

AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

Selected best practices and suggestions for
improvement for clinicians

Hospital-Acquired Complication **6**

RESPIRATORY 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
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 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?



Around **10,600 hospital-acquired episodes of respiratory complications** occur each year in Australian hospitals[#]



Hospital-acquired respiratory complications increase the **length of stay and the cost of admission**[§]

65.4
↓
30

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 30 per 10,000 hospitalisations, it would prevent at least **1,555 episodes of 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: www.safetyandquality.gov.au/our-work/indicators/hospital-acquired-complications/

[#] The data used in this sheet are for hospital-acquired complications recorded 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

- 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

- 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.



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