Infection Control Student and Staff Guidelines
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1. **INTRODUCTION**

This Guide is for Faculty of Health students who undertake professional experience placements (PEPs), work with patients in a health services environment; or who may encounter exposure-prone procedures in laboratory settings. It also serves as a resource for staff providing instruction and supervision.

The Guide adheres to University of Tasmania (UTAS) *Work Health and Safety Policy* and associated *Infection Control Procedure* and the Faculty of Health *Infectious Diseases Guidelines and Procedures*. It draws on excerpts from the Commonwealth of Australia’s NHMRC (2010) *Australian Guidelines for the Prevention and Control of Infection in Healthcare* which is a very comprehensive document on health risks and appropriate precautions and highly recommended resource.

Students may also be interested in the Victorian Government Communicable Diseases Section (2005) *The Blue Book: Guidelines for the control of infectious disease* which provides detailed guidelines for specific diseases.

Note- all web links listed in this document have been revised December, 2014
2. DUTY OF CARE

UTAS has a duty of care towards both students and patients to prevent or minimise the risk of transmission of infectious or blood-borne diseases.

As a student, you also have a duty of care to prevent or minimise the risk of transmission of infectious or blood-borne diseases to and between patients.

All students have a responsibility to:

- Know what nosocomial infections are and understand the routes of transmission of infection;
- Comply with best practice infection control techniques, including standard and additional precautions;
- Practice recommended hand hygiene to prevent nosocomial transmission of infection;
- Understand and practice the principles of asepsis in performing procedures and know what to do in the event that aseptic technique is compromised. Students should be aware that the Aseptic Non-Touch Technique (ANTT) to protect patients during invasive clinical procedures is being implemented across Tasmania (see Appendix 2);
- Be immunised against infectious diseases important in the health care setting and screened for tuberculosis according to the Faculty of Health Infectious Diseases Guidelines and Procedures (as outlined in The Australian Immunisation Handbook (10th edition, 2013);
- Know their infectious status with respect to blood borne viruses and if positive be aware of their obligations under the Australian National Guidelines for the Management of Health Care Workers Known to be Infected with Blood-Borne Viruses. (PDF printable version PDF 211 KB)

NOTE: Guiding Principle 4 (page 7), ‘All HCWs, including trainee and student HCWs, involved in EPPs have a professional and ethical responsibility to be voluntarily tested annually for BBVs, and immediately after potential acute exposure associated with a risk of disease acquisition.’

These results will not be requested by the Faculty of Health. This information is confidential and it is the students’ responsibility to follow up with their doctor.

- Know how to report and seek assistance in the event of exposure to blood and/or body fluids (needle stick injuries and splashes to mucous membranes and / or non-intact skin); and
- Understand and practice appropriate waste disposal including the disposal of sharps to minimise the risk of transmission of infectious diseases in health care settings.

Students are expected to access, read and adhere to work, health and safety guidelines, including those for management of exposure to blood/body fluids (needle stick injuries), at each health care agency where they undertake a professional experience placement. In the event of exposure during that placement, students are required to comply with the policies and procedures of the agency in the first instance and also to report the incident to their Program Unit Coordinator.
3. IMMUNISATION

Immunisation requirements for students are detailed in the Faculty of Health Infectious Diseases Guidelines and Procedures.

In addition to course commencement requirements, annual influenza vaccinations are also highly recommended.

Students who have had significant exposure to tuberculosis should also undertake repeat screening ie Mantoux testing through their local TB clinic.

4. STANDARD PRECAUTIONS


It is essential that standard precautions are applied at all times because:

- People may be placed at risk of infection from others who carry infectious agents;
- People may be infectious before signs or symptoms of disease are recognized or detected, or before laboratory tests are confirmed in time to contribute to care;
- People may be at risk from infectious agents present in the surrounding environment including environmental surfaces or from equipment; and
- The risk of transmission increases with specific procedures and practices.

Standard precautions should be used in the handling of:

- blood (including dried blood) and all other body substances, secretions and excretions (excluding sweat), regardless of whether they contain visible blood. (See also Appendix 1)

Standard precautions consist of:

- Hand hygiene, before and after every episode of patient contact;
- The use of personal protective equipment;
- The safe use and disposal of sharps;
- Routine environmental cleaning;
- Reprocessing of reusable medical equipment and instruments;
- Respiratory hygiene and cough etiquette;
- Aseptic non-touch practices and techniques (see Appendix 2 – ANTT);
- Waste management; and
- Appropriate handling of linen.
4.1 HAND HYGIENE

Reference:
NHMRC (2010) *Australian Guidelines for the Prevention and Control of Infection in Healthcare*, p.34

Hand hygiene is the most important and most basic technique to prevent the spread of infection.

