

**AUSTRALIAN COMMISSION  
ON SAFETY AND QUALITY IN HEALTH CARE**

**NIMC VTE Prophylaxis Section  
Audit and Reporting Tool  
User Guide**

**November 2013**

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## 1.0 Introduction

An audit tool has been developed to assist healthcare organisations to audit the use of the venous thromboembolism (VTE) prophylaxis section in the 2013 version of the National Inpatient Medication Charts - NIMC (acute) and NIMC (GP e-version).

The VTE prophylaxis section has been developed to prompt:

- VTE risk assessment
- VTE pharmacological prophylaxis prescribing
- VTE mechanical prophylaxis ordering.

**Figure 1: NIMC VTE prophylaxis section in the NIMC**

VTE risk assessed: Yes <input checked="" type="checkbox"/> Prophylaxis not required <input type="checkbox"/> Contraindicated <input type="checkbox"/>			Signature: <i>B. Jones</i>		Date: 12/15/13	
Date <i>12/15/13</i>	Medicine (print generic name) <i>ENOXAPARIN</i>					
Route <i>Subcut</i>	Dose <i>40mg</i>	Frequency and NOW enter times <i>Morning</i>	<i>0800</i>	<i>PD</i>	<i>PD</i>	
Indication <b>VTE prophylaxis</b>		Pharmacy				
Prescriber signature <i>B. Jones</i>	Print your name <i>Brian Jones</i>	Contact <i>9847</i>				
Mechanical prophylaxis <i>TED STOCKINGS</i>			AM check	<i>PD</i>	<i>PD</i>	
Prescriber/NI signature <i>B. Jones</i>	Print your name <i>Brian Jones</i>	Contact <i>9847</i>	PM check	<i>PD</i>		
						Continue on discharge? Yes / No Dispense? Yes / No Duration: ..... days Qty: .....

### Audit and Reporting Tool

The electronic audit tool is an automated Microsoft Excel spreadsheet that allows hospitals to collect baseline (pre-implementation) and post-audit data. When the data is entered the Excel tool automatically collates this information into a report for the audit period.

The tool can be used to measure compliance with the elements of the pre-printed VTE prophylaxis section including:

- VTE risk assessment documentation
- pharmacological and mechanical prophylaxis prescribing
- anticoagulant therapy administration documentation
- recording checks of mechanical devices.

## 2.0 Conducting an audit of the NIMC VTE prophylaxis section

The tool has two audit functions: **baseline** (pre-implementation) and **post-implementation** (hereafter referred to as “post-audit”). This enables health services to complete a pre-implementation (baseline) audit prior to introducing the NIMC with VTE prophylaxis section (NIMC 2013) and a post-audit at a pre-determined time after introducing the new chart.

### 2.1 Pre-implementation (baseline) audit

It is recommended that the baseline audit be completed prior to commencing staff education (see Figure 2 below). Conducting a baseline audit provides health services with an opportunity to measure improvement in documentation of VTE risk assessment and prophylaxis prescribing following introduction of the NIMC with VTE prophylaxis section. The audit tool has a separate function for completing the baseline audit and contains fewer questions compared to the post-audit.

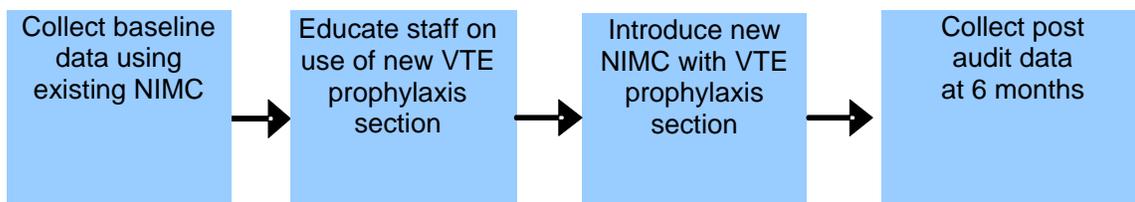
## 2.2 Post implementation audit

After introducing the NIMC 2013 the post-audit can be used to measure usage of the VTE prophylaxis section and improvements in VTE prophylaxis documentation and prescribing in the organisation. The post-audit contains additional audit elements which can be used to monitor any unintended consequences resulting from use of the VTE prophylaxis section such as co-existing orders for anticoagulation in the VTE prophylaxis section and the regular medicines section of the chart. While the NIMC VTE prophylaxis pilots showed no evidence of duplicate orders of anticoagulation (orders in the VTE prophylaxis section and the regular medicines section of the chart) an early audit is recommended to ensure the NIMC VTE section is being used correctly.

The post-audit tool can be used to re-audit compliance with the features of the VTE prophylaxis section. For example, hospitals using a rapid audit and feedback cycle of quality improvement such as the Plan Do Study Act (PDSA) methodology for implementing the chart can use the post-audit tool to collect audit data on a sample of patients every month e.g. 20 patient audits a month until they have reached their target.

Hospitals may choose to complete the VTE Prophylaxis section audit at the same time as they undertake an NIMC audit.

