Venous Thromboembolism (VTE) Prevention
An Electronic Solution for NSW

Selvana Awad & Catriona Middleton-Rennie
Objectives

- Provide an overview of the development process
- Demonstrate the Electronic VTE Risk Assessment Tool
- Share learnings from the pilot
- Share learnings from WSLHD’s implementation journey
- Discuss and plan implementation requirements
What does the literature say?

• Standardised, systems approaches to VTE Prevention
• Use of standardised tools are effective in:
  – improving the reliability and consistency of VTE prevention processes
  – ensuring that patient’s management is appropriate based on individual VTE risk factors and bleeding risks
  – reducing the incidence of hospital-associated VTE
The VTE Prevention Program

**Guidelines**
- VTE Prevention Framework
- Revised Policy Directive

**Tools**
- VTE Risk Assessment Tool
- Electronic support through eMR
- Audit / performance monitoring tool
- Non-fatal VTE Incident Management Tool
- Revised NIMC with dedicated VTE section

**Education and Raising Awareness**
- eLearning module for clinicians
- Educational resources for clinician training
- Patient education material
- Posters focused on patients, and clinicians
Developing a tool for NSW

- VTE Prevention Expert Advisory Group with state-wide representation established
- Multidisciplinary experts: surgeons, physicians, nurses, pharmacists, clinical governance
- Aim: develop a fit-for-purpose tool for NSW
No consensus regarding the preferred VTE risk assessment tool.

- Quantitative vs Qualitative models, pros and cons

Ideally, tools should have these elements:

- Identify patients at risk of VTE
- Identification of bleeding risks
- Prescribing recommendations/guidance
- Easy to use
- Integrated within clinical practice and workflows
The Process

- State-wide study conducted evaluating 5 risk assessment tools:
  1. VTE Risk Assessment, Clinical Excellence Commission
  2. ClotStop VTE Risk Assessment, Liverpool Hospital
  3. Risk Assessment for VTE, King’s College Hospital, London
  4. VTE Risk Assessment and Prophylaxis Orders, San Diego Medical Center
  5. Risk Assessment Checklist for VTE, PD2010_007

- 9 patient scenarios, 30 participants from across the state

- Evaluated:
  1. Reliability (outcomes correlated with gold standard)
  2. User acceptability
Results

- 300 assessments completed and 30 surveys returned
- Reliability (correlation with gold standard):
  - Risk assessment outcome: VTE Risk Assessment and Prophylaxis Orders, San Diego Medical Center
  - Treatment outcome: Risk Assessment for VTE, King’s College Hospital, London (however other tools were comparable)
# Results – User Acceptability

<table>
<thead>
<tr>
<th>Question</th>
<th>Original CEC tool</th>
<th>ClotStop tool, Liverpool Hospital</th>
<th>King’s College tool</th>
<th>San Diego Medical Center tool</th>
<th>Checklist in VTE PD</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Which tool was the easiest to complete?</td>
<td>16.7% (5)</td>
<td>16.7% (5)</td>
<td>26.7% (8)</td>
<td>33.3% (10)</td>
<td>6.7% (2)</td>
</tr>
<tr>
<td>2. Which tool was the best in regards to layout and flow?</td>
<td>16.7% (5)</td>
<td>13.3% (4)</td>
<td>30.0% (9)</td>
<td>30.0% (9)</td>
<td>10.0% (3)</td>
</tr>
<tr>
<td>3. Which tool provided the most helpful guidance to reach a VTE risk outcome?</td>
<td>13.3% (4)</td>
<td>6.7% (2)</td>
<td>36.7% (11)</td>
<td>36.7% (11)</td>
<td>6.7% (2)</td>
</tr>
<tr>
<td>4. Which tool best helped to identify a bleeding risk and/or contraindication to pharmacological and/or mechanical prophylaxis?</td>
<td>13.3% (4)</td>
<td>6.7% (2)</td>
<td>36.7% (11)</td>
<td>26.7% (8)</td>
<td>13.3% (4)</td>
</tr>
<tr>
<td>5. Which tool provided the best clinical decision support to guide prophylaxis?</td>
<td>13.3% (4)</td>
<td>6.7% (2)</td>
<td>40.0% (12)</td>
<td>26.7% (8)</td>
<td>13.3% (4)</td>
</tr>
<tr>
<td>6. Which tool would you most prefer to use overall?</td>
<td>16.7% (5)</td>
<td>10.0% (3)</td>
<td>33.3% (10)</td>
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</table>
The NSW VTE Paper Tool

