AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE



Hospital-Acquired Complications Fact Sheets

Supporting safety and quality in Australian health services **2018**



Introduction

The Australian Commission on Safety and Quality in Health Care (the Commission) is pleased to share with you this information on hospital-acquired complications (HACs).

Complications in Australian hospitals

Australians enjoy good health compared to other developed nations. Significant resources are deployed to ensure that the health system supports the continued good health of Australians.¹ Despite these efforts, an unacceptable proportion of Australian hospital admissions are associated with an adverse event.²

What are HACs?

A HAC refers to a patient complication for which clinical risk mitigation strategies may reduce (but not necessarily eliminate) the risk of that complication occurring.

Why are HACs important?

HACs are a problem for patients and their families as they affect the patient's recovery, overall outcome and can result in a longer length of stay in hospital. HACs are also a concern for health services. This is because a patient's admission costs more if they have a HAC, diverting resources away from other patient care activities.³ This means more work is needed to reduce adverse events, including HACs, and improve the quality of care provided to patients.

Why have these fact sheets been developed?

These fact sheets, and other HACs resources released by the Commission, have been developed to support clinicians and others to reduce the occurrence and impact of HACs. Within this booklet, you will find fact sheets for 15 of the 16 nationally agreed HACs. A fact sheet has not been prepared for HAC 5 – 'unplanned intensive care unit admission' – as data about this HAC is not yet collected nationally.

How nurses and midwives can prevent and manage HACs

Nurses, midwives and other front-line staff play a key role in avoiding the occurrence of HACs. It is these clinicians who are responsible for providing care, and who can take actionable steps to prevent a HAC. The fact sheets, where appropriate, provide guidance on strategies to prevent or respond to the occurrence of HACs.

Where to find more information

These fact sheets are part of a larger resource, called the *Hospital-Acquired Complications Information Kit.* The information kit and additional information on the HACs list, can be accessed via the Commission's website at <u>www.safetyandquality.gov.au</u>.

3. Independent Hospital Pricing Authority, National Hospital Cost Data Collection 2015–16, acute admitted episodes, excluding same day, 2018.

^{1.} Australian Institute of Health and Welfare, Health expenditure Australia 2015–16. Health and welfare expenditure series no. 58. Cat. no. HWE 68, AIHW, Editor 2017: Canberra.

^{2.} Productivity Commission, Report on Government Services: Chapter 12 Public Hospitals, Australian Government Productivity Commission, Editor 2017: Canberra.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 1

PRESSURE INJURY

нс	HOSPITAL-ACQUIRED COMPLICATION	
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

A pressure injury is a localised injury to the skin and/or underlying tissue, usually over a bony prominence, as a result of pressure, or pressure in combination with shear and/or friction. This hospital-acquired complication (HAC) includes the diagnoses^{*} of:

- Stage III ulcer
- Stage IV ulcer
- Unspecified decubitus ulcer and pressure area.



Pressure injuries take a long time to heal, which has consequences for patients' quality of life, as such injuries can cause severe pain, and can involve sleep and mood disturbance as well as susceptibility to infection. They also adversely affect rehabilitation, mobility and long-term quality of life.

Why focus on pressure injuries?





All facilities should be working to reduce their rates of pressure injuries.

- 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.

Prevention and management of pressure injury



Grade B = Good evidence - body of evidence can be trusted to guide practice in most situations

Grade C = Some evidence - body of evidence provides some support for recommendation(s) but care should be taken in its application

Grade D = Weak evidence - body of evidence is weak and recommendation must be applied with caution

Source: Reproduced with the permission of the Australian Wound Management Association from the Pan Pacific Clinical Practice Guideline for the Prevention and Management of Pressure Injury (2012). Available from: http://www.woundsaustralia.com.au/publications/2012_AWMA_Pan_Pacific_Guidelines.pdf

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 2

FALLS RESULTING IN FRACTURE OR INTRACRANIAL INJURY

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) covers falls occurring in hospital which result in a fracture or intracranial injury resulting in diagnoses of intracranial injury, fractured neck of femur or other fractures.*



Fall-related injury is one of the leading causes of hospital-acquired morbidity and mortality in older Australians, and leads to pain, bruising and lacerations and fractures. Falls can also lead to intracranial bleeding, can instil a fear of falling, in turn leading to a loss of confidence and decline in mobility, and an injurious fall can increase the likelihood of discharge to a residential aged care facility.