**Figure 2: Suggested method for conducting baseline and post-audits of VTE prophylaxis prescribing**



## 2.3 How many patients should be audited?

It is suggested that hospitals audit 30 to 60 patient charts over a one month period across both audits. Hospitals may wish to vary this according to the size of the hospital, target patient sample and their own quality improvement methodology. For example, hospitals using continuous quality improvement methodology may choose to continuously audit 10-20 patients a month.

Patients should be randomly selected. The pre and post-implementation audits should include a similar mix of patients e.g. surgical, medical, cancer etc. The patient mix should be representative of the wards/units being audited.

## 2.4 Who should conduct the audits?

The audit of medication charts should be conducted by a clinician experienced with auditing and quality improvement methodology. Wherever possible, the same auditor(s) should complete both audits.

It is recommended that auditors familiarise themselves with the audit data elements and definitions prior to conducting the audit (see 4.0 NIMC VTE Prophylaxis Section Audit Elements table below).

### 3.0 How to use the Excel audit and reporting tool

1. Download the NIMC VTE prophylaxis section audit tool from the Commission's web site at: [www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/nimc/vteprophylaxis/](http://www.safetyandquality.gov.au/our-work/medication-safety/medication-chart/nimc/vteprophylaxis/) and save the Excel file into a project folder on your computer.
2. Open the Excel file when ready to commence entering data for the audit.
3. Decide which audit to complete, either baseline or post-audit. It is recommended that hospitals complete a baseline audit prior to introducing the new NIMC with VTE prophylaxis section.
4. If using Excel Version 2007 or 2010 when the file opens it will appear with an "Enable Editing" message (see Figure 3). You should click this button to enable the spreadsheet. This message will not appear in Excel Version 2003

Figure 3: Input screen when file is initially opened in Excel® 2010

Audits	
Baseline	0
Post-Audit	0

Audit Type: Baseline

Save Session

Clear Data

**General**

1 What is the category of prophylaxis?

- Surgical
- Medical
- Obstetric
- Cancer
- Other (please specify)

5. There are five sheets/tabs in the audit tool: input, data, report, comments and definitions. The function of each of these sheets (screens) is described below.

Figure 4: Data Sheets available in the Audit and Reporting Tool

Audits	
Baseline	0
Post-Audit	0

Audit Type: Baseline

Save Session

Clear Data

**General**

1 What is the category of prophylaxis?

- Surgical
- Medical
- Obstetric
- Cancer
- Other (please specify)

**VTE Risk Assessment**

Input | Data | Report | Comments | Definitions

### 3.1 Input screen

The input screen allows you to enter data for each type of audit. It has two modes: baseline and post-audit. Prior to undertaking an audit please familiarise yourself with the audit data definitions which are provided in Section 4.0.

On entering the Input screen choose the type of audit you wish to undertake by clicking on the “**Audit Type**” button. Choose “**baseline**” for a pre-implementation (baseline) audit which is undertaken prior to introducing the NIMC with VTE prophylaxis section. Choose “**Post-Audit**” to undertake an audit of the NIMC with VTE prophylaxis section (see Figure 5 below).

Figure 5: Input screen showing Baseline/Post-Audit options

Audits	
Baseline	0
Post-Audit	0

Audit Type: Baseline (dropdown menu with options: Baseline, Post-Audit)

**General**

1	What is the category of prophylaxis?	<input type="radio"/> Surgical <input type="radio"/> Medical <input type="radio"/> Obstetric <input type="radio"/> Cancer <input type="radio"/> Other (please specify)
---	--------------------------------------	--

**VTE Risk Assessment**

**VTE Prophylaxis Orders**

**Pharmacological VTE Prophylaxis**

**Mechanical VTE Prophylaxis**

The audit tool will expand to show additional questions as you progress through the audit, for example, the VTE risk assessment questions will only appear after the Category of Prophylaxis is chosen.

### 3.2 Baseline audit

1. After choosing the **Baseline Audit**, start the audit by choosing the category of prophylaxis e.g., surgical, medical etc. Proceed to answer the questions in chronological order until you get to the end of the audit.
2. Click on the *Submit* button when all values are entered for one patient. This will copy the data into a separate sheet within the Excel® file and will also reset the spreadsheet for the next patient.
3. As audits are completed the *Audit table* at the top of the input screen will automatically count the number of audits that have been completed (refer to figure 5 above).
4. Enter subsequent patient audits until the baseline audit is complete.
5. **Save Session** and **Clear Data** buttons. The “Save Session” button has the same functionality as the Excel® save function. Ensure the data is regularly saved during the audit using either of these options. The “Clear Data” button acts to clear any data that has not yet been submitted. If half way through an audit a mistake is made and the auditor wishes to go back to the first question the “Clear Data” button will clear any data for that patient. **Please note that once data has been submitted it cannot be cleared.**

#### NOTES

1. In both audits, if the answer to the question “*Is VTE prophylaxis ordered? (pharmacological and/or mechanical)*” is “No”, the tool will automatically skip to the submit function to allow you to finish data entry for that patient (see Figure 6 below).
2. In other cases where the answer to a particular question is “No” subsequent questions can be left blank. For example if pharmacological prophylaxis is not prescribed there is no requirement to answer the questions on anticoagulant doses required and doses documented as given (see Figure 7 below).
3. Some questions have an “Other” or “Comments” field. Where this option is chosen a free text field will appear to allow you to enter more information (see Figure 5 below). If Other (please specify) is selected, users must enter some text in the field to complete data entry for this patient and for the Submit button to appear.

