

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication **7**

VENOUS THROMBOEMBOLISM

HOSPITAL-ACQUIRED COMPLICATION	RATE ^a
1 Pressure injury	10
2 Falls resulting in fracture or intracranial injury	4
3 Healthcare-associated infections	135
4 Surgical complications requiring unplanned return to theatre	20
5 Unplanned intensive care unit admission	na ^b
6 Respiratory complications	24
7 Venous thromboembolism	8
8 Renal Failure	2
9 Gastrointestinal bleeding	14
10 Medication complications	30
11 Delirium	51
12 Persistent incontinence	8
13 Malnutrition	12
14 Cardiac complications	69
15 Third and fourth degree perineal laceration during delivery (per 10,000 vaginal births)	358
16 Neonatal birth trauma (per 10,000 births)	49

a per 10,000 hospitalisations except where indicated
b na = national data not available

This hospital-acquired complication (HAC) includes the diagnoses of pulmonary embolism and deep vein thrombosis.*



Venous thromboembolism (VTE) is one of the leading causes of preventable death in Australia, accounting for almost 10% of all hospital deaths. VTE can cause distressing symptoms in the form of pain, swelling, tenderness, limited mobility and dyspnoea, tachypnoea and/or respiratory distress, tachycardia, arrhythmias, cough or haemoptysis. VTE has an extremely high patient mortality.

Why focus on venous thromboembolism?

Around 3,400 hospital-acquired episodes of VTE occur each year in Australian hospitals[#]

Hospital-acquired venous thromboembolisms increase the **length of stay and the cost of admission**[§]

28.9 Highest rate of this HAC at Principal Referral Hospitals[†]

9 Aggregate rate of this HAC at Principal Referral Hospitals
Per 10,000 hospitalisations

If all hospitals reduced their rate of this HAC to less than 9 per 10,000 hospitalisations, it would prevent at least **663 episodes of venous thromboembolism**



All facilities should be working to reduce their rates of VTE.

* The specifications for the hospital-acquired complications list providing the codes, inclusions and exclusions required to calculate rates is available on the Commission's website: www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/
[#] The data used in this sheet are for hospital-acquired complications in Australian public hospitals in 2015–16. Sourced from: Independent Hospital Pricing Authority (AU). Activity Based Funding Admitted Patient Care 2015–16.
[§] Independent Hospital Pricing Authority (AU): Pricing and funding for safety and quality: risk adjustment model for hospital-acquired complications, version 3, 2018.
[†] Hospitals were classified in the Principal Referral Hospitals peer group for these purposes according to the Australian Institute of Health and Welfare's former definition of major city hospitals with more than 20,000 acute weighted separations and regional hospitals with more than 16,000 acute weighted separations.

Top tips for prevention and management of venous thromboembolism (VTE)

The following provides key points for clinicians to consider to avoid this hospital-acquired complication.

Conduct risk assessment

- Conduct a comprehensive risk assessment including assessing the patient's baseline risk of VTEs, their risk of bleeding and any contraindications to pharmacological or mechanical prophylaxis
- Identify risk factors related to the individual such as increased age, pregnancy, active malignancy, previous VTE, varicose veins, obesity, immobility, hormone replacement or oral contraceptive use and/or acquired thrombophilia
- Identify medical illness risk factors such as chest infection, heart failure, current myocardial infarction, stroke with immobility, chemotherapy and/or acute inflammatory bowel syndromes
- Identify injury or surgery risk factors such as all surgical procedures and leg injuries.

For a patient at risk, develop a prevention plan as part of a comprehensive care plan

Develop prevention plan

Clinicians, patients and carers develop an individualised, comprehensive prevention plan to prevent VTE that identifies:

- Goals of treatment consistent with the patient's values
- Any specific nursing requirements, including equipment needs
- Any allied health interventions required, including equipment needs
- Observations or physical signs to monitor and determine frequency of monitoring
- Laboratory results to monitor and determine frequency of monitoring if specialist assistance is required.

Deliver prevention plan

Deliver the VTE prophylaxis plan including:

- Maintaining the patient's hydration
- Mobilisation of the patient
- Mechanical compression
- Providing medications.

Monitor

- Monitor the effectiveness of these strategies in preventing VTE and reassess the patient if VTE occurs
- Review and update the care plan if it is not effective or is causing side effects
- Engage in reviewing clinical outcomes, identifying gaps and opportunities for improvement
- Clinicians develop and document a detailed discharge plan for patients being discharged with VTE prophylaxis and provide this plan to the patient before discharge and to their GP or ongoing care provider within 48 hours of discharge.

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