AUSTRALIAN COMMISSION ON SAFETY AND QUALITY IN HEALTH CARE

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Patient Placement Guide – Infection Prevention and Control

Introduction

There are estimated to be around 165,000 healthcare-associated infections (HAIs) occurring in Australian acute healthcare facilities each year[1], making HAIs the most common complication affecting patients in hospital. HAIs are considered a potentially preventable adverse event. All patients are potentially at risk of acquiring and transmitting infectious conditions to other patients and healthcare workers when receiving care. Action 3.6c of the Preventing and Controlling Healthcare-Associated Infection Standard requires consideration of patient accommodation needs to manage infection risks. Therefore, all patients should be assessed on admission, to ensure that placement and management of those with confirmed or suspected infectious conditions is both appropriate and timely.

This Guide is intended to support the decision-making of nurses, doctors, bed managers, patient flow managers and after-hours managers in the most appropriate bed allocation, particularly when local infection prevention and control (IPC) advice is not available. This guidance may also be useful in areas such as emergency departments and outpatient services. This guidance is particularly important in the context of a pandemic or local outbreak.

Patient placement is a two-step process that is informed by a risk assessment (Step 1) followed by prioritisation of the seriousness of the infection and any competing patient needs (Step 2). Collaboration with the local IPC service should be sought as soon as possible.

Step 1: Risk Assessment

The placement of patients in any clinical area should be considered, and risk assessed according to a number of factors, including, but not limited to:

- Whether the patient is suspected or known to be colonised or infected with a highly transmissible or epidemiologically significant pathogen (such as a multidrug-resistant organism)
- Whether the patient has signs and symptoms that raise suspicion of the presence of an infectious condition
- How the known or suspected infectious organism is transmitted, and
- The period of time transmission-based precautions should be used.

Guidance on factors to be considered when conducting a risk assessment to inform patient placement is provided in *Table 1*.

Step 2: Prioritisation

The prioritisation of single room isolation, or other arrangements when a single room is not available, is not just dependent on the mode of transmission and infectivity of the pathogen, but also on the seriousness of the infection to other individuals. Recommendations on the prioritisation of specific infectious conditions are provided in *Table 2***.** Single rooms are preferred for all patients requiring isolation due to infectious conditions, and are always indicated for patients requiring airborne precautions (ideally with negative pressure ventilation). Designated bathroom facilities should be available, the door must be kept closed and appropriate signage displayed outside the room. Consideration of competing needs must also be taken into account, such as patients requiring end-of-life care; those who are immunosuppressed; patients with a higher need for privacy and dignity; or those requiring reduction of harm afforded by a single room.

When a single room is not available, or there are insufficient isolation facilities for the number of suspected or confirmed infectious patients, consultation with the local IPC service is recommended to assess the various risks associated with other patient placement options (e.g. cohorting).

For more information on isolation and transmission-based precautions please refer to Chapter 3 - Standard and transmission-based precautions of the Australian Guidelines for the Prevention and Control of Infections in Healthcare (2019).

Table 1: Risk Assessment

RISK FACTORS	Source and modes of transmission	Clinical predictors of transmission	Clinical impact of transmission	Room availability
Questions for Consideration	• Is human to human transmission known? • Is/are the mode/s of transmission known? • Has the person recently returned from overseas travel? • What is the infectivity of the organism?	• Does the patient have factors that would increase the risk of transmission?	• How susceptible are other patients in the area? • What is the morbidity and mortality associated with the organism/condition disease? • Will the safety of the individual who is to be isolated be affected?	• What is the availability of negative pressure isolation rooms? • What competing priorities exist for single room provision? • Are single rooms with designated toilet facilities available? • Are there other patients with the same organism, species and/or strain that could be cohorted?
Examples	• Suspected or confirmed acute respiratory infection • Public health notification	• Wandering • Cognitive impairment • Incontinence • Broken skin • Open/draining wounds • Invasive devices • Poor hygiene practices • Clinical symptoms such as: – Diarrhoea – Vomiting – Coughing – Sneezing	• Organism not easily transmitted but associated with high mortality rate • Immunosuppressed patients • Neonates and young children • Elderly patients • Patients with burns • Renal patients • Pregnant women	• Patients requiring high security or one-on-one observation • Patient requiring end-of-life care • Privacy and dignity issues • Existing cohorts

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Table 2: Priority Guide

Transmission-based precautions should be applied in addition to standard precautions, in accordance with the Australian Guidelines for the Prevention and Control of Infections in Healthcare (2019), and jurisdictional guidance. Depending on the infectious organism and its mode of transmission, one or more types of transmission-based precautions may be required.