Figure 6: Input screen showing Submit function and “Other” free text field

7	A	B	F	G	H	I
8		Post- Audit	0			
9		Audit Type	Baseline		Clear Data	
10						
11						
12		<b>General</b>				
13		1	What is the category of prophylaxis?	<input type="radio"/> Surgical <input checked="" type="radio"/> Medical <input type="radio"/> Obstetric <input type="radio"/> Cancer <input type="radio"/> Other (please specify)		
15		<b>VTE Risk Assessment</b>				
16		2	Are there any contraindications to VTE prophylaxis?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
17		3	If VTE prophylaxis is contraindicated, is the contraindication documented somewhere in the medical record?	<input checked="" type="radio"/> Yes <input type="radio"/> No		
18		3A	Specify contraindication	GI Bleed		
19		4	Is VTE risk assessment documented somewhere?	<input type="radio"/> Yes <input checked="" type="radio"/> No		
25		<b>VTE Prophylaxis Orders</b>				
28		5	Is VTE prophylaxis ordered? (pharmacological and/or mechanical)	<input type="radio"/> Yes <input checked="" type="radio"/> No		
29		<b>Pharmacological VTE Prophylaxis</b>				
30		<b>Mechanical VTE Prophylaxis</b>				
31						
32						
42						
43						
51						
52						
53						
54		Submit				

If no VTE prophylaxis is ordered, click “Submit following a “No” answer to Question 10.

**Figure 7: Input screen showing blank fields**

	A	B	F	G	H	I
28		<b>VTE Prophylaxis Orders</b>				
29						
30	5	Is VTE prophylaxis ordered? (pharmacological and/or mechanical)			<input checked="" type="radio"/> Yes <input type="radio"/> No	
31						
32		<b>Pharmacological VTE Prophylaxis</b>				
33	6	Is pharmacological prophylaxis prescribed anywhere?			<input type="radio"/> Yes <input checked="" type="radio"/> No	
35	7	Is <b>pharmacological</b> prophylaxis prescribed in the regular medications section?			<input type="radio"/> Yes <input checked="" type="radio"/> No	
40	8	What is the number of doses of anticoagulant <b>required</b> ?				
41	9	What is the number of doses of anticoagulant <b>documented as given</b> ?				



### 3.3 Post-audit

1. To undertake a post-audit, choose the Post-Audit button. You will notice the post-audit has several additional questions which are specifically related to completion of the NIMC VTE prophylaxis section (see Figure 8 below).
2. Click on the *Submit* button when all values are entered for one patient. This will copy the data into a separate sheet within the Excel® file and will also reset the spreadsheet for the next patient.
3. Enter subsequent patient audits until the post-audit is complete.
4. **Save Session** and **Clear Data** buttons. The “*Save Session*” button has the same functionality as the Excel® save function and should be used regularly during the audit to ensure data is being saved. The “*Clear Data*” button acts to clear any data that has not yet been submitted. If half way through an audit a mistake is made and the auditor wishes to go back to the first question the “*Clear Data*” button will clear any data for that patient. **Please note that once data is submitted for a patient it cannot be cleared.**

Figure 8: Post-Audit input screen

A	B	F	G	H	I
1	<b>NIMC VTE Prophylaxis Section Audit Tool</b>				
2	Version 20131114.131933				
3		<b>Audits</b>		Save Session	
4		Baseline	0		
5		Post-Audit	0		
6		<b>Audit Type</b>	Post-Audit	Clear Data	
7	<b>General</b>				
8	1	What is the category of prophylaxis?	<input type="radio"/> Surgical <input type="radio"/> Medical <input checked="" type="radio"/> <b>Obstetric</b> <input type="radio"/> Cancer <input type="radio"/> Other (please specify)		
9	<b>VTE Risk Assessment</b>				
10	2	Are there any contraindications to VTE prophylaxis?	<input type="radio"/> Yes <input type="radio"/> No		
11	3	If VTE prophylaxis is contraindicated, is the contraindication documented somewhere in the medical record?	<input type="radio"/> Yes <input type="radio"/> No		
12	4	Is the <b>contraindicated</b> checkbox ticked?	<input type="radio"/> Yes <input type="radio"/> No		
13	5	Is the <b>VTE risk assessed</b> checkbox ticked?	<input type="radio"/> Yes <input type="radio"/> No		
14	6	Is the prophylaxis <b>not required</b> checkbox ticked?	<input type="radio"/> Yes <input type="radio"/> No		
15	7	Is NIMC VTE risk assessment section <b>signed</b> ?	<input type="radio"/> Yes <input type="radio"/> No		
16	8	Is NIMC VTE risk assessment section <b>dated</b> ?	<input type="radio"/> Yes <input type="radio"/> No		
17			<input type="radio"/> Yes		

**NOTES:**

1. In both audits, if the answer to the question “*Is VTE prophylaxis ordered? (pharmacological and/or mechanical)*” is “No” , the tool will automatically skip to the submit function to allow you to finish data entry for that patient (see Figure 5 below).
2. In other cases where the answer to a particular question is “No” subsequent questions can be left blank. For example if pharmacological prophylaxis is not prescribed there is no

requirement to answer the questions on anticoagulant doses required and doses documented as given (see Figure 7) .