Why focus on falls resulting in fracture or intracranial injury?



Around 1,800 hospital-acquired falls resulting in fracture or intracranial injury occur each year in Australian hospitals[#]



Hospital-acquired falls increase the length of stay and the cost of admission⁵

11.7

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

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 4 per 10,000 hospitalisations it would prevent at least 251 falls resulting in fracture or intracranial injury



All facilities should be working to reduce their rates of falls resulting in fracture or intracranial injury.

- 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.
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Top tips for prevention and management of falls resulting in fracture or intracranial injury

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as:
 - Agitation, delirium, confusion or impaired judgement
 - Gait instability
 - Lower limb weakness
 - Urinary incontinence, frequency or need for assisted toileting
 - Previous falls
 - Prescription of 'culprit' drugs, particularly central acting sedative hypnotics
 - Older age.

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 falls 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

Where indicated, deliver falls prevention strategies such as:

- Assess cognition and screen for delirium
- Manage continence, such as toilet frequently
- Review medications
- Monitor orthostatic blood pressure
- Implement fall injury prevention strategies where clinically indicated, which could include:
 - using a validated falls risk assessment that includes a standardised cognitive assessment tool
 - ensuring consistent and complete communication between all care providers
 - providing a buzzer or call bell to patients to contact nurses for assistance
 - having a protocol in place to address extra precautions needed for patients with dementia or other diseases that affect memory.

- Monitor the effectiveness of any fall prevention strategies, and reassess the patient if falls 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
- Put referrals in place in order to minimise future falls and address deconditioning.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 3

HEALTHCARE-ASSOCIATED INFECTIONS

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

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

This hospital-acquired complication (HAC) includes the diagnoses of*:

- Urinary tract infection
- Surgical site infection
- Pneumonia
- Bloodstream infection
- Multi-resistant organism

- Central line and peripheral line associated bloodstream infection
- Infection associated with prosthetics/ implantable devices
- Gastrointestinal infection.



Hospital-acquired infections are one of the most common complications affecting hospital patients, and greatly increase morbidity and mortality, as well as the risk of readmission within 12 months.



Hospital-acquired infections increase the length of stay and the cost of admission $^{\mathfrak{g}}$

Why focus on hospital-acquired infections?

Urinary tract infection (UTI) refers to an infection affecting the bladder, urethra, ureters or kidneys.

Around 20,500 hospital-acquired UTIs occur each year in Australian hospitals*



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



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 47.1 per 10,000 hospitalisations, it would prevent at least **2,757 UTIs**



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

Surgical site infection refers to an infection that occurs in the region of the body where prior surgery has been performed. It may or may not be associated with an indwelling device, such as a surgical drain.

Around 5,600 hospital-acquired surgical site infections occur each year in Australian hospitals#

32.9

Aggregate rate at Principal Referral Hospitals

Highest rate at Principal Referral Hospitals[†]

Per 10,000 hospitalisations



If all hospitals reduced their rate to less than 13.9 per 10,000 hospitalisations, it would prevent at least **786 surgical site infections**



All facilities should be working to reduce their rates of surgical site infections.

Pneumonia refers to an infection of the lungs.



Around 17,900 hospital-acquired episodes of pneumonia occur each year in Australian hospitals[#]

Highest rate at Principal Referral Hospitals[†]

Aggregate rate at Principal Referral Hospitals

40. Referral Per 10,000 hospitalisations

67

If all hospitals reduced their rate to less than 46.6 per 10,000 hospitalisations, it would prevent at least **2,830 episodes** of pneumonia



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

Blood stream infection refers to the presence of live pathogens in the blood, causing an infection.