This table includes common infectious conditions and is not exhaustive. For a more extensive list of infectious conditions refer to *Appendix 6.4 - Type and duration of precautions for specific infections and conditions* of the Australian Guidelines for the Prevention and Control of Infections in Healthcare (2019).

Infectious conditions are listed in each priority group in alphabetical order and not in any ranking of importance. In the case of more than one condition from any priority group presenting at any one time, local policy and risk assessment should inform the bed placement decision.

Priority Group	Disease/Clinical symptoms	Infectious Period	Precautions required[#]
FIRST	Chickenpox (Varicella)	Until all lesions are dry and crusted over	S + C + A
	Disseminated herpes zoster (shingles)	Duration of illness[*]	S + C + A
	Measles	Until 4 days after rash appears: Duration of illness[*] in immune compromised patients	S + A
	Pulmonary tuberculosis (active)	Usually until 1 week of treatment and 3 sputum smears negative; consult with respiratory physician	S + A
	Respiratory viruses of concern (e.g. SARS, MERS CoV, pandemic influenza)	Duration of illness[*]	S + C + D + A
	SARS-CoV-2	Refer to: Coronavirus Disease 2019 (COVID-19) CDNA National Guidelines for Public Health Units	S + C + D (+A when performing aerosol generating procedures)
	Viral haemorrhagic fever	Duration of illness[*]	S + C + D
SECOND	*Clostridioides difficile* infection (suspected/confirmed)	Duration of illness*	S + C
	Carbapenemase-producing Enterobacterales (CPE)	Duration of illness[*] or colonisation	S + C
	Infectious gastroenteritis (suspected/confirmed)	Until and depending on confirmed diagnosis	S + C (+ D if determined by risk assessment)
	Influenza	72 hrs post anti-influenza medication, or 5 days since onset of respiratory symptoms. Longer for young children, immunosuppressed or ICU patients	S + C + D
	Meningococcal disease	Until 24 hours after initiation of effective therapy	S + D
	Mumps (Parotitis)	Until 5 days after onset of swelling	S + D
	Parvovirus B19	Duration of illness[*]	S + D

Priority Group	Disease/Clinical symptoms	Infectious Period	Precautions required[#]
	Pertussis (Whooping Cough)	Until 5 days after initiation of treatment, or 21 days after symptom onset if not receiving antibiotic treatment, or 14 days after onset of paroxysmal cough	S + D
	Respiratory Syncytial Virus (RSV)	Duration of illness[*]	S + C + D
	Undiagnosed rash/fever	Until and depending on confirmed diagnosis	S + C (+ D if determined by risk assessment)
THIRD	Head Lice (Pediculosis)	Until 24 hours after initiation of effective therapy	S + C
	Impetigo (school sores)	Until 24 hours after initiation of effective therapy	S + C
	Localised herpes zoster (shingles)	Duration of illness* and until all lesions are dry and crusted over	S + C
	Multidrug-resistant organisms not already listed (e.g. MRSA, VRE, ESBLs)	Duration of illness* or colonisation	S + C
	Scabies	Until 24 hours after initiation of effective treatment	S + C

***Duration of illness may differ among individuals; medical advice should be sought**

 # In accordance with the local and jurisdictional guidance, and the Australian Guidelines for the Prevention and Control of Infections in Healthcare (2019).

Key: S = standard, C = contact, D = droplet, A = airborne

Source

This resource was adapted from the Clinical Excellence Commission (2016), Infection Prevention and Control Considerations for Patient Placement.

References

1. National Health and Medical Research Council, Australian Commission on Safety and Quality in Health Care. Australian Guidelines for the Prevention and Control of Infection in Healthcare. Canberra: NHMRC; 2019; Available from: https://www.nhmrc.gov.au/about-us/publications/australian-guidelines-prevention-and-control-infection-healthcare-2019.