

Mater Health Services (MHS) Infection Prevention and Control

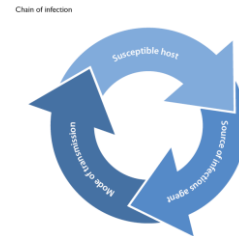
Background

Healthcare-associated infection (HAI) represents a major burden to the healthcare system in terms of financial cost and detrimental patient outcome.^{1,2} There are around 200,000 HAI in Australian acute healthcare facilities each year.² This makes HAI the most common complication affecting patients in hospital. HAI is a potentially preventable adverse event rather than an unpredictable complication. Effective infection prevention and control can significantly reduce the rate of HAI.

Key Information

- Infection requires three main elements
 - a source of the infectious agent,
 - a mode of transmission, and
 - a susceptible host.

Interruption of this cycle is a strategy to limit the spread of infection.



- When approaching a clinical task it is useful to consider the risks of HAI transmission in terms of what potential agents are involved, how are they transmitted and who is at risk of infection.
- In healthcare settings infectious agents can be transmitted by contact, droplet or airborne routes. In some cases, an organism may be transmitted by more than one route e.g. influenza (droplet and contact). For more information, refer to Table 14 in the MHS Infection Control Manual.
- Standard precautions are work practices that are applied to all patients regardless of their perceived or confirmed infectious status. Standard precautions include hand hygiene, use of personal protective equipment (PPE), safe use and disposal of sharps, principles of asepsis and environmental hygiene.
- Transmission-based precautions are additional work practices for infectious agents where standard precautions are not sufficient to interrupt transmission. Within MHS, colour-coded signs (which correspond with the routes of transmission) are used to indicate which patients are under precautions.
- Hands can become contaminated with infectious agents through contact with a patient, patient surroundings and the environment. At MHS, hand hygiene must be performed in line with the Five Moments for Hand Hygiene (refer Table 10 of the MHS Infection Control Manual). Compliance with the Five Moments is continuously monitored by validated auditors using direct observation. Hand hygiene can be performed using either plain or antiseptic soap and water or alcohol hand gel or rub.
- PPE refers to a variety of barriers (aprons, gowns, masks, protective eyewear), used to protect mucous membranes, airways, skin and clothing from contact with infectious agents. PPE must be worn in line with standard and transmission-based precautions (refer Sections 2.2.2 and 2.4 of the MHS Infection Control Manual).
- Aseptic non-touch technique (ANTT) aims to prevent pathogenic microorganisms, in sufficient quantity to cause infection, from being introduced to susceptible sites by hands, surfaces and equipment. Core components of ANTT include Key-Part and Key-Site protection, hand hygiene, glove use and the use of aseptic fields (refer Section 2.2.9 of the MHS Infection Control Manual).
- Reusable medical devices and clinical/patient-care equipment must be reprocessed (cleaned, disinfected or sterilised) after use to prevent patient, clinician and environmental contact with potentially infectious material. This includes personal items such as stethoscopes and PDAs/phones.
- An important strategy to ensure antimicrobial stewardship and rationalisation of antimicrobial therapy is to regularly review the patient's antimicrobial treatment and microbiology results.
- Infection Control should be notified if there are two or more linked cases of infection with the same organism in a ward.

Further information

Mater Health Services (MHS) Infection Control Manual -
<http://intranet.mater.org.au/cms/item.asp?pid=18430>

Hand Hygiene Australia Online Learning Package for Medical Staff - access via Mandatory Education website (MoVES), CEI-HH: Hand Hygiene

Mater Aseptic Non Touch Technique (MANTT) eLearning Package - access via MoVES, CE-MANTT

Antimicrobial Stewardship Program - <http://materteam/css/csqu/pharm/asprog/default.aspx>

For other policies related to infection control e.g. intravascular device management, refer to DocuCube on the Mater Intranet Homepage

References

1. Brady, R.R.W., McDermott, C., Gibb, A.P. & Paterson-Brown, S. (2008). Fact or infection: do surgical trainees know enough about infection control? *Ann R Coll Surg Engl*, 90: 647-650.
2. Cruickshank, M. & Ferguson, J., editors. *Reducing Harm to Patients from Health Care Associated Infection: The Role of Surveillance*: Australian Commission on Safety and Quality in Health Care, 2008.