Decision made by VTE Expert Advisory Group to adapt San Diego Medical Center tool for use in NSW. Review and endorsement process undertaken (modifications made).
About the San Diego Tool

In the original demonstration project at UC San Diego, this model was chosen after considering and rejecting more complicated individualized point-scoring systems that proved unpopular and had poor inter-observer agreement in pilot testing. In contrast, this risk assessment model was considered intuitive and easy to use. Direct observations revealed that it could be filled out in a few seconds, and there were high levels of inter-observer agreement. Integration into order sets, coupled with multifaceted interventions, resulted in marked improvements in protocol-defined adequate prophylaxis (from 58 percent to 98 percent) and reduced HA-VTE by 40 percent in medical and surgical populations without any increase in detectable bleeding or heparin-induced thrombocytopenia.19,20

A wide variety of other hospitals have enjoyed improved prophylaxis and reduced HA-VTE with a multifaceted approach that included variants of this VTE risk assessment model. This includes published results19,21 and many unpublished results. Some of these site success stories are available online (http://www.ahrq.gov/professionals/quality-patient-safety/patient-safety-resources/resources/vtguide/vtguide5.html). Large-scale VTE prevention collaborative efforts from SHM, AHRQ/QI organization partnerships, and many others have reported similar positive results, but these efforts did not have a standardized method to monitor outcomes.22,23

Optimizing Prevention of Hospital-acquired Venous Thromboembolism (VTE): Prospective Validation of a VTE Risk Assessment Model

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Supported by the Agency for Healthcare Research and Quality (AHRQ) Partners Implementing Patient Safety (PIPS) grant 1U18HS015826-01.

Disclosure: Nothing to report.

BACKGROUND: Hospital-acquired (HA) venous thromboembolism (VTE) is a common source of morbidity/mortality. Prophylactic measures are underutilized. Available risk assessment models/protocols are not prospectively validated.

OBJECTIVES: Improve VTE prophylaxis, reduce HA VTE, and prospectively validate a VTE risk-assessment model.

DESIGN: Observational design.

SETTING: Academic medical center.

PATIENTS: Adult inpatients on medical/surgical services.

INTERVENTIONS: A simple VTE risk assessment linked to a menu of preferred VTE prophylaxis methods, embedded in order sets. Education, audit/feedback, and concurrent identification of nonadherence.

MEASUREMENTS: Randomly sampled inpatient audits determined the percent of patients with “adequate” VTE prevention. HA VTE cases were identified concurrently via digital imaging system. Interobserver agreement for VTE risk level and judgment of adequate prophylaxis were calculated from 150 random audits.

RESULTS: Interobserver agreement with 5 observers was high (kappa score for VTE risk level = 0.81, and for judgment of “adequate” prophylaxis = 0.90). The percent of patients on adequate prophylaxis improved each of the 3 years (58%, 78%, and 93%; P < 0.001) and reached 98% in the last 6 months of 2007; 361 cases of HA VTE occurred over 3 years. Significant reductions for the risk of HA VTE (risk ratio [RR] = 0.69; 95% confidence interval [CI] = 0.47-0.79) and preventable HA VTE (RR = 0.14; 95% CI = 0.06-0.31) occurred. We detected no increase in heparin-induced thrombocytopenia (HIT) or prophylaxis-related bleeding using administrative data/chart review.

CONCLUSIONS: We prospectively validated a VTE risk-assessment/prevention protocol by demonstrating ease of use, good interobserver agreement, and effectiveness. Improved VTE prophylaxis resulted in a substantial reduction in HA VTE.