3. Some questions have an “Other” or “Comments” field. Where this option is chosen a free text field will appear to allow you to enter more information (see Figure 6). If “Other (please specify)” is selected, users must enter some text in the field to complete data entry for this patient and for the Submit button to appear.

### 3.4 Data screen

1. The data screen contains the raw data. Each row of data represents one patient audit and allows auditors to determine how many audits have been completed (please note an audit count is also available in the input screen). **It is recommended that auditors do not change any data in the data sheet.**
2. The raw data has a “Timestamp” column which allows auditors to see when the audit was undertaken (see Figure 9 below). If audits are undertaken over a number of days, each row in the Timestamp column will reflect the date it was entered in the audit tool.
3. The “Delete Data” button allows auditors to delete all data that has been entered in the audit tool. **Please note that once data has been deleted it is not recoverable** (see section below on Repeat Audits).

Figure 9: Data screen showing raw data with timestamp

Audit Item #	Baseline Question	Post-Audit Question	Audit Question	Timestamp	Audit Type	Audit Id	What is the category of prophylaxis?	Other (please specify)	Are there any contraindications to VTE prophylaxis?
1	1A	2		11-Nov-2013 14:58:14	Baseline	1	Other (please specify)	Outpatient	Yes
1	1A	2		11-Nov-2013 14:59:30	Baseline	2	Medical		No
1	1A	2		11-Nov-2013 15:09:23	Baseline	3	Cancer		No
1	1A	2		11-Nov-2013 15:10:05	Baseline	4	Obstetric		No

### 3.5 Report screen

The report screen provides a report of results for both the baseline and post-audits (Post-Audit). The reports are dynamic and build as each new audit is submitted.

Questions that are not included in the baseline audit are shaded out in mauve as indicated in Figure 10 below.

To print a copy of the report at the completion of an audit, use the *File Print* functionality in Excel.

Figure 10: Report screen

NIMC VTE Prophylaxis Section Audit Report					
Data item	Baseline		Post-Audit		Comments
	n	%	n	%	
Number of patients	5		5		Count of patients
Number of surgical patients	1	20%	1	20%	Percent of patients by category
Number of medical patients	1	20%	1	20%	
Number of cancer patients	1	20%	1	20%	
Number of obstetric patients	1	20%	1	20%	
Number of other patients	1	20%	1	20%	
<b>VTE Risk Assessment</b>					
Is the VTE risk assessed checkbox ticked?			5	100%	
Is the prophylaxis not required checkbox ticked?			2	40%	
Is the contraindicated checkbox ticked?			1	20%	
Is NIMC VTE risk assessment section signed?			5	100%	
Is NIMC VTE risk assessment section dated?			5	100%	
Is VTE risk assessment documented somewhere?	3	60%	2	40%	
Where is the VTE risk assessment documented?					
Progress notes	1	20%	1	20%	
Care plan	0	0%	0	0%	
Clinical pathway	1	20%	0	0%	
Pre-admission checklist	0	0%	0	0%	
Risk assessment form/guide	0	0%	0	0%	
NIMC regular Section	1	20%	1	20%	
Not documented elsewhere	2	40%	3	60%	
EHR	0	0%	0	0%	
Other	0	0%	0	0%	
If VTE prophylaxis is contraindicated, is contraindication specified in the medical record?	3	60%	1	20%	
<b>VTE prophylaxis orders</b>					
VTE prophylaxis ordered	4	80%	3	60%	
<b>Pharmacological VTE Prophylaxis</b>					
Pharmacological VTE prophylaxis prescribed anywhere	3	60%	3	60%	
Pharmacological prophylaxis prescribed in the VTE section (if no orders, at least one in the VTE section)			2	40%	
Pharmacological VTE prophylaxis prescribed in regular section	3	60%	1	20%	

### 3.6 Comments screen

The report on the comments screen lists free text entries that have been submitted for the following questions:

- *What is the category of VTE prophylaxis?* Lists “Other” category
- *Where is VTE risk documented?* Lists “Other” category
- *If VTE prophylaxis is contraindicated, is the contraindication specified in the medical record?* Lists *specific contraindications* recorded in the comments field
- *Are there current pharmacological VTE prophylaxis orders in both the VTE and regular medicines sections?* Lists *details of the orders* recorded in the comments field
- *Is pharmacological VTE prophylaxis ordered at the same time as therapeutic anticoagulation in error?* Lists *details of the orders* recorded in the comments field
- *Where is mechanical prophylaxis ordered?* Lists “Other” category
- *Where is mechanical prophylaxis check?* Lists “Other” category

The comments report also includes responses to VTE prophylaxis prescribed/ordered to allow auditors to see whether VTE prophylaxis was prescribed/ordered where there was a contraindication to prophylaxis were documented in the medical record (see Figure 11 below).



