1.2 Percentage of hospitalised adult patients that receive venous thromboembolism prophylaxis appropriate to their level of risk

Purpose

This indicator addresses the effectiveness of processes that ensure judicious and appropriate use of venous thromboembolism (VTE) prophylaxis in hospitalised patients.

Background and evidence

Deep vein thrombosis and pulmonary embolism (collectively known as VTE) are major, potentially fatal complications of hospital admission. The incidence of VTE varies with age, medical condition, co-morbidities, type of surgery and duration of immobilisation.[1] Both underuse and inappropriate use of VTE prophylaxis are well-recognised practice gaps in Australian hospitals[2-4] and national initiatives have been developed to drive improvements in the use of VTE prophylaxis.[5-7]

The Australian Commission on Safety and Quality in Health Care recommends that hospitals develop a policy outlining standard processes, procedures and responsibilities for assessing all adult patients for VTE risk and guiding the selection of appropriate prophylactic measures.[6] The policy should be approved by the local hospital drug and therapeutics committee, or other appropriate committee, and be informed by national recommendations such as those from the National Health and Medical Research Council (NHMRC).[7] Use of locally agreed processes for assessing and documenting VTE and bleeding risks in all adult patients, and locally agreed recommendations for the use of VTE prophylaxis may assist implementation of best practice.

VTE prophylaxis incorporates mechanical methods (e.g. graduated compression stockings), pharmacological methods (e.g. heparin, low molecular weight heparin or an oral anticoagulant) or a combination of these. Appropriate prescription of prophylaxis depends on the clinical situation and should be determined by local policy and guidelines.

Key definitions

Hospitalised adult patients refers to all patients aged 18 years and over who have a length of stay in hospital greater than 24 hours from the time of their initial presentation.

Prophylaxis appropriate to their level of risk means prophylaxis that is concordant with the recommendations in a locally agreed guideline, which has been endorsed by the DTC, or where no local guideline is available, the NHMRC guideline.[7] It is important to consider the following aspects:

i) VTE prophylaxis is prescribed when indicated

ii) VTE prophylaxis is not prescribed when not indicated

iii) VTE prophylaxis is not prescribed when contraindicated.

Data collection for local use

Please refer to the section *Using the National Quality Use of Medicines Indicators for Australian Hospitals* for guidance on sample selection, sample size, measurement frequency and other considerations.

Inclusion criteria: Patients aged 18 years and over admitted to hospital or the emergency department.

Exclusion criteria: Patients with a length of stay less than 24 hours from the time of initial presentation.

Recommended data sources: Medication charts and medical records.

The data collection tool for QUM Indicator 1.2 assists data collection and indicator calculation.

Data collection for inter-hospital comparison

This indicator assesses compliance with local policy, which may affect the ability to draw comparisons between hospitals whose local policies differ.
If used for inter-hospital comparison discussion and agreement on an optimal policy consistent with national recommendations should take place. Definitions, sampling methods and guidelines for audit and reporting also need to be agreed in advance in consultation with the coordinating agency.

Indicator calculation

$$\frac{\text{Numerator}}{\text{Denominator}} \times 100\%$$

Numerator = Number of adult patients receiving VTE prophylaxis appropriate to their level of risk

Denominator = Number of adult patients in sample

Limitations and interpretation

Determination of each patient's risk of VTE and risk of bleeding should be guided by an objective assessment of risk factors and clinical judgement and a VTE risk assessment should be clearly documented. This should be used to determine the appropriateness of the prescribed VTE prophylaxis. Where no risk assessment is documented the auditor is required to determine the patient's level of risk in order to assess the appropriateness of prophylaxis. *Indicator 1.1: Percentage of hospitalised adult patients that are assessed for risk of venous thromboembolism* provides further information regarding documentation of VTE risk assessment.
It is recommended that the staff carrying out the audit have relevant expertise in order that they can accurately assess the appropriateness of VTE prophylaxis.
It is recommended that Indicators 1.1 and 1.2 are collected concurrently where possible.

It is recommended that data for different patient groups (e.g. medical, surgical, obstetrics) can be identified separately in order to inform post-audit interventions.

Antithrombotic therapy

Further information

NSW TAG's position statement on Safe Use of Heparins and Oral Anticoagulants for Venous Thromboembolism Prophylaxis in Adults may assist hospitals with development of policies and guidelines on the use of VTE prophylaxis.[8]

The National Health and Medical Research Council's Stop the Clot program[5] assists organisations to integrate VTE prevention guidelines into routine hospital care **www.nhmrc.gov.au/nics**. A number of resources are also available from the Australian Commission on Safety and Quality in Health Care's VTE Prevention Resource Centre[6] at **www.safetyandquality.gov.au**

An e-learning module on prescribing VTE prophylaxis for clinicians is available from NPS MedicineWise at **http://learn.nps.org.au**

The Medication Safety Self Assessment for Antithrombotic Therapy in Australian Hospitals[9] (MSSA-AT) can help identify potential strategies for improvement with this indicator. MSSA-AT encourages development of robust systems for safe prescribing, dispensing, administration and monitoring of antithrombotic therapy. MSSA-AT is available at **www.cec.health.nsw.gov.au**

This indicator can be used to assist hospitals in meeting the National Safety and Quality Health Service Standard 1 [items 1.2.1, 1.2.2, 1.5.2, 1.6.1, 1.6.2, 1.7.2] and Standard 4 [items 4.2.1, 4.2.2, 4.5.1, 4.5.2, 4.11.1].[10]

References

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