KEYWORDS: adherence, care standardization, computerized physician orders entry, deep vein thrombosis prophylaxis, preventive services, quality, improvement, venous, thromboembolism.
Compared to baseline, patients benefitting from [computerised] VTE CDS were 35% less likely to have a VTE” Amland et al. 2014

“The VTE rate declined from 0.954 per 1000 patient days to 0.434 comparing baseline to full [computerized] VTE CDS” Amland et al. 2014

“[Computerized] CDS systems with embedded algorithms, alerts, and notification capabilities enable physicians at the point of care to utilise guidelines and make impactful decisions to prevent VTE.” Amland et al. 2014

“Embedding VTE prevention practice into routine care, supported by electronic solutions and combined with dedicated VTE training led to continued improvement in overall risk assessment.” Roberts et al. 2013

“Without increasing the risk of bleeding, a CDS system requiring clinicians to document VTE risk assessment in the electronic medical record (EMR) promoted improved rates of pharmacological prophylaxis at any time during an admission and a decreased risk of VTE in general medical patients” Galanter et al. 2010
An Electronic VTE Solution for NSW

• Electronic VTE Risk Assessment tool in the eMR (based on the paper version) developed in collaboration with eHealth NSW and the VTE Expert Advisory Group

• It serves as a standardised documentation tool and provides clinical decision support:
  – Assigning VTE risk level (Higher, Moderate, Lower)
  – Guidance for prescribing prophylaxis
Two-phased Evaluation

Phase 1: Testing on nine patient scenarios in a controlled environment to evaluate user acceptance and assessment outcomes.
• 80% of users found the e-RAT easy to use and useful for assessing and managing VTE risk.
• A number of usability issues such as the lack of reference text recognition were identified.
Correlation with Gold Standard

• 26 out of 27 (96%) risk assessment outcomes and 18 out of 27 (67%) treatment outcomes correlated with ‘Gold Standard’.
Time Taken

- Average time taken to complete an assessment using the e-RAT decreased from 7.8min to 3.5min after the completion of four assessments (n=27; range, 2 min - 12 min)
Time Taken

Prior to testing, the JMOs involved in the study were asked how long they were willing to spend on conducting a VTE risk assessment using a tool. This is what they said….

‘5-10 minutes’ (x2 users)

‘Maximum 10 minutes’

‘1-2 minutes per patient’

‘1 minute’
JMO Comments

Do you have any comments comparing the paper and electronic tools? Do you have a preference and if so, why?

‘I would prefer electronic as it is quicker to fill out and less likely to lose but I feel paper contained more information which was useful.’

‘Electronic will be easier to navigate and will ensure that medical team fill it out if it comes up as an ‘Alert’ in the patient file. Paper forms are hardly used.’

‘eMR version has built in fail safe/redundancies so that one cannot contradict oneself like in the paper version.’
Phase 2

- When the e-RAT was used, 76% of prophylaxis prescribing was appropriate.
Phase 2

• There was limited use of the e-RAT during the live pilot, possibly due to:
  – Initial implementation process (mass roll-out)
  – Limited understanding of workflow
  – Passive prompting mechanisms (reliance on the Patient Summary Screen)
  – Culture and behaviour around conducting and documenting a formal VTE risk assessment
Release & Supporting Resources

• Modifications made based on findings from the evaluation
• Released state-wide
• eLearning module for clinicians under development
• eMR supporting resources:
  – Change Management Guide
  – Quick Reference Guide
  – Design Document
Using the Electronic VTE Tool

Venous Thromboembolism (VTE) Risk Assessment

- **Name:** Awad, Sam
- **MRN:** 544079
- **DOB:** 13/02/1964
- **AGE:** 53 Years
- **SEX:** M
- **LOC:** 2N, 206, 1
- **Address:** 30 Balfour St, CHIPPENDALE, NSW 2008
- **MC:** 99999999999

- **Previous VTE Risk documented for this admission**
  - Last assessment completed on: 23/03/2017 15:43
  - By: Davis, Paul
  - Specialist: Medical Officer

- **Last recorded VTE Risk:**
  - Expected Date of Discharge: 15/02/2017
  - Expected LOS: 2.0 days

- **Is the patient pregnant or 6 weeks post-partum?**
  - No

- **If yes, has the Obstetrics team been consulted?**
  - Yes

- **Would you like to use the VTE Risk Assessment tool?**
  - Yes

- **VTE Risk:**
  - Lower Risk

- **Prophylaxis Decision**
  - Prophylaxis not required
  - Prophylaxis contraindicated
  - Pharmacological prophylaxis prescribed
  - Mechanical prophylaxis prescribed
  - Pharmacological and mechanical prophylaxis prescribed