### 3.8 Repeat Audits

As noted above, hospitals may want to undertake multiple post-audits following introduction of the NIMC with VTE prophylaxis section, e.g., 20 audits each month.

The audit tool allows hospitals to undertake a baseline audit and one post-audit. To undertake multiple post-audits, follow the suggested method below:

1. Complete the baseline and first post-audit.
2. Click File “Save as” on the Excel<sup>®</sup> menu and save the spreadsheet with a new file name (e.g. file name could include the date the first post-audit was completed).
3. Go to Commission website and download a new version of the audit tool, save in project folder or on desktop and undertake a subsequent post-audit.
4. This download procedure will be necessary for each subsequent post-audit.

## 4.0 NIMC VTE prophylaxis section audit elements

The audit elements are defined in the table on the following pages. The audit data elements asterisked and shaded in light blue in the table below are only included in the post-audit as they relate to specific areas of the NIMC VTE prophylaxis section. The other (unshaded) audit elements are common to the baseline and post-audits and allow hospitals to compare their pre- and post-audit results including:

- rates of VTE risk assessment documentation (and where VTE risk is documented)
- rates of VTE prophylaxis prescribing (pharmacological and mechanical)
- rates of mechanical VTE prophylaxis (and where mechanical prophylaxis is ordered and checked)
- VTE prophylaxis prescription and administration errors i.e., doses of anticoagulant not signed as administered and mechanical prophylaxis not documented as checked.

Completion of a post-audit soon after introducing the NIMC with VTE prophylaxis section will allow hospitals to review whether the VTE prophylaxis section is being used correctly. Specifically it will provide information on:

- correct use of the risk assessment section
- pharmacological VTE prophylaxis prescribing in the VTE prophylaxis section
- mechanical prophylaxis ordering and checking in the VTE prophylaxis section

While the NIMC VTE Pilot showed no evidence of duplicate prescribing of anticoagulants or co-existing orders for anticoagulation in the VTE prophylaxis section and the regular medicines section of the chart, an early audit is recommended to:

- ensure correct usage of the NIMC VTE section; and
- check for any unintended consequences.

#### 4.1 Audit elements, audit definitions and report calculations

Audit Elements	Definitions	Report calculation (#)	Report percentage (%)
<p><b>What is the category of VTE prophylaxis?</b></p> <ul style="list-style-type: none"> <li>• Surgical</li> <li>• Medical</li> <li>• Cancer</li> <li>• Obstetric</li> <li>• Other (please specify)</li> </ul>	<p>The category of prophylaxis is the reason the VTE prophylaxis has been prescribed. There are five categories:</p> <ul style="list-style-type: none"> <li>• Surgical (i.e. admitted for a surgical procedure)</li> <li>• Medical (i.e. admitted for a medical condition eg stroke, AMI, etc)</li> <li>• Cancer (a subset of the medical category but does not include cancer surgery which should be classified under Surgical)</li> <li>• Obstetric (pregnancy &amp; childbirth)</li> <li>• Other (if the admission is for something other than the four categories above e.g., anaesthesia)</li> </ul> <p>You may need to review the admission diagnosis and check the notes to retrieve this information.</p> <p>Select the patient category for the VTE prophylaxis from the list. For the 'Other' category please specify what the admission diagnosis is that requires VTE prevention in the free text field provided in the audit tool.</p>	<p>Total patients audited</p> <p>Total number of patients in each category</p>	<p>Percent of patients in each of the five categories</p>
<p><b>Are there any contraindications to VTE prophylaxis?</b></p>	<p>Record yes if there are any contraindications to pharmacological and/or mechanical VTE prophylaxis.</p>	<p>Total number of patients with contraindication(s) to pharmacological and/or mechanical VTE prophylaxis.</p>	<p>Percent of total patients that have contraindication(s) to pharmacological and/or mechanical VTE prophylaxis.</p>
<p><b>If VTE prophylaxis is contraindicated, is the contraindication specified in the medical record?</b></p>	<p>Record yes if there is documentation in the medical record indicating a specific contraindication to VTE prophylaxis e.g. <i>active bleeding</i> and record the contraindication in the Comments field. Record 'No' if there is no documentation to indicate VTE prophylaxis is contraindicated. If the patient is on a treatment dose of anticoagulant this is also a contraindication which should be documented in the medical record.</p>	<p>Total number of patients with specific contraindication(s) to pharmacological and/or mechanical VTE prophylaxis documented in the medical record.</p>	<p>Percent of patients with contraindication(s) to pharmacological and/or mechanical VTE prophylaxis where the specific contraindication is documented in the medical record.</p>

