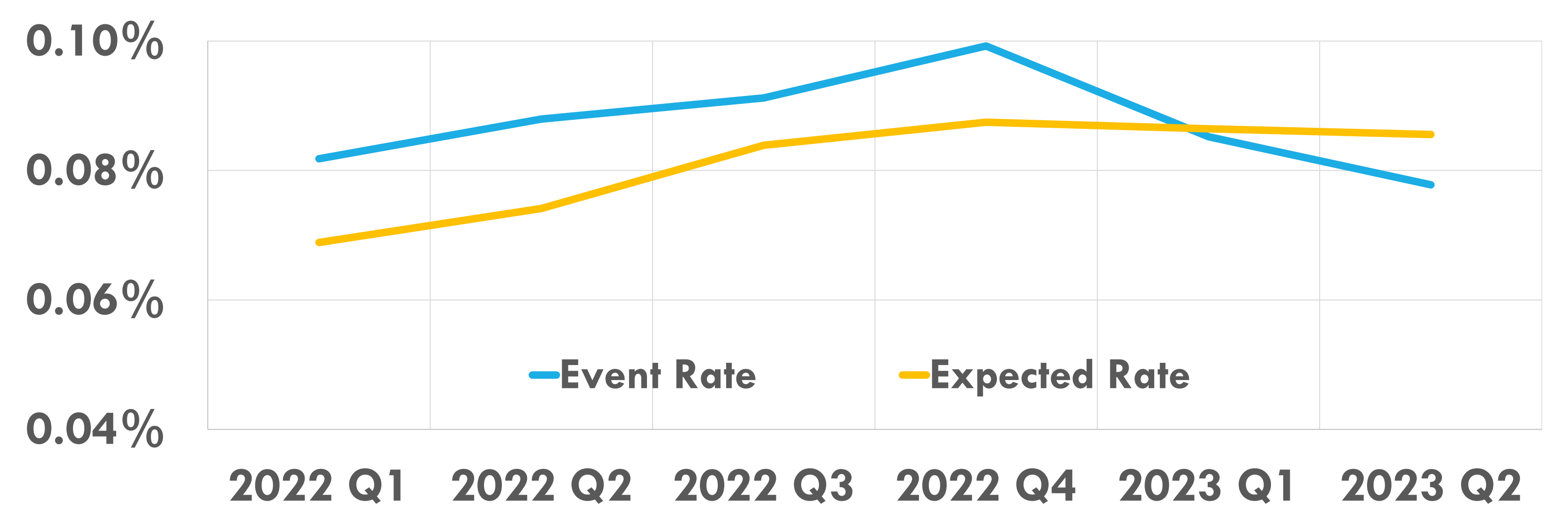


Figure 4: Event rates and expected rates for patient case mix for DVT/PE events per quarter

- ❖ The improvement in the rates of documented VTEp and the decrease of event rates demonstrates the success of this dashboard model
- ❖ To the authors knowledge the development of a whole of hospital VTEp dashboard used to improve clinical practice is an Australian first.