- **Additional Information**
Identify VTE Risk Factors

VTE Risk Assessment Tool

Assess Venous Thromboembolism Risk and allocate patient into Risk Category

- None
- Total hip replacement, total knee replacement, or hip fracture surgery
- Abdominal or pelvic surgery for cancer
- Multiple major trauma
- Acute spinal cord injury with paraplegia

Patient Age
- Age is less than 60

Patient Height
- Patient Weight
- Body Mass Index

VTE Risk Factors
- No other risk factors present
- Moderate (major surgery [operating time > 45 min and/or involves abdomen]
- Prior history of VTE
- Known thrombophilia (including inherited disorders)
- Active malignancy or cancer treatment
- Congestive heart failure
- Myocardial infarction
- Active or chronic lung disease
- Active infection
- Inflammatory bowel disease
- Active rheumatic disease
- Obese (BMI greater than 30)
- Hormonal replacement therapy
- Obesity based cardiothoracic
- Hypersensitivity nephritis
- Varices (wire/chronic venous stasis
- Nephrotic syndrome
- Ehlers-Danlos
- Sickle cell disease

Does the patient have significantly reduced mobility relative to normal state?  
- Yes  
- No

Is the Expected Length of Stay greater than 2 days?  
- Yes  
- No

VTE Risk
- Higher Risk
- Moderate Risk
- Lower Risk

Proceed to check for Contraindications to Pharmacological and Mechanical prophylaxis
- Yes  
- No

Contraindications do not need to be identified for patients who have Lower Risk allocated. Consider education and early mobilisation. Also, see reference text for patient education information.
Identify contraindications and Other conditions to consider with pharmacological prophylaxis.

Absolute Contraindications

- No absolute contraindication to pharmacological prophylaxis
- Active haemorrhage
- Severe traumatic head or spinal cord with haemorrhage in last 4 weeks
- Thrombocytopenia (platelets less than 50 x 10^9/L) or coagulopathy
- End stage liver disease (INR > 1.5)
- Therapeutic anticoagulation with medication e.g. warfarin, dabigatran, rivaroxaban, fondaparinux, apixaban

If other, please specify

Relative Contraindications (Consider risk vs benefit)

- Intracranial haemorrhage within last year
- Cerebrolysis within 2 weeks
- Intracocular surgery within 2 weeks
- Gastrointestinal or genitourinary haemorrhage within last month
- Active intracranial lesions or neoplasms
- Hypertensive emergency
- Post-operative bleeding concerns
- Use of antiplatelets (e.g., aspirin, clopidogrel, dipyridamole)
- High falls risk
- Inherited bleeding disorder

Other Conditions

- Heparin sensitivity or history of heparin induced thrombocytopenia (HIT) (consult haematologist for alternative treatment)
- Insertion/removal of epidural catheter or spinal needle (lumbar puncture) (current or planned)
- Creatinine clearance < 30mL/min (see recommendations)
- Acute stroke (seek further advice from stroke service)
- Neurosurgery (seek further advice from neurosurgery consultant)
- Weight < 50kg or > 100kg (consider dosage adjustment as per local guidelines)
Prescribing VTE Prophylaxis

- Consider tool’s recommendations.
- Indicate prescribing decision.

**Contraindications to Pharmacological Prophylaxis**
- Pharmacological prophylaxis is not contraindicated
- Pharmacological prophylaxis is contraindicated
- Pharmacological prophylaxis may be prescribed (consider risk vs benefit)

**Contraindications to Mechanical Prophylaxis**
- Mechanical prophylaxis is not contraindicated
- Mechanical prophylaxis is contraindicated
- Mechanical prophylaxis may be prescribed (consider risk vs benefit)

**Prescribing Recommendations**

Please note that this tool does not preclude the use of clinical judgement. Refer to local policy and procedures where they exist. There may be an important reason why generally recommended prophylaxis is not appropriate for this patient.

**Higher Risk**
Prescribe pharmacological AND mechanical prophylaxis unless contraindicated

For suggestions on pharmacological and mechanical agents, right click inside the adjacent box and choose Reference Text.