* Is the <b>contraindicated</b> checkbox ticked?	Record yes if the <b>contraindicated</b> checkbox is ticked.	In post-audit the total number of patients with <b>contraindicated</b> checkbox ticked.	In post-audit the percent of patients where the <b>contraindicated</b> checkbox is ticked.
* Is the <b>VTE risk assessed</b> checkbox ticked?	Record yes if the <b>VTE risk assessed</b> checkbox is ticked.	In post-audit the total number of patients with the <b>VTE risk assessed</b> checkbox ticked.	In post-audit the percent of patients where the <b>VTE risk assessed</b> checkbox is ticked.
* Is the <b>prophylaxis not required</b> checkbox ticked?	Record yes if the prophylaxis <b>not required</b> checkbox is ticked.	In post-audit the total number of patients with <b>not required</b> checkbox ticked.	In post-audit the percent of patients where the <b>not required</b> checkbox is ticked.
* Is the <b>VTE risk assessment section signed</b> ?	Record yes if the VTE risk assessment section has been signed by an authorised clinician.	In post-audit the total number of patients with <b>VTE risk assessment section signed</b>	In post-audit the percent of patients where the VTE risk assessment section has been <b>signed</b> by an authorised clinician
* Is the <b>VTE risk assessment section dated</b> ?	Record yes if the VTE risk assessment section has been dated by an authorised clinician.	In post-audit the total number of patients with <b>VTE risk assessment section dated</b>	In post-audit the percent of patients where the VTE risk assessment section has been <b>dated</b> by an authorised clinician
<b>Is VTE risk assessment documented somewhere? (If post-audit, is VTE risk assessment documented somewhere else?)</b>	All adult patients admitted to inpatient care must be assessed for risk of VTE. Documentation of the assessment should be easily identified in the patient's medical record. Click yes if a VTE risk assessment is documented somewhere in the medical record i.e., <b>not</b> the VTE prophylaxis section of the NIMC. Click no if there is <b>no evidence</b> of a documented risk assessment.	The number of patients with a VTE risk assessment documented somewhere in the medical record. In post-audit, the number of patients with a VTE risk assessment documented <b>somewhere else</b> in the medical record i.e., <b>not</b> the NIMC VTE prophylaxis section.	Percent of total patients with a VTE risk assessment documented somewhere in the medical record. In post-audit, the percent of total patients with a VTE risk assessment documented <b>somewhere else</b> in the medical record i.e., <b>not</b> the NIMC VTE prophylaxis section.

<p><b>Where is it documented?</b></p> <ul style="list-style-type: none"> <li>• Progress notes</li> <li>• Care plan</li> <li>• Pre-admission checklist</li> <li>• Risk assessment form</li> <li>• Clinical pathway</li> <li>• NIMC regular section or on the chart</li> <li>• EHR</li> <li>• Other (please specify)</li> </ul>	<p>Select the documentation category from the list provided e.g. <i>risk assessment form, clinical pathway, electronic health record (EHR) etc</i></p> <p>If 'Other' is selected record the details in the Comments field.</p> <p><b>NOTE:</b> This question allows for multiple responses.</p>	<p>The number of documentations for each documentation category</p>	<p>Documentation category as a percent of total documentations.</p> <p><b>Note:</b> this percentage calculation is not patient-based.</p> <p><b>Example:</b> If there are 40 risk assessment documentations and 10 of these are in a care plan then the percent of care plan documentations is 25%.</p>
<p><b>Is VTE prophylaxis ordered? (pharmacological and/or mechanical)</b></p>	<p>Record yes if any VTE prophylaxis is prescribed - pharmacological, mechanical or both.</p> <p>If no VTE prophylaxis is ordered for the patient, leave the remaining questions in the audit tool blank and click ""Submit"" button</p>	<p>The number of patients with VTE prophylaxis prescribed – pharmacological and/or mechanical.</p>	<p>Percent of total patients with VTE prophylaxis prescribed – pharmacological and/or mechanical.</p>
<p><b>Is pharmacological VTE prophylaxis prescribed anywhere?</b></p>	<p>Record yes if pharmacological VTE prophylaxis is prescribed anywhere on the NIMC.</p>	<p>The number of patients with pharmacological VTE prophylaxis prescribed</p>	<p>Percent of total patients with pharmacological VTE prophylaxis prescribed</p>
<p><b>* Is pharmacological prophylaxis prescribed in the VTE prophylaxis section? (If there are multiple VTE prophylaxis orders, at least one order is in the VTE prophylaxis section)</b></p>	<p>Record yes if the pharmacological VTE prophylaxis is prescribed in the VTE prophylaxis section of the NIMC.</p>	<p>The number of patients with pharmacological VTE prophylaxis prescribed in the VTE prophylaxis section of the NIMC</p>	<p>Out of patients with pharmacological VTE prophylaxis prescribed, the percent that have pharmacological prophylaxis prescribed in the NIMC VTE prophylaxis section at least once.</p>
<p><b>Is pharmacological prophylaxis prescribed in the regular medications section?</b></p>	<p>Record yes if pharmacological VTE prophylaxis is prescribed in the regular medicines section of the NIMC.</p>	<p>The number of patients with pharmacological VTE prophylaxis prescribed in the regular medicines section of the NIMC</p>	<p>Out of patients with pharmacological VTE prophylaxis prescribed, the percent that have pharmacological prophylaxis prescribed in the regular medications section.</p>