Around 15,200 hospital-acquired blood stream infections occur each year in Australian hospitals[#]

4 Highest rate at Principal Referral Hospitals[†]

Aggregate rate at Principal Referral Hospitals

Per 10,000 hospitalisations



If all hospitals reduced their rate to less than 39.5 per 10,000 hospitalisations, it would prevent at least **2,757 blood** stream infections



All facilities should be working to reduce their rates of blood stream infections.

Central line and peripheral line associated blood stream infection (CLABSI) is a blood stream infection caused by introduction of pathogens into the blood stream via a central or peripheral line.



Around 4,400 hospital-acquired central line and peripheral line associated blood stream infections occur each year in Australian hospitals#



Highest rate at Principal Referral Hospitals[†]

Aggregate rate at Principal Referral Hospitals

Per 10,000 hospitalisations

If all hospitals reduced their rate to less than 11.9 per 10,000 hospitalisations, it would prevent at least **804 CLABSIs**



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

Multi-resistant organism (MRO) refers to bacteria that are resistant to one or more classes of antimicrobial agents and usually are resistant to all but one or two commercially available antimicrobial agents.



Around 3,800 hospital-acquired MROs occur each year in Australian hospitals#



Referral Hospitals[†]

Highest rate at Principal



Aggregate rate at Principal **Referral Hospitals**

Per 10,000 hospitalisations



If all hospitals reduced their rate to less than 8.9 per 10,000 hospitalisations, it would prevent at least 791 MROs

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

Infections associated with prosthetics and implantable devices refer to infections that are complications related to the insertion and care of medical devices, such as shunts, cochlear implants, pacemakers, insulin pumps.

Around 6,800 hospital-acquired infections occur each year in Australian hospitals#



Referral Hospitals[†]

Aggregate rate at Principal **Referral Hospitals**

Per 10,000 hospitalisations



If all hospitals reduced their rate to less than 18.1 per 10,000 hospitalisations, it would prevent at least 1,126 infections associated with prosthetics and implantable devices



All facilities should be working to reduce their rates of infections associated with prosthetics and implantable devices.

Gastrointestinal infections refers to infections of the gastrointestinal tract that may be acquired in hospital, especially Clostridium difficile, rotavirus, norovirus.



B

All facilities should be working to reduce their rates of gastrointestinal infections.

- * 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/
- Independent Hospital Pricing Authority (AU): Pricing and funding for safety and quality: risk adjustment model for hospital-acquired complications, version 3, 2018.
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† 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.

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Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 4

SURGICAL COMPLICATIONS REQUIRING UNPLANNED RETURN TO THEATRE

нс	HOSPITAL-ACQUIRED COMPLICATION	
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	na⁵
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*:

- Post-operative haemorrhage/haematoma requiring transfusion and/or return to theatre
- Surgical wound dehiscence
- Anastomotic leak
- Vascular graft failure
- Other surgical complications requiring unplanned return to theatre.



Many operating theatre visits involve patients who return to theatre unexpectedly following an earlier operation. When patients experience a haemorrhage they may have pain, bruising discomfort, loss of blood pressure, dizziness and collapse. Wound dehiscence (the reopening of wounds) can be highly traumatic to patients and carers. Needing to return unexpectedly to the operating theatre is distressing to patients and carers, and furthermore subjects the patient to repeated anaesthesia risks.

Why focus on surgical complications?





All facilities should be working to reduce their rates of unexpected returns to the operating theatre.

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

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 6

RESPIRATORY COMPLICATIONS

нс	SPITAL-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	na⁵
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
	10,000 1 11 11 11 11 11	10 A A

a per 10,000 hospitalisations except where indicated

b na = national data not available

This hospital-acquired complication (HAC) includes the diagnoses of respiratory failure and acute respiratory distress syndromes requiring ventilation and aspiration pneumonia.*



Patients with respiratory failure and acute respiratory distress syndromes experience profoundly distressing symptoms including increasing shortness of breath to the point of air hunger and overwhelming anxiety. Patients with aspiration pneumonia may also experience worsening shortness of breath, cough, purulent phlegm, fevers, sweats, fatigue and drowsiness.