**Moderate Risk**
Prescribe pharmacological OR mechanical prophylaxis if not prescribing pharmacological prophylaxis

For suggestions on pharmacological and mechanical agents, right click inside the adjacent box and choose Reference Text.

Considering the patient’s risk category, VTE risk factors and contraindications to pharmacological and/or mechanical prophylaxis, please indicate your decision

- Prescribe pharmacological prophylaxis
- Prescribe mechanical prophylaxis
- Prophylaxis NOT to be prescribed

Remember to plan for early mobilisation and provide education to all patients.

For suggestions on pharmacological and mechanical agents, right click inside the adjacent box and choose Reference Text.
**Prescribing Options**

**VTE Higher Risk Prescribing Ref Text**

- Encourage early mobilisation and provide patient education: *Preventing Blood Clots*
- Please note that this tool does not preclude the use of clinical judgement. Refer to local policy and procedures where they exist. There may be an important reason why generally recommended prophylaxis is not appropriate for this patient.
- Where the patient’s weight is < 50kg or > 100kg, consider dosage adjustment as per local guidelines.

**Prescribe one pharmacological option (IF THERE ARE NO CONTRAINDICATIONS):**
- Enoxaparin 40 mg subcutaneous daily
- Dalteparin 5,000 units subcutaneous daily
- If Creatinine Clearance < 30mL/min:
  - Enoxaparin 20 mg subcutaneous daily OR
  - Heparin 5,000 units subcutaneous 8- or 12-hourly

**Alternative oral agents for Orthopaedic Surgical patients may include:**
- Hip replacement: dabigatran, rivaroxaban, fondaparinux, apixaban
- Knee replacement: dabigatran, rivaroxaban, fondaparinux, apixaban
- Hip fracture: fondaparinux, aspirin in combination with LMWH

**AND**

**Prescribe one mechanical device (IF THERE ARE NO CONTRAINDICATIONS):**
- Graduated compression stockings / anti-embolic stockings
- Intermittent pneumatic compression
- Foot impulse device

**OR**

**Do NOT prescribe pharmacological or mechanical prophylaxis because of contraindications.**

**Key:**
- LMWH = low molecular weight heparin e.g. enoxaparin, dalteparin

**Consider Duration of Therapy:**

**Medical patients:**
- Continue until acute medical condition is stable, patient is mobile or until hospital discharge

**Surgical patients:**
- Lower leg immobilisation due to injury: until mobility returns to baseline
Important Elements for Implementation

- Multi-faceted, systems approach
- Relevant stakeholders are identified and engaged

“Engaging clinical staff with the VTE prevention process required multiple tailored approaches, based around perceived drivers within different staff groups” Roberts et al. 2013

- Oversight of senior clinical and managerial staff
- Identification of champions
- Education and training requirements
- Link to the prescribing process
- Consideration of workflows and electronic functionalities to embed into practice
- Use of data to drive change
WSLHD’s Implementation Journey and Learnings
WSLHD timeline

- Dec. 2014 Baseline Audit
- Feb 2015 VTE RAT rolled out across the district
- Aug. 2015 Snapshot Audit
- Oct. 2015 MO survey
- Nov. 2015 Workshop 1/2
- Dec. 2015 / Jan 2016 Audit
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- Mar. 2016 Workshop 2/2
- June 2016 Blacktown Project
- Sep. 2016 Blacktown Project
- Apr. 2017 Audit
- April 2016 CEC ECLP
- Sep. 2016 CEC ECLP
- Jan. 2017 Orientation
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**Aug. 2015 Snapshot Audit**
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- Now……
Increase identification of patients potentially at risk for HA VTE

Process Measure: 30% increase in completed VTE RA within 24 hours of admission in 6 months
Data source: VTE electronic data extract

Increase the number of patients prescribed appropriate prophylaxis

Process Measure: In 6 months 95% of identified at risk patients have appropriate prophylaxis prescribed
Data source: VTE electronic data extract

Increase medical clinical leadership

Increase the number of patients that have appropriate administration of the prescription

Process Measure: within 6 months 95% of identified at risk patients have appropriate prophylaxis administered as prescribed
Data source: Yearly point prevalence audit