<p><b>* Are there current pharmacological VTE prophylaxis orders in both the VTE and regular medicines sections? (i.e. VTE prophylaxis ordered twice in error)</b></p>	<p>Record yes if there is more than one <b>active</b> order of anticoagulant for pharmacological VTE prophylaxis (i.e. duplicate therapy that has been prescribed in error). Enter details of the orders in the <b>comments</b> field (e.g. enoxaparin 40mg daily + heparin 5000units BD, or heparin ordered twice).</p>	<p>The number of patients with more than one <b>active</b> order of anticoagulant for pharmacological VTE prophylaxis</p>	<p>The percent of total patients that have pharmacological VTE prophylaxis orders in both the VTE and regular medicines sections? (i.e. VTE prophylaxis ordered twice in error)</p>
<p><b>* Is pharmacological VTE prophylaxis ordered at the same time as therapeutic anticoagulation in error?</b></p>	<p>Record yes if there are active orders for both pharmacological VTE prophylaxis and therapeutic anticoagulant therapy on the current medication chart(s). Enter details of the orders in the <b>comments</b> field (e.g. heparin 5000units BD for prophylaxis + enoxaparin 60mg BD for treatment).</p>	<p>The number of patients with active orders for both pharmacological VTE prophylaxis and therapeutic anticoagulant therapy on the current medication chart(s).</p>	<p>The percent of total patients that have pharmacological VTE prophylaxis ordered at the same time as therapeutic anticoagulation in error.</p>
<p><b>What is the number of doses of anticoagulant required?</b></p>	<p>Record the number of doses of anticoagulant ordered for VTE prophylaxis that <b>should have been administered</b>. Count all doses that <b>should</b> have been administered from the commencement of the chart to the time of the audit by counting the number of administration boxes.</p>	<p>Total count of all doses of anticoagulation ordered for VTE prophylaxis that should have been administered.</p> <p><b>Example:</b> If the doctor has prescribed enoxaparin 40 mg daily to commence on the 6/8/2013 and the chart was audited on the 10/8/2013 after the daily dose had been given the <b>required</b> number of anticoagulant doses is 5. If the nursing staff has signed in the administration section that the patient was given a dose of enoxaparin each day then the number of doses <b>documented as given</b> is also 5.</p>	
<p><b>What is the number of doses of anticoagulant documented as given?</b></p>	<p>Record the number of doses of anticoagulant ordered for VTE prophylaxis that <b>have been signed as administered</b>, including doses that have a '<i>reason for not administering</i>' code documented. For further information on recording administration of doses and reasons for not administering codes refer to the NIMC User Guide available on the Commission website at <a href="http://www.safetyandquality.gov.au/wp-content/uploads/2012/02/NIMC-User-Guide-PDF.pdf">www.safetyandquality.gov.au/wp-content/uploads/2012/02/NIMC-User-Guide-PDF.pdf</a></p>	<p>Total count of all doses of anticoagulation ordered for VTE prophylaxis that have been signed as administered/given.</p>	<p>Percentage of total doses of anticoagulation that are documented and signed as given. One hundred minus this calculation provides percent of doses of anticoagulation NOT signed as given.</p>

<p><b>Is mechanical VTE prophylaxis ordered?</b></p>	<p>Record yes if mechanical VTE prophylaxis is ordered.</p>	<p>The number of patients with mechanical VTE prophylaxis ordered</p>	<p>Percent of total patients with mechanical VTE prophylaxis ordered.</p>
<p><b>Where is mechanical prophylaxis ordered?</b></p> <ul style="list-style-type: none"> <li>• Progress notes</li> <li>• Care plan</li> <li>• Clinical pathway</li> <li>• NIMC regular section</li> <li>• NIMC VTE section</li> <li>• Not ordered</li> <li>• EHR</li> <li>• Pre-admission checklist</li> <li>• Other (please specify)</li> </ul>	<p>Select the correct documentation category from the list provided e.g. care plan, clinical pathway etc If 'Other' is selected record the details in the Comments field. <b>NOTE:</b> This question allows for multiple responses. To select two or more options hold down the Ctrl button while making your selection.</p>	<p>The number of documentations for each documentation category</p>	<p>Documentation category as a percent of total documentations. <b>Note:</b> this percentage calculation is not patient-based. <b>Example:</b> If mechanical VTE prophylaxis is ordered 50 times and 30 of these orders are in the NIMC VTE prophylaxis section then the percentage is 60%.</p>
<p><b>Where are mechanical prophylaxis checks documented?</b></p> <ul style="list-style-type: none"> <li>• Progress notes</li> <li>• Care plan</li> <li>• Clinical pathway</li> <li>• NIMC regular section</li> <li>• NIMC VTE Section</li> <li>• Not documented</li> <li>• EHR</li> <li>• Other (please specify)</li> </ul>	<p>Select the correct documentation category from the list provided e.g. care plan, clinical pathway etc If 'Other' is selected record the details in the Comments field. <b>NOTE:</b> This question allows for multiple responses. To select two or more options hold down the Ctrl button while making your selection.</p>	<p>The number of documentations for each documentation category</p>	<p>Documentation category as a percent of total documentations. <b>Note:</b> this percentage calculation is not patient-based. <b>Example:</b> If there are 60 mechanical prophylaxis checks documented and 40 of these are in the NIMC VTE prophylaxis section then the percent of checks in the NIMC VTE prophylaxis section is 67%.</p>
<p><b>What is the number of mechanical VTE prophylaxis checks required?</b></p>	<p>Record the number of times mechanical VTE prophylaxis <b>should be checked</b>. Count all times that the graduated compression stockings, intermittent pneumatic compression (IPC) <b>should be checked</b> from the commencement of the order to the time of the audit.</p>	<p>Total count of the number of mechanical VTE prophylaxis checks required.</p>	