Why focus on respiratory complications?



All facilities should be working to reduce their rates of respiratory complications.

- * 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: <u>www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/</u>
- # 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 respiratory failure including acute respiratory distress syndromes requiring ventilation

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as: chronic obstructive pulmonary disease, impaired mobility and inability to elevate head, recent surgery, abdominal and chest wounds, obesity, nutritional status and hydration, impaired swallow and/or cough reflex, recent chest infection with ongoing production of secretions, respiratory centre depressants, such as opioids, benzodiazepines and post anaesthetic, respiratory muscle weakness due to neuromuscular conditions and/or severely compromised states of health
- Undertake routine observations of respiratory function where appropriate, including respiratory rate and monitoring of oxygen saturation for patients at-risk of respiratory failure and document these observations in the clinical record.

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 respiratory failure 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 respiratory failure prevention strategies where clinically indicated, such as:

- Re-position and/or mobilise routinely
- Elevate bed head to sitting position
- Provide supplementary oxygen as per medical orders
- Active humidification for medical gases and appropriate administration of fluids according to the patients clinical history and situation
- Active and passive chest physiotherapy
- Manage pain effectively
- Monitor physiological status including oxygen saturation and auscultate chest routinely
- Establish baseline measures and diagnostic images for ongoing evaluation of the patient's respiratory status and lung fields
- Obtain sputum samples for microscopy and sensitivities to determine the most effective antibiotic regime when required.

- Monitor the effectiveness of the respiratory failure prevention strategies, and reassess the patient if respiratory failure 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.

Top tips for prevention and management of aspiration pneumonia

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as:
 - Impaired swallow and/or cough reflex
 - Strokes or other neuromuscular conditions
 - Cancers affecting cranial nerves or the recurrent laryngeal nerve
 - Poorly controlled nausea and vomiting
 - Excessive alcohol consumption.

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 aspiration pneumonia:

- 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, including temperature, respiratory rate and chest auscultation and document findings in the clinical record
- · Laboratory results to monitor and determine frequency of monitoring
- If specialist assistance is required.

Deliver prevention plan

Where clinically indicated, deliver aspiration pneumonia prevention strategies, such as:

- Speech pathology review
- Drinking thickened fluids
- Sitting upright when eating
- Safe swallowing strategies.

- Monitor the effectiveness of the aspiration pneumonia prevention strategies, and reassess the patient if aspiration pneumonia 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.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 7

VENOUS THROMBOEMBOLISM

нс	SPITAL-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	na⁵
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
	10,0001 10,10,00	

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?



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/

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

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.
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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 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.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 8

RENAL FAILURE

нс	SPITAL-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	na⁵
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
	10,0001 10,10,10,10,10,10,10,10,10,10,10,10,10,1	

a per 10,000 hospitalisations except where indicated

b na = national data not available

This hospital-acquired complication (HAC) relates to renal failure (or acute kidney injury). It includes hospital-acquired acute renal failure requiring haemodialysis or continuous haemofiltration.*



Hospital-associated acute kidney injury (also known as acute renal failure) is common as it may be caused by impaired renal perfusion due to hypotension or dehydration, medicines, recent surgery, radiographic contrast media, or sepsis. Renal failure may cause distressing symptoms including fluid retention and swelling, dyspnoea, drowsiness, fatigue, cognitive clouding and confusion, persistent nausea, and seizures. The condition also has an extremely high mortality rate of 50%. Early recognition and intervention are important elements of effective treatment.

Why focus on renal failure?



B

All facilities should be working to reduce their rates of renal failure.