Increase learning from hospital associated VTE

Increase the accuracy and availability of data to enable learning

Balancing Measure: The number of major bleeds that occur for patients who are prescribed and administered VTE prophylaxis

Team Members:
- Team Leader -
- Consumer
- VTE EAG
- Facility working parties
- Project Sponsor – Clinical Governance

Outcome Measure: How much?
By when?
Data source: HIE coded data

Outcome Measure: How much?
By when?
Data source: VTE electronic data extract

To safely reduce preventable Hospital Associated (HA) VTE < 5% by November 2016

Aim:
Identifying patients at risk

**The Problem:**
Inconsistent approach to the accurate and timely identification of patients potentially at risk for HA VTE

**Aim:**
In 8 months there will be a 40% increase in the number of admitted patients who have a documented VTE risk assessment completed

**Outcome Measure:**
50% of admitted patients will have a completed electronic VTE risk assessment in 6 months

**Process Measure:**
30% increase in completed electronic VTE risk assessment tool in 6 months

**Data source:** VTE electronic data extract

**Process Measure:**
Within 6 months 95% of identified at-risk patients have appropriate prophylaxis prescribed

**Data source:** VTE electronic data extract

**Solution**
- Present data and the RAT to senior medical staff
- Use electronic VTE RAT
- Inconsistent approach to the accurate and timely identification of patients potentially at risk for HA VTE
- Increase Clinical Leadership
- Improve leadership/attitude
- Enable improved clinical practice
- Enable appropriate education
- Increase use of Clinical Pathways
- Increased use of Risk Assessment Tools
- Improve system

**Impact**
High

**Implementation**
Easy
WSLHD timeline

KEY TAKE HOME MESSAGE
START SMALL 😊

April 2016 CEC ECLP

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Blacktown Project Diagnostic Process

**Driver Diagram:**

**The Problem:**
VTE is a leading cause of morbidity and mortality despite being largely preventable through risk assessment and the appropriate prescription of VTE prophylaxis. NSW Health Policy mandates VTE Risk Assessments within 24 hours of admission. An electronic VTE RA tool is available in the EMR, however usage of the tool is minimal.

**SMART Aim:** By the 30th of November 2016, 100% of eligible patients admitted under respiratory and general surgery at Blacktown Hospital have a VTE risk assessment completed using the electronic VTE risk assessment tool in the EMR, within 24 hours of admission.

**Measure:**
- How many: 100% electronic VTE Risk Assessments completed within 24 hours of admission in all respiratory and general surgery patients
- By when: 30th November 2016

**Driver Diagram: Brainstorming of barriers (causes of the problem) and solutions**

**Improve VTE risk assessment process**
Process Mapping

- Mapped out current process
- Identified opportunities for completing the electronic VTE tool within the current workflow

**First PDSA cycle:**
- Test the completion of the eVTE tool at particular time points in one team

**KEY TAKE HOME MESSAGE**

*One place does not fit all* 😊
Results – General Surgery

Electronic VTE Risk Assessment Rate: General Surgery

Shadowing: tool used by EST team (JMO and registrar)

New JMO rotation: tool used by EST team (same registrar, new JMO)

New Registrar rotation: tool used by EST team (new registrar, same JMO)

New JMO rotation
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- **Now……**
Current process for geriatric patients presenting to Westmead Hospital Emergency Department

Blue pathway is working hours – Monday to Friday 08:00-17:00. Excludes public holidays.

Red and grey pathway is out of hours – 17:00-08:00, weekends and public holidays.

VTE Risk assess all new admissions from the last 24 hours

Prepared by Geriatrics and Clinical Governance September 2016
Current process for Haematology patients presenting to Westmead Hospital

Booked admission

Transfer from another hospital

Patient presents to ED

Patient is seen by nurse in ED and allocated triage category

Patient allocated to haematological team 1,2 or Bone Marrow team as appropriate.

Bed available?

YES

Admit to ward

NO

Medications charted?

YES

Discharge home

NO

Medications charted in clinic?

YES

Patient reviewed by allocated team on morning round

Admitting Haematology Registrar charts medications

YES

Pt is seen by haematology Registrar and will be discussed with haematology Consultant. The h/Consultant will decide if the patient will be admitted.