<p><b>What is the number of mechanical VTE prophylaxis checks documented?</b></p>	<p>Record the number of mechanical prophylaxis checks that <b>have been documented.</b></p>	<p>Total count of the number of mechanical VTE prophylaxis checks that have been documented.</p>	<p>Percentage of required mechanical prophylaxis checks that have been documented/signed as checked. One hundred minus this percent provides percent of checks not signed/documented.</p>
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*(\*) Included in the post-audit only*

## 5.0 Frequently asked questions

### 1. If the patient is not prescribed any VTE prophylaxis i.e., the answer to Question 10 is 'no', the remaining questions are not applicable. How should I complete the remaining questions?

If you answered 'no' to the question ***“Is VTE Prophylaxis ordered (pharmacological and/or mechanical)?”*** the tool will allow you to submit the data without answering further questions. Click the submit button at the bottom of the screen and proceed to the next audit.

### 2. In my hospital doctors do not indicate the number of required doses of pharmacological VTE prophylaxis. How do I answer the question: *What is the number of doses of anticoagulant required?*

Doctors are not required to stipulate the number of doses required. The audit requires that you calculate the number of doses of anticoagulant ordered for VTE prophylaxis that **should have been administered**. To do this you need to calculate all doses that should have been administered from the commencement of the order up to the time of the audit, or until the time the order has been ceased, by counting the number of administration boxes.

**Example:** If the doctor has prescribed enoxaparin 40 mg daily to commence on the 6/8/2013 and the chart was audited on the 10/8/2013 after the daily dose had been given the **required** number of anticoagulant doses is 5. If the nursing staff has signed in the administration section that the patient was given a dose of enoxaparin each day then the number of doses **documented as given** is also 5.

### 3. In my hospital all surgical patients assessed to be at risk of VTE get some sort of mechanical prophylaxis unless it is contraindicated. This is done by the nurses, no order is documented and checking for mechanical prophylaxis is recorded on a clinical pathway. In the audit how do I answer the questions related to mechanical prophylaxis?

**For baseline audit:** Answer “Yes” to ***“Is mechanical VTE prophylaxis ordered?”***, if mechanical prophylaxis is in use and on the patient. For the question: ***Where is mechanical prophylaxis ordered?*** Choose “Other” and add comment e.g., hospital policy, not specifically ordered. Choose “Clinical Pathway” for ***“Where are mechanical prophylaxis checks documented?”***

**For post-audit:** As for baseline audit. The auditor may wish to record that the NIMC VTE prophylaxis section has not been used for mechanical prophylaxis ordering and recording checks, if this is the case.

### 4. How do I know if there are current pharmacological VTE prophylaxis orders in both the VTE and regular medication sections? (i.e., VTE prophylaxis ordered twice in error?)

Review all of the patient's current medication charts. Record yes if there is more than one active order of anticoagulant for VTE prophylaxis (i.e. duplicate therapy has been prescribed in error). If you are unsure if the therapy is duplicated seek advice from a pharmacist or doctor. Auditors can enter details of the duplicate orders in the comments field (e.g. enoxaparin 40mg daily + heparin 5000 units BD, or heparin ordered twice). These free text comments will appear in a report in the “Comments” screen.

Anticoagulants used for VTE prophylaxis include: heparin, enoxaparin, dalteparin, fondaparinux, danaparoid, rivaroxaban, dabigatran, apixaban.

**5. How do I know if pharmacological VTE prophylaxis has been ordered at the same time as therapeutic anticoagulation in error?**

Therapeutic anticoagulation means a treatment dose of anticoagulant prescribed, e.g., for treatment of a pre-existing DVT. The dose of agent will generally indicate whether the drug is being used for prophylaxis or treatment. If the indication is not documented on the NIMC check if it is documented in the patient's notes. If you are unsure seek advice from a pharmacist or doctor. Record yes if there are **ACTIVE** orders for **BOTH** VTE prophylaxis and therapeutic anticoagulant therapy on the current medication chart(s). Auditors can enter details of the orders in the comments field (e.g. heparin 5000 units BD for prophylaxis + enoxaparin 60mg BD for treatment). These free text comments will appear in a report in the "Comments" screen.

**6. How do I audit a patient on a treatment dose of anticoagulant and not prescribed VTE prophylaxis? Are they considered to not have VTE prophylaxis ordered? Or should these patients be excluded from the audit?**

These patients should be included in the audit as **contraindicated** as they are already on a treatment dose of enoxaprin, warfarin etc. Document clearly in the Comments field of the audit tool that the patient is on a "*treatment dose of anticoagulant*". In the post-audit these patients should have the contraindicated box ticked.