- * 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: <u>www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/</u>
- # 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.
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Top tips for prevention and management of renal failure

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as: major surgery and trauma, multi-organ failure, increased age, diabetes mellitus, cardiovascular disease and malignancy, chronic kidney disease, sepsis, hypovolemia, hypotension, nephrotoxic medications and/or muscle ischaemia
- Assess patients for renal failure risks, particularly when their hospital episode is associated with:
 - The use of iodinated contrast agents
 - Chronic kidney disease (adults with an estimated glomerular filtration rate less than 60 ml/min/1.73 m2)
 - Oliguria (urine output less than 0.5 ml/kg/hour)
 - Symptoms or signs of nephritis (such as oedema or haematuria)
 - Symptoms or history of urological obstruction, or conditions that may lead to obstruction
 - Neurological or cognitive impairment or disability, which may mean limited access to fluids because of reliance on a carer
 - Deteriorating early warning scores/physiological parameters.

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 renal failure 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

Where clinically indicated, deliver renal failure prevention and management strategies, such as:

- Systems to recognise and respond to oliguria and/or deterioration in defined early warning criteria
- Routine consultation with nephrology specialists prior to administering iodinated contrast agents, and consideration of the requirement, and patient suitability, for volume expansion and pharmacological protection
- Fluid resuscitation and management as indicated
- Consideration of pharmacological intervention as appropriate
- Haemodialysis and/or continuous renal replacement therapy if the patient is not responding to medical management, as indicated by hyperkalaemia, metabolic acidosis symptoms and/or complications of uraemia (for example, pericarditis or encephalopathy) and/or fluid overload pulmonary oedema.

- Monitor the effectiveness of renal failure prevention and management strategies, and reassess the patient if renal failure 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.

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Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 9

GASTROINTESTINAL BLEEDING

нс	HOSPITAL-ACQUIRED COMPLICATION	
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:

- Haematemesis
- Malaena
- Gastrointestinal haemorrhage
- Gastric ulcer with haemorrhage

- Duodenal ulcer with haemorrhage
- Peptic ulcer with haemorrhage
- Gastrojejunal ulcer with haemorrhage
- Acute haemorrhagic gastritis.*



Patients with gastrointestinal bleeds may experience distressing vomiting or diarrhoea with haematemesis and malaena, as well as tiredness, shortness of breath, faintness, dizziness and collapse.

Why focus on gastrointestinal bleeding?



- * 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: <u>www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/</u>
- # 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.
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AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 10

MEDICATION COMPLICATIONS

нс	HOSPITAL-ACQUIRED COMPLICATION	
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	nab
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

Many hospital-acquired complications (HACs) can arise as a consequence of medication use in hospital. This hospital-acquired complication focuses on the following three main diagnostic groups:

- Medication-related respiratory complications/respiratory depression
- Haemorrhagic disorder due to circulating anticoagulants
- Hypoglycaemia.*



Respiratory depression and complications from inappropriate dosing and management of sedatives or narcotic medications are a serious health concern. Drowsiness, confusion, myoclonic jerking, and hallucinations may precede the onset of respiratory depression, and hypoxic brain injury and death may result from inappropriate dosing of these medications.

Haemorrhagic disorder due to inappropriate dosing of anticoagulants can lead to excessive bruising or catastrophic bleeding in the form of localised haemorrhage, haematemesis, haemoptysis, malaena, and epistaxis, and may lead to circulatory collapse, shock, and even death.

The high prevalence of diabetes in our communities and hospitals, changes to oral intake during hospitalisation and the narrow therapeutic index of some hypoglycaemic agents predispose patients to hypoglycaemia. Hypoglycaemia causes symptoms such as anxiety, dizziness, nausea or vomiting, seizures and coma.

Why focus on medication complications?

Around 13,500 hospital-acquired episodes of medication complications occur each year in Australian hospitals [#]	Hospital-acquired medication complications increase the length of stay and the cost of admission [§]
Highest rate of this HAC at Principal Referral Hospitals [†]	
Aggregate rate of this HAC at Principal Referral Hospitals	of this HAC to less than 35 per 10,000 hospitalisations, it would prevent at least 2,067 medication complications



All facilities should be working to reduce their rates of medication complications.

