HLTIN301C
Comply with infection control policies and procedures

Learner resource
Version 2

Training and Education Support
Industry Skills Unit
Meadowbank

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Section 1  Microbiology/transmission of infection

Health care workers can protect themselves and others from becoming infected by understanding the chain of infection, modes of transmission and methods of prevention. It is also important to understand the differences between bacteria and viruses, as well as pathogenic and non-pathogenic microorganisms and their role in causing disease. Client education should include this information so that preventative measures can be practised when the client goes home.

Modes of transmission

Bacteria and viruses can be transmitted in the various ways listed below.

1.  Contact
   Direct contact involves close proximity of people i.e. direct touch, by clothing or through droplets from the mouth and nose.

   Indirect contact involves contact with personal articles of an infected individual such as tissues or dentures. It also includes contact with pathogens on articles such as chairs.

2.  Vehicles
   This route of transmission is through food, water, medications, or blood.

3.  Airborne
   Includes droplets from the respiratory tracts of infected persons, contaminated dust and microorganisms shed into the air from hair, skin, etc.

4.  Vectors
   Includes contaminated flies, mosquitoes, fleas, ticks, etc.

5.  Autogenous
   Infection from the client’s usual microbial flora.
Common sources of infection in the hospital

The table below lists the micro-organism, describes the common sources of infection and outlines the modes of transmission of infectious diseases.

<table>
<thead>
<tr>
<th>Micro organism</th>
<th>Source</th>
<th>Mode of transmission</th>
<th>Infection or disease</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Bacteria</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Staphylococcus aureus</td>
<td>Nares, skin, hair</td>
<td>Contact, vehicles, airborne</td>
<td>Infected wounds, pneumonia, abscesses, cellulitis, food poisoning</td>
</tr>
<tr>
<td>Streptococcus, beta-</td>
<td>Colon, vagina of adult females</td>
<td>Contact, vehicles, autogenous</td>
<td>Urinary tract and wound Infections</td>
</tr>
<tr>
<td>haemolytic Group D</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Streptococcus viridans</td>
<td>Naso-oro-pharynx</td>
<td>Autogenous</td>
<td>Bacterial endocarditis</td>
</tr>
<tr>
<td>Toxigenic Excherichia</td>
<td>Colon, perineum</td>
<td>Contact, vehicles, airborne</td>
<td>Enteritis</td>
</tr>
<tr>
<td>coli</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bacteroides species</td>
<td>Colon, mouth, vagina</td>
<td>Contact, autogenous</td>
<td>Peritonitis, abscesses</td>
</tr>
<tr>
<td>Serratia species</td>
<td>Colon, perineum</td>
<td>Direct, airborne</td>
<td>Pneumonia, bacteraemia, urinary tract and wound infections</td>
</tr>
<tr>
<td><strong>Fungi and Yeasts</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candida albicans</td>
<td>Mouth, colon, genital tract, skin</td>
<td>Contact, vehicles, autogenous</td>
<td>Moniliasis, dermatitis oral thrush, vaginitis, skin infections</td>
</tr>
<tr>
<td><strong>Viruses</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Herpes viruses</td>
<td>Lesions of the mucous membrane, skin, blood</td>
<td>Contact, vehicles</td>
<td>Sexually transmitted disease, cold sores</td>
</tr>
<tr>
<td>Hepatitis A</td>
<td>Faeces, blood, urine</td>
<td>Contact, vehicles airborne, possibly vectors, autogenous</td>
<td>Infectious hepatitis</td>
</tr>
<tr>
<td>Hepatitis B</td>
<td>Faeces, blood, body excretions, and fluids</td>
<td>Contact, vehicles</td>
<td>Serum hepatitis</td>
</tr>
</tbody>
</table>
Activity 1

Access the Government of South Australia Health Department website and search for ‘you’ve-got-what’ and click on ‘The ways infectious diseases spread’. Make some notes for yourself of key points.

Activity 2

Refer to a relevant text for information on ‘Chain of Infection’.

Summarise your readings on the ‘Chain of Infection’ using the headings in the table below.

<table>
<thead>
<tr>
<th>Main Points</th>
<th>Development of an infection occurs in a cycle that depends on the presence of all the following elements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Infectious agent</td>
<td></td>
</tr>
</tbody>
</table>
### Activity 2 (continued)

<table>
<thead>
<tr>
<th>Main Points</th>
<th>Development of an infection occurs in a cycle that depends on the presence of all the following elements:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reservoir</td>
<td></td>
</tr>
<tr>
<td>Portal of exit</td>
<td></td>
</tr>
<tr>
<td>Modes of transmission</td>
<td></td>
</tr>
<tr>
<td>Portal of entry</td>
<td></td>
</tr>
<tr>
<td>Susceptible host</td>
<td></td>
</tr>
</tbody>
</table>
Section 2  Terminology associated with spread of disease

Activity 1

Refer to recommended text by Potter & Perry’s fundamentals of Nursing, Chapter 33, Infection Control, section on ‘The Infectious Process’.

1. Describe the meaning of the following terms:
   Pathogenicity: ____________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   Inflammatory response: ____________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   Exudate: __________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   Immune response: _________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________

2. Describe the stages of infection.
   Incubation period: _________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
   ______________________________________________________________________
Activity 1 (continued)

Prodromal stage: ____________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Illness stage: ________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Convalescence: ______________________________________________________________
__________________________________________________________________________
__________________________________________________________________________

Activity 2

Refer to a relevant text and look up Nosocomial Infections.

1. Define ‘Nosocomial Infections’:
__________________________________________________________________________
__________________________________________________________________________

2. List the actions a nurse can take to minimise the incidence of Nosocomial Infection:
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
__________________________________________________________________________
Section 3  Infection control policies and procedures

The NSW Ministry of Health Policy on Infection Control outlines the broad principles of infection control and is intended as a framework within which Local Health Districts and health care facilities can develop comprehensive operational infection control policies and procedures appropriate for their own organisations. You may even find it helpful to keep your own copy of this policy. This policy can be accessed through the NSW Ministry of Health website.

Activity 1

Obtain two (2) examples of infection control policies from your employer, a health facility or your TAFE College.

1. What aspects of infection control do they cover?

2. Why are these important?