- The new standard of care is ‘bare below the elbows’. All Care Staff/Healthcare Workers are to be ‘bare below the elbows’ when providing clinical care/performing hand hygiene to meet their infection control and hand hygiene obligations. This means:
  - Bracelets, wrist watches and rings with stones or ridges must not be worn when providing clinical care. A single flat ring/band may be worn but must not interfere with effective hand hygiene practice.
  - Long ties, lanyards and long sleeved shirts must not interfere with effective hand hygiene practice. Retractable (or similar) ID card holders are recommended in place of lanyards and should be cleaned regularly.
  - Nails should be kept short and clean and nail polish should not be worn. Artificial nails (gel or acrylic) must not be worn by any Care Staff/Health Care Workers with direct patient contact.

Any breached skin (cuts, dermatitis or abrasion) must be covered with a waterproof film dressing. Staff with dermatitis should report for evaluation as per local protocols.

‘Hand hygiene’ has come to replace terms such as ‘handrub’ and ‘handwash’. Hand hygiene, using alcohol-based gel, is more effective against the majority of common infectious agents than hand hygiene with plain or antiseptic soap and water. Plain soaps aid in the mechanical removal of microorganisms and have no antimicrobial activity; they are sufficient for general social contact and for cleansing of visibly soiled hands. Soaps are also used for mechanical removal of certain organisms such as *C. difficile* and norovirus.

You will become aware of the **5 Moments for Hand Hygiene** approach. This approach defines the key times when healthcare workers need to perform hand hygiene:

1. before touching a patient;
2. before clean/aseptic procedures;
3. after body fluid exposure/risk;
4. after touching a patient; and
5. after touching a patient’s surroundings.

*Alcohol gels are available in all hospital wards and should be used for each of The 5 Moments for Hand Hygiene:*

- Apply alcohol gel to all surfaces of the bands for a minimum of 15 seconds.
- Ensure that all skin surfaces are accessible.
- Ensure that your nails are clean, short and unvarnished.
Hands carry the following two different types of flora:

- **Resident Flora** - These organisms live and multiply on the skin (mainly on superficial layers, but 10-20% inhabit deep layers) and can be repeatedly cultured, even after routine hand hygiene.

- **Transient Flora** - These organisms are present in the hospital microenvironment and contaminate the hands of all staff during normal work activities. They can be readily passed on to another person during contact and will survive on the hands for up to 24 hours if not removed by hand hygiene.

You can access the following highly recommended Hand Hygiene Australia resources:

- Hand Hygiene Australia Manual
- Online Learning Packages on hand hygiene - It is strongly recommended that you complete the learning package and include the Certificate of Completion in your portfolio.

If any hand issues occur with handwashing there are several resources available to assist;


### 4.2 Personal Protective Equipment (PPE)


Personal Protective Equipment (PPE) provides a barrier between the source and the operator. Its use does not negate the need for safe work practices or hand hygiene.

Selection of personal protective equipment must be based on assessment of the risk of transmission of infectious agents to the patient or carer, and the risk of contamination of the clothing or skin of healthcare workers or other staff by patients’ blood, body substances, secretions or excretions. Factors to be considered are:

- probability of exposure to blood and body substances;
- type of body substance involved; and
- probable type and probable route of transmission of infectious agents.

Assess the risk of spraying or splashing in the specific situation and choose appropriate PPE. Before putting on PPE explain to the patient that it is a routine part of infection prevention and control.

#### GLOVES

Gloves must be worn as a single-use item for:

- each invasive procedure;
- contact with sterile sites;
- contact with non-intact skin or mucous membranes;
- activities that has been assessed as carrying a high risk of exposure to blood, body substances, secretions and excretions;
Types of gloves worn should be appropriate to the task:

- **Sterile gloves** for aseptic procedures and contact with sterile sites;
- **Non sterile examination gloves** to be used for all other contacts, and
- **General-purpose utility gloves** to be used for cleaning and during manual decontamination of used instruments and equipment.