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- # 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.
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Top tips for prevention and management of medication-related respiratory depression

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

Conduct risk assessment

Conduct a comprehensive risk assessment

Identify key risk factors such as:

- Impaired renal or hepatic function
- Age over 55 years
- History of COPD with CO2 retention
- Polypharmacy with agents that compromise renal or hepatic function
- Severely compromised status of health
- Smoker (>20 pack years)
- History of daytime somnolence or snoring
- Prolonged surgery (>2 hours)
- Thoracic or other large incision interfering with adequate ventilation.

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 medication-related respiratory depression that identifies:

- Goals of treatment consistent with the patient's values
- Any specific nursing requirements
- Any allied health interventions required
- 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

- Clinicians, patients and carers work in partnership to deliver analgesia and sedation where clinically indicated
- If medication-related respiratory depression occurs, manage patients who have opioid or sedative toxicity according to best-practice guidelines.

- Monitor the effectiveness of strategies to prevent opioid and sedative toxicity
- Review and update the pain management plan if it is not effective or is causing adverse effects
- Engage in reviewing clinical outcomes, identifying gaps and opportunities for improvement.

Top tips for prevention and management of haemorrhagic disorder due to circulating anticoagulants

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

Conduct risk assessment

Conduct a comprehensive risk assessment

- Identify risk factors such as:
 - Impaired renal or hepatic function
 - Coagulopathies or bleeding history (patient or family)
 - Recent bleeding (within 48 hours) or active bleeding
 - Comorbidities including history of hypertension or stroke
 - Active peptic ulcer or ulcerative gastrointestinal disease
 - Polypharmacy with interactions and incompatibilities
 - Concurrent use of other medicines known to increase the risk of bleeding (such as aspirin, non-steroidal antiinflammatory drugs, clopidogrel, dipyridamole, enoxaparin, warfarin, dabigatran, rivaroxaban, apixaban) or to alter the metabolism of anticoagulants
 - History of heparin-induced thrombocytopaenia
 - Surgical procedure with high bleeding risk, such as intracranial surgery, head and neck surgery.

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 haemorrhagic disorder due to circulating anticoagulants that identifies:

- Goals of treatment consistent with the patient's values
- Any specific nursing requirements
- Any allied health interventions required
- 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

- Clinicians, patients and carers work in partnership to deliver anticoagulation and VTE prophylaxis where clinically indicated
- · Patients who experience a bleed are managed according to best-practice guidelines.

- Monitor the effectiveness of strategies to prevent excessive anticoagulation
- Review and update the anticoagulation plan if it is not effective or is causing adverse effects
- Engage in reviewing clinical outcomes, identifying gaps and opportunities for improvement
- Ensure appropriate follow-up has been attended.

Top tips for prevention and management of hypoglycaemia

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

Conduct risk assessment

Conduct a comprehensive risk assessment.

Identify key risk factors such as:

- Illness that impacts on glycaemic activity and metabolism
- Comorbidities or treatment plans that impact on oral intake
 - pre-procedure / investigation fasting
 - emetigenic medications
 - emetigenic treatments (such as radiation)
- Polypharmacy with interactions and incompatibilities.

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 hypoglycaemia that identifies:

- Goals of treatment consistent with the patient's values
- Any specific nursing requirements
- Any allied health interventions required
- 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

- Clinicians, patients and carers work in partnership to deliver a comprehensive care plan to deliver optimal blood glucose management
- Manage patients who experience hypoglycaemia according to best-practice guidelines.

- Monitor the effectiveness of strategies to maintain optimal blood glucose control
- Review and update the diabetes management plan if it is not effective or is causing adverse effects
- Engage in reviewing clinical outcomes, identifying gaps and opportunities for improvement
- Ensure the patient is referred for appropriate support services.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 11

DELIRIUM

нс	SPITAL-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

Delirium refers to a hospital-acquired confusional state that may be fluctuating or acute.*



Symptoms of delirium are distressing for patients and their carers. They include confusion, hallucinations, anxiety, fear or paranoia, irritability or frustration, rapid and unpredictable mood changes, sleeplessness and restlessness and agitation, or sleepiness, sluggishness and apathy. Symptoms fluctuate in the course of the day and may worsen in the evening or into the night.