Admit as inpatient?

YES

NO

Discharge home

Admit to ward

C5A/Outlier

Bed available?

YES

NO

C5A/Outlier

Admitting ED MO charts medications

Patient not reviewed

Reviewed by allocated team on morning round

Next day a weekday?

YES

NO

Next day a weekday?

YES

NO

Next day a weekday?

YES

NO

Next day a weekday?

YES

NO

VTE Risk assess all new admissions from the last 24 hours

Prepared by Haematology and Clinical Governance September 2016

Blue pathway is working hours – Monday to Friday 08:00-17:00. Excludes public holidays.

Red and grey pathway is out of hours – 17:00-08:00, weekends and public holidays.

VTE eRAT

KEY TAKE HOME MESSAGE
START SMALL
GET SMALLER 😊

Number VTE eRAT completed

- Oct-16
- Nov-16
- Dec-16
- Jan-17
- Feb-17
- Mar-17
- Apr-17
- May-17
- Jun-17
- Jul-17
- Aug-17

Haematology

Spread of VTE eRAT completion

Oct-16 Nov-16 Dec-16 Jan-17 Feb-17 Mar-17 Apr-17 May-17 Jun-17 Jul-17 Aug-17

Haematology Other
WSLHD timeline

- Dec. 2014 Baseline Audit
- Feb 2015 VTE RAT rolled out across the district
- Aug. 2015 Snapshot Audit
- Oct. 2015 MO survey
- Nov. 2015 Workshop 1/2
- Dec. 2015 / Jan 2016 Audit
- Jan 2016 VTE eRAT
- Mar. 2016 Workshop 2/2
- June 2016 Blacktown Project
- Sep. 2016 Westmead Project
- April 2016 CEC ECLP
- Sep. 2016 CEC ECLP
- April 2017 Audit
- Jan. 2017 Orientation
- Now….
VTE Risk Assessment Tool

Use of VTE RAT

- **2015**: 95 VTE RAT used, 1 VTE RAT not used
- **2017**: 33 VTE RAT used, 108 VTE RAT not used

Legend:
- Blue: VTE RAT used
- Gray: VTE RAT not used
Identifying patients at risk - results

Inconsistent approach to the accurate and timely identification of patients potentially at risk for HA VTE

In 8 months there will be a 40% increase in the number of admitted patients who have a documented VTE risk assessment completed

**Outcome Measure:**
50% of admitted patients will have a completed electronic VTE risk assessment in 6 months
Data source: **VTE electronic data extract - April 2017 - 0.62%**

Data source: **2015 Yearly point prevalence = 1.05%  2017 Yearly point prevalence audit = 23.4%**

**Outcome Measure:**
30% of admitted patients will have a completed electronic VTE risk assessment within 24 hours of admission in 6 months
Data source: VTE electronic data extract

**Outcome Measure:**
In 8 months 60% of admitted audited patients will have clear documentation of a completed VTE risk assessment
Data source: **2015 Yearly point prevalence = 1.05%  2017 Yearly point prevalence audit = 30.7%**
What we have learnt...

• Think small – get smaller
• Process map then PDSA - PDSA - PDSA
• Pick one point in time
• Data
• Have prepared answers for the naysayers
• Governance Structure
• Use your workforce
• Led by a Senior Consultant works the best
• Spread will happen
WSLHD timeline

Dec. 2014 Baseline Audit
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Jan 2016 VTE eRAT
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Sep. 2016 CEC ECLP
Jan. 2017 Orientation
April 2017 Audit

NOW.......
Discussion Activity
Brainstorming & Discussion Activity

3 minutes – individual reflection
10 minutes – group discussion

1) What do you already have in place that will assist with the implementation of the electronic VTE risk assessment tool?

2) Potential challenges you might face when implementing the tool.

3) Pick one challenge that you intend to target first and plan your next steps.
Wrap Up & Next Steps

• We would like to work with you to:
  – Support implementation (resources to be emailed)
  – Improve the tool
  – Trial active prompting mechanisms to improve the tool’s visibility and integration within the workflow (eMR functionalities)
  – Link to electronic prescribing
  – Explore the use of clinical informatics

• The future: more automation
References


Thank you

For further information:

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