**Gloves must be changed** after every episode of individual patient care and between patients.

Note: Allergy or sensitivity may develop to chemicals used in the manufacture of gloves or to the latex in gloves. If you have a sensitivity or allergy to latex, inform your supervisor and ensure you use an alternative glove type. Powder-free latex gloves or alternatives to latex are available.

**GOWNS**

International guidelines recommend that aprons or gowns be worn by all healthcare workers when:

- close contact with the patient, materials or equipment may lead to contamination of skin, uniforms or other clothing with infectious agents; or
- there is a risk of contamination with blood, body substances, secretions or excretions (except sweat).

The type of apron or gown required depends on the degree of risk, including the anticipated degree of contact with infectious material and the potential for blood and body substances to penetrate through to clothes or skin. Gowns and aprons must be changed between patients.

A clean non-sterile apron or gown is generally adequate to protect skin and prevent soiling of clothing during procedures and/or patient-care activities that are likely to generate splashing or sprays of blood or body substances;

- A fluid-resistant apron or gown should be worn when there is a risk that clothing may become contaminated with blood, body substances, secretions or excretions (except sweat).
- A plastic apron can be worn beneath a sterile gown to give added protection if strike-through is a possibility during surgical procedures.

**PROTECTIVE EYEWEAR**

Procedures that generate splashes or sprays of blood, body substances, secretions or excretions require either a face shield, or a mask worn with protective eyewear.

Eyewear should be close fitting and shielded at the sides.

Equipment should be decontaminated after use.

**MASKS**

Surgical masks are loose fitting, single-use items that cover the nose and mouth. They are used as part of standard precautions to keep splashes or sprays from reaching the mouth and nose of the wearer. They also provide some protection from respiratory secretions.

Single-use surgical masks are different from other masks that are used as ‘additional precautions’ ie. P2 respirator, N95 respirator, respiratory protection device, and the particulate respirator.

### 4.3 Aseptic Practices

Reference:
Aseptic practices protect patients during invasive clinical procedures by employing infection control measures that minimise, as far as practicably possible, the presence of pathogenic microorganisms.

Aseptic practices are indicated if performing any invasive procedure, for example:

- Surgical procedures;
- Dressing open wounds; and
- Insertion of indwelling cannulae/catheters.

Measures employed to achieve asepsis include:

- Performance of appropriate hand hygiene;
- Preoperative skin preparation;
- Supply and storage of sterile equipment;
- Antiseptic and disinfectant use;
- Management of indwelling devices; and
- Environmental controls such as air filtration.

Specimens should be collected with gloved hands, placed in a correctly labeled leak proof container, enclosed in a sealed bag for transport with the request form in the outer sleeve pocket of the plastic bag to prevent contamination.

It is imperative that before you commence professional experience placement you are familiar with aseptic practices, the Australian guidelines and the resources available to assist you in your learning (as outlined in this document).

4.4 SAFE HANDLING & DISPOSAL OF POTENTIALLY INFECTIOUS MATERIAL

WASTE DISPOSAL


When handling waste, apply Standard Precautions to protect yourself and others against exposure to blood and body substances.

Segregation of waste should occur at the point of its generation. Waste should be contained in the appropriate receptacle (identified by colour and label) and disposed of according to the facility waste management plan. Ensure you understand the correct procedures for waste handling or ask your supervisor.

DISPOSAL OF SHARPS


The person generating the sharp is responsible for its safe disposal.

Disposal should occur immediately following its use and at the point of use into designated puncture resistant containers that conform to Australian Standard AS4031.
Standard measures to avoid sharps injuries include handling sharp devices in a way that prevents injury to the user and to others who may encounter the device during or after a procedure. Some examples are:

- **Never pass a sharp by hand to another person**; use a basin or neutral zone;
- Use instruments, rather than fingers, to grasp needles, retract tissue, and load/unload needles and scalpels;
- Make a verbal announcement when passing sharps;
- Use round-tipped scalpel blades instead of pointed sharp-tipped blades; and
- **Never recap used needles** unless an approved recapping device is used.

Sharps containers should be sealed for disposal when 2/3 full.

### 4.5 ENVIRONMENTAL CONTROLS

Reference:
NHMRC (2010) *Australian Guidelines for the Prevention and Control of Infection in Healthcare*, p.68

Prompt removal of spots and spills of blood or body substances followed by cleaning and disinfection of the contaminated area is sound infection control practice and meets occupational health and safety requirements. Appropriate PPE should be worn at all times.