Why focus on delirium?



* 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: <u>www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/</u>

delirium during hospitalisation.

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Top tips for prevention and management of delirium

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

Conduct risk assessment

- Conduct a comprehensive risk assessment.
- Identify key risk factors such as:
 - Pre-existing cognitive impairment and/or dementia
 - Aged \geq 65 years (\geq 45 years for Aboriginal and Torres Strait Islander peoples)
 - Severe medical illness
 - Hip fracture.

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 delirium 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

Where clinically indicated, deliver delirium prevention strategies, such as:

- Regular monitoring for changes in behaviour, cognition and physical condition
- Medication review, including review of antipsychotics, as there is evidence that using antipsychotics can worsen delirium
- Activities for stimulating cognition
- Non-drug measures to help promote sleep
- Assistance for patients who usually wear hearing and visual aids
- Correction of dehydration, malnutrition and constipation
- · Mobility activities
- Oxygen therapy where appropriate
- Pain assessment and management
- Regular reorientation and reassurance.

- Monitor the effectiveness of the delirium prevention strategies, and reassess the patient if delirium 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
- Follow up patients regarding resolution of delirium, the emergence of ongoing cognitive impairment and other comorbidities.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 12

PERSISTENT INCONTINENCE

HC	SPITAL-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	na⁵
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
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b na = national data not available

Persistent incontinence is defined as urinary incontinence that arises during a hospital admission, and which is present on discharge or which persists for seven days or more.*



Persistent urinary incontinence has a significant impact both on those who suffer from it, as well as on people caring for those with the condition. Patients' experiences range from inconvenience to social and psychological stigmatisation, and include physical symptoms such as skin irritation and painful excoriation.

Why focus on persistent incontinence?



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Top tips for the prevention and management of persistent incontinence

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as:
 - Medicines, such as antidepressants, oestrogens, diuretics and sleep medicines
 - Underlying systemic conditions such as diabetes, obesity, cardiovascular, multiple sclerosis
 - Infections, such as urinary tract infection
 - Postoperative complications following prostate surgery or hysterectomy
 - Constipation
 - Poor mobility due to surgery, such as fractured neck of femur
 - Childbirth
 - Menopause
- Review other factors such as delirium, polyuria including that from heart failure or hyperglycaemia, faecal impaction, urinary retention, bladder issues and/or toilet access or signage.

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 incontinence 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

Where clinically indicated, deliver incontinence prevention strategies, such as:

- · Identify and treat reversible causes of incontinence
- Consider carefully the need to insert an indwelling catheter, and aim for earliest safe removal.

- Monitor the effectiveness of incontinence prevention strategies, and reassess the patient if persistent incontinence 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.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 13

MALNUTRITION

нс	SPITAL-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) relates to malnutrition, which is a deficiency of nutrients such as energy, protein, vitamins and minerals, and causes adverse effects on body composition, function or clinical outcome.^{*}



Malnutrition can develop through a deficiency in dietary intake, from complications associated with illnesses causing poor absorption, such as Crohn's disease and ulcerative colitis; nutrient losses; or as a consequence of increased nutritional requirements of a disease state. The risk of malnutrition becomes more acute for patients as they age, and is associated with a range of adverse outcomes including depression of the immune system, impaired wound healing, muscle wasting, longer length of hospital stay, and higher treatment costs and increased mortality.

Why focus on malnutrition?





All facilities should be working to reduce their rates of episodes of malnutrition during hospitalisation.

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- # 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.
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Top tips for prevention and management of malnutrition

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

Conduct risk assessment

- Conduct a comprehensive risk assessment
- Identify risk factors such as: increased age, frailty and impaired mobility, polypharmacy, oral dysphagia, impaired swallowing, constipation, malabsorption conditions and syndromes, Parkinson's disease, chronic disease, cognitive decline and delirium, dementia, eating dependencies and/or institutionalisation
- Identify patients who are nutritionally at risk, including those who have been admitted to hospital with poor appetites or inadequate food intakes, preceding unexplained or unintentional weight loss, physical difficulty eating and/or drinking, and/or communication difficulties
- Identify patients with high nutritional needs, including those with increased nutritional requirements, those with poor absorptive capacity, some who are malnourished and lactating women.