A neutral detergent is the cleaning solution of choice for environmental surfaces. Extra cleaning may be necessary in the presence of some micro-organisms.

Strategies for decontaminating spills of blood and other body substances (e.g. vomit, urine) vary according to volume and the setting in which they occur. In patient-care areas, healthcare workers can manage small spills by cleaning with detergent solution.

For spills containing large amounts of blood or other body substances, workers should contain and confine the spill by:
- removing visible organic matter with absorbent material (e.g. disposable paper towels);
- removing any broken glass or sharp material with forceps; and
- soaking up excess liquid using an absorbent clumping agent (e.g. absorbent granules).

### SOILED LINEN

Reference:

All linen is considered contaminated therefore minimal handling is recommended.

All used linen should be handled with care to avoid dispersal of microorganisms into the environment and to avoid contact with staff clothing. The following principles apply for linen used for all patients (i.e. whether or not transmission-based precautions are required):

- Appropriate PPE is to be worn during handling of soiled linen to prevent skin and mucous membrane exposure to blood and body substances;
- Used linen is ‘bagged’ at the location of use into an appropriate laundry receptacle;
• Used linen must not be rinsed or sorted in patient-care areas, or washed in domestic washing machines;
• Linen soiled with body substances should be placed into leak-proof laundry bags for safe transport;
• Any linen bags likely to leak blood or body fluid must be contained by a clear plastic bag and secured prior to transport. Alternatively waterproof linen bags should be used; and
• Linen bags, when 2/3 – 3/4 full must be securely tied for transport.

5. NOSOCOMIAL INFECTIONS

Nosocomial infections are those acquired directly or indirectly in a medical setting.

The probability of a microorganism causing infection in a host is dependent upon the dose (number of microorganisms), a susceptible host site in contact with the organism, time of contact (sufficient for multiplication or not) and the virulence of the organism.

SOURCE

The source(s) of the infecting agents may be patients, staff or visitors and may include:
• Persons with acute diseases;
• Persons in the incubating or window period of a disease;
• Persons who are colonised or chronic carriers of the infecting agent;
• The person’s own endogenous flora; or
• Inanimate objects, including equipment and medications.

Susceptible Host: Resistance to infection varies depending upon underlying medical conditions and other factors that compromise a person’s immune status. Trauma, surgical procedures, anaesthesia, invasive indwelling devices, therapeutic and diagnostic procedures increase susceptibility to infection.

Immunocompromised patients are at increased risk of infection from both their own flora (endogenous) as well as other sources (exogenous). Susceptibility to infection depends on the severity and duration of immunosuppression. They may be particularly susceptible to environmental contaminants such as Legionnaires disease or Aspergillus. Where invasive medical procedures are involved, consideration should be given to placing patients at the start of the operating schedule. If considerable immunosuppression or neutropenia is present, the Additional Precaution of single room accommodation is desirable.

ROUTES OF TRANSMISSION

Direct contact Transmission involves direct physical transfer of microorganisms from an infected or colonised person to a susceptible host. Indirect contact transmission involves the contact of a susceptible host with a contaminated inanimate object, such as contaminated instruments or equipment.

Droplet Transmission is generated during coughing, sneezing, talking, and during certain procedures such as suctioning and bronchoscopy. Transmission occurs when droplets containing microorganisms come in contact with the conjunctiva, nasal or buccal mucosa of a susceptible person. Droplet distribution involves close association, usually 1 metre or less.
**Airborne** Transmission occurs by dissemination in the air of either droplet nuclei or dust particles containing the infectious agent. Microorganisms carried in this manner can be widely dispersed via air currents and can remain airborne for long periods before being inhaled by the susceptible host.

**Vehicle** Transmission applies to microorganisms transmitted by contaminated food, water, drugs, blood or body fluids.

**Vectorborne** Transmission occurs through mosquitoes, flies, rats or other vermin.

### 6. ADDITIONAL PRECAUTIONS

Additional Precautions are always in addition to Standard Precautions.

Additional Precautions are specific to the situation and type of transmission. Transmission-based precautions are applied to patients suspected or confirmed to be infected with agents transmitted by the contact, droplet or airborne routes.

- Airborne transmission (eg tuberculosis, measles, chickenpox, pandemic influenza);  
- Droplet transmission (eg mumps, rubella, seasonal influenza, pertussis);  
- Contact transmission (eg MRSA, Clostridium difficile);  
- Any combination of the above routes; and  
- Immunocompromised patients.

The combination of measures used in transmission-based precautions depends on the route(s) of transmission of the infectious agent involved:

- Continued implementation of standard precautions;  
- Use of appropriate PPE (likely to include gloves, apron/gown, surgical or other masks/respirators, face or eye protection);  
- Patient-dedicated equipment;  
- Single rooms or patient cohort rooms;  
- Appropriate air handing;  
- Enhanced cleaning and disinfection of the patient environment; and  
- Restricted transfer of patients within and between facilities.

It is imperative that you familiarize yourself with the local protocols and procedures at each of your host agencies.
7. EXPOSURE PRONE PROCEDURES (EPP)

Reference:

The blood and body substances of all patients are to be considered potential sources of infection, regardless of diagnosis or perceived risk. All students must be aware of how to prevent exposure to blood or body fluids. During EPP’s, there is an increased risk of transmitting blood borne viruses between health care workers and patients.

In order to carry out or participate in exposure prone procedures, you:

a. Have an ethical duty to be aware of your immunity or infectious status to ensure that you do not place yourself or others at risk of infection.

b. Have an ethical duty to seek follow-up and/or regular testing and counselling if you engage in at-risk behaviour and/or suspect that you may have been infected with a blood-borne virus during your course.

c. Are required to arrange testing for blood-borne viruses to determine your status as soon as practicable after enrolment and prior to your first professional experience placement.

Students infected with blood-borne viruses must be aware of the Australian National Guidelines for the Management of Health Care Workers Known to be Infected with Blood-Borne Viruses. (PDF printable version PDF 211 KB)

Refer to the Faculty of Health Infectious Diseases Guidelines and Procedures.

Students should also be aware of local legal requirements. All students should review the Australasian Society for HIV Medicine, Guide to Australian HIV Laws and Policies for Healthcare Professionals 2013.

EPP are categorised according to the level of risk of transmission in increasing order of magnitude:

**Category 1** A procedure where the hands and fingertips of the healthcare worker are usually visible and outside the body most of the time and the possibility of injury to the worker’s gloved hands from sharp instruments and/or tissues is slight. This means that the risk of the healthcare worker bleeding into a patient’s open tissues should be remote, e.g. insertion of a chest drain.

**Category 2** A procedure where the fingertips may not be visible at all times but injury to the healthcare worker’s gloved hands from sharp instruments and/or tissues is unlikely. If injury occurs it is likely to be noticed and acted upon quickly to avoid the healthcare worker’s blood contaminating a patient’s open tissues, e.g. appendectomy.

**Category 3** A procedure where the fingertips are out of sight for a significant part of the procedure, or during certain critical stages and in which there is a distinct risk of injury to the healthcare worker’s gloved hands from sharp instruments and/or tissues. In such circumstances it is possible that exposure of the patient’s open tissues to the healthcare worker’s blood may go unnoticed or would not be noticed immediately, e.g. suturing of an episiotomy.
7.1 Preventing Blood and Body Fluid Exposure

Students need to use standard precautions where there is a risk of blood or body fluid exposure and implement safe working practices such as:

- Demonstrate an understanding of the principles of standard and additional precautions;
- Use PPE and other precautionary strategies as applicable;
- Safely handle and dispose of sharps;
- Safely handle and transport specimens;
- Safely handle and dispose of waste;
- Use of standard precautions for environmental cleaning;
- Use of standard precautions for cleaning blood and body substance spills; and
- Safely handle and appropriately clean reusable instruments.

Review again the Checklist of Standard Precautions for Procedures (Appendix 1).

7.2 Management of Blood & Body Fluid Exposure

Report immediately to Professional Experience Placement supervisor within the health care setting you are attached to and follow local hospital or primary care setting guidelines.

Decontaminate the exposed area and treat the wound:

a. Skin: wash with soap and water or a skin disinfectant product. DO NOT use caustic agents such as bleach as they may compromise skin integrity.

b. Mouth, nose, eyes: rinse well with water or saline.

c. Wound: treat as appropriate (e.g. suturing, dressing).