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 malnutrition that identifies:

- Goals of treatment consistent with the patient's values
- Any specific nursing requirements
- Any allied health interventions required
- 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

Where clinically indicated, deliver malnutrition prevention strategies, such as:

- Social measures to ensure provision of meals
- Help with feeding
- Food and fluid intake records
- Modified menus
- Dietetic advice and oral nutrition supplements and/or artificial nutrition support
- Patient and family input where feasible.

- Monitor the effectiveness of any malnutrition prevent strategies, and reassess the patient if malnutrition 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.

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 14

CARDIAC COMPLICATIONS

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
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a per 10,000 hospitalisations except where indicated

b na = national data not available

Hospital-acquired cardiac complications include the diagnoses of:

- Heart failure and pulmonary oedema
- Arrhythmias
- Cardiac arrest
- Acute coronary syndrome including unstable angina and myocardial infarction both STEMI (ST-segment elevation myocardial infarction) and Non-STEMI/NSTEMI (Non-ST segment elevation myocardial infarction).*



Cardiac complications range from unstable angina, through to acute myocardial infarction, arrhythmias, pulmonary oedema and even cardiac arrest. Patients may experience symptoms including shortness of breath, peripheral oedema, paroxysmal nocturnal dyspnoea, palpitations, dizziness, collapse or sudden death.

Why focus on cardiac complications?





All facilities should be working to reduce their rates of cardiac complications.

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Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 15

THIRD AND FOURTH DEGREE PERINEAL LACERATION DURING DELIVERY

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
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a per 10,000 hospitalisations except where indicated

b na = national data not available

This hospital-acquired complication (HAC) includes the diagnoses of third and fourth degree perineal lacerations with and without instrumentation.*



Third and fourth degree perineal lacerations cause persistent and distressing physical and psychological symptoms, including perineal pain, sexual and urinary problems, faecal urgency and incontinence of both flatus and stool. If these injuries are not recognised and repaired promptly, they can have serious long-term consequences for women's lives.

Why focus on third and fourth degree perineal lacerations?



All facilities should be working to reduce their rates of third and fourth degree perineal lacerations.

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- # 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.
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AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for improvement for clinicians

Hospital-Acquired Complication 16

NEONATAL BIRTH TRAUMA

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	na⁵
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
	10.0001	

a per 10,000 hospitalisations except where indicated

b na = national data not available

The birth trauma hospital-acquired complication (HAC) includes a number of diagnosis codes which fit into the following categories:*

- Subdural and cerebral haemorrhage
- Epicranial subaponeurotic haemorrhage
- Other injuries to skeleton
- Injury to spine and spinal cord

- Facial nerve injury
- Other cranial and peripheral nerve injuries
- Other specified birth trauma.

The following are **not included** in this definition: preterm infants younger than 37 completed weeks and with a birth weight less than 2,499g; osteogenesis imperfecta; and brachial plexus injury.



The consequences of neonatal birth trauma may be significant and have life-long consequences. Prevention of neonatal birth trauma therefore presents an important challenge.

Why focus on neonatal birth trauma?



Around 1,100 hospitalacquired neonatal birth trauma injuries occur each year in Australian hospitals#



V

If all hospitals reduced their rate of this HAC to less than 54 per 10,000 births, it would prevent at least **134 episodes** of neonatal birth trauma



The health of the mother and baby are central to the clinical decision making during childbirth. Whilst all attempts should be made to avoid neonatal trauma, it must be recognised that sometimes, in order to preserve life, episodes of neonatal trauma may occur.

However, rates of neonatal trauma vary significantly across the country and services should monitor their performance. Where neonatal trauma rates are elevated, services should work to reduce them.

- * 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: <u>www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/</u>
- # 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.
- † 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.

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