Report the exposure within 48 hours to the local Medical Practitioner or Approved Health Care Worker supervising the placement so that appropriate investigations and treatment are promptly initiated.

Test the source for HBV, HCV, HIV

The source individual may be tested for HIV antibody, Hepatitis B surface antigen and/or Hepatitis C antibody.

Informed consent and both pre & post-test counselling are required for these investigations. This is the responsibility of the attending Medical Practitioner. The results are confidential between practitioner and source individual.

If the source individual does not consent to have tests taken, the affected person is to be followed up as if the source was unknown.

If the source is known or suspected to be HIV positive, the on-call Infectious Diseases Physician must be contacted urgently for advice. An alternative contact during working hours is the Tasmanian Sexual Health Physician at the Tasmanian Sexual Health Clinic (1800 675 859).

If the source is HIV positive, post-exposure prophylaxis with antiretroviral therapy may be offered (at no cost) when the risk of transmission is considered to be significant. This needs to be commenced as soon as possible after the exposure (and certainly within 72 hours).

Counselling will be provided by the local Occupational Health officer, ID physician or the Tasmanian sexual health physician on the risk of transmission, the importance of strict compliance with the
treatment regimen and the potential side effects and appropriate course of action if these are experienced. The student must be advised to practice safe sex until tests results are received and the patient’s risk history has been reviewed.

**Assess risk of transmission of infection to the exposed student**

The risk of a student getting a disease from a blood or body fluid exposure depends on the type of injury, the type of body fluid and whether the source has infective blood.

An exposure that might place the student at risk for HIV infection is defined as a percutaneous injury (e.g. needle stick, exposed skin that is chapped, abraded, or afflicted with dermatitis) with blood, tissue, or other body fluids that are potentially infectious.

In addition to blood and visibly bloody body fluids, semen and vaginal secretions have been implicated in the sexual transmission of HIV; however they have not been implicated in occupational transmission from patients to health professionals.

The following fluids also are considered potentially infectious: cerebrospinal, synovial, pleural, peritoneal, pericardial and amniotic fluid. The risk of transmission of HIV infection from these fluids is unknown.

The risk for transmission of HIV infection from the following fluids and materials is very low: Faeces, nasal secretions, saliva, sputum, sweat, tears, urine and vomitus are not considered potentially infectious unless they are visibly bloody.

**Initiate treatment according to risk**

Treatment will be considered if it is anticipated that the source’s blood results will not be available within 24 hours and the source patient is likely to be HIV positive, or in the window period. PEP for HIV can be considered if the exposure was a high risk injury from an unknown source. When the test results become available, ongoing treatment may be reassessed.

**Test the exposed student** for HIV, HBV and HCV antibody levels if the source is unknown. Post-exposure prophylaxis (PEP) may be considered. (This will be considered in light of history, actual exposure and perceived risks).

Urgent testing and results from the laboratory may not be available over public holidays and weekends. Therefore it is essential that the student has a record of their Hepatitis B immunity.

Baseline tests for HIV, HBV and HCV antibody levels establish the immune status or previously acquired infection of the student. **If HBV prophylaxis is required, for Hep B IgG to be effective it is critical that the exposed student commences this within 72 hours of the incident.**

Confidentiality of the student’s status is to be maintained within privacy and public health guidelines. In order to protect confidentiality, students may choose to have these tests performed by a different service (e.g. emergency department, general practice, sexual health).

If the source HBV result will not be available within 24-48 hours, and if the student HBV status is not documented, then consider, with the student’s consent:

- Hepatitis B immunoglobulin
- Hepatitis B vaccine (1st dose)
- ADT (adult diphtheria and tetanus) if necessary

**Refer to an Infectious Disease Consultant if the exposure is high risk or you have any concerns.**

*National Guidelines: 2013 Post-Exposure Prophylaxis after Non-Occupational and Occupational Exposure to HIV*
7.3 FOLLOW-UP FOR EXPOSURE TO BLOOD AND BODY FLUIDS

Follow-up and appropriate care is required for:

**Possible Parenteral Exposure:**
- Intradermal injury with a needle contaminated with blood or body fluid;
- A wound not associated with visible bleeding produced by an instrument contaminated with blood or body fluid;
- Old wound or skin lesion contaminated with blood or body fluid; and
- Mucous membrane or conjunctival contact with blood.

**Definite Parenteral Exposure:**
- Laceration or similar wound which causes bleeding and is produced by an instrument that is visibly contaminated with blood or body fluid;
- Any direct inoculation with human immunodeficiency virus (HIV) tissue or material likely to contain HIV, Hepatitis B virus (HBV) or Hepatitis C virus (HCV) not included above. This refers to accidents in laboratory settings.

**Massive Exposure:**
- Transfusion of blood, injection of large volume of blood/body fluids (>1ml);
- Parenteral exposure to laboratory specimens containing high titre of virus.

8. DUTY OF CARE – REPORTING & CONTACTS

Should you have a placement-related accident with risk of infection, you must report it immediately to your Placement Supervisor:

1. In a hospital setting it is likely that you will be referred to the Infection Control Unit or Work, Health and Safety Officer
2. Outside of a hospital setting, your Placement Supervisor will advise you on local requirements and protocols.

In all instances, your UTAS Unit Coordinator and Placement Supervisor must also be notified and relevant documentation completed.

Please refer to the UTAS Infection Control Procedure for information about protocols, responsibilities and support.

It is the student’s responsibility to ensure complete follow up by arranging post exposure blood tests as advised by their treating physician.

In emergency health situations you may also access assistance from UTAS Security on 6226 7600 (South) or 6324 3336 (North/North West).
APPENDIX 1

CHECKLIST OF STANDARD PRECAUTIONS FOR PROCEDURES

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<td>✓</td>
</tr>
<tr>
<td>Insertion of urinary catheter</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>If exposure risk likely</td>
<td>✓</td>
</tr>
<tr>
<td>Urinary catheter care</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td>If exposure risk likely</td>
<td>✓</td>
</tr>
<tr>
<td>Suctioning: endotracheal tube, tracheostomy</td>
<td></td>
<td>⚡️</td>
<td></td>
<td></td>
<td>Dominant hand (open suction system)</td>
<td>✓</td>
</tr>
<tr>
<td>Major dental procedures*</td>
<td></td>
<td>✓</td>
<td>✓</td>
<td></td>
<td></td>
<td>✓</td>
</tr>
<tr>
<td>Routine intra-oral dental procedures</td>
<td></td>
<td>✓</td>
<td></td>
<td></td>
<td></td>
<td>✓</td>
</tr>
</tbody>
</table>

* Including most dental implants, surgical removal or exposure of completely impacted teeth or tooth fragments, vital endodontics, surgical periodontics, maxillo-facial surgery.
APPENDIX 2

Protocol:
Aseptic technique protects patients during invasive clinical procedures. This protocol outlines the principles of Aseptic Non-touch Technique which is a framework for aseptic practice and includes examples of a step by step procedure to assist staff in implementing these principles.

Standards:
National Safety & Quality Health Service Standards: Preventing & Controlling Healthcare Associated Infections
3.1 Developing and implementing governance systems for effective infection prevention and control to minimise the risks to patients of healthcare associated infections
3.10 Developing and implementing protocols for aseptic technique

Community Care Common Standards: 1.6 Risk Management

Aged Care Standards: 4.7 Infection Control

Rationale:
Aseptic Non-touch Technique (ANTT) is one of the components of standard precautions and is designed to protect patients during invasive clinical procedures by employing infection control measures that minimise, as far as practically possible, the presence of pathogenic microorganisms. Standard Precautions protocol

The ANTT Theoretical Framework for Clinical Practice provides health care workers (HCWs) with a set of foundation principles for safe and efficient aseptic technique. Understanding these principles will help HCWs determine the type of aseptic technique and the level of infective precautions required for different clinical procedures. ANTT is achievable in both clinical and non-clinical settings such as on hospital wards or in a patient’s own home.

Procedure/Process:
ANTT is a technique used to prevent contamination of key-parts and key-sites by microorganisms that could cause infection. In ANTT, asepsis is ensured by identifying and then protecting key-parts and key-sites by hand hygiene, non-touch technique, using new sterilised equipment and/or cleaning existing key-parts to a standard that renders them aseptic prior to use. Once a sterilised item has been opened it is referred to as “aseptic”, not “sterile”. All clinical staff must be familiar with the principles of ANTT and apply them to their work practices.

The Infection Control components of ANTT consist of the following:
1. Identify and Protect Key-parts and Key-sites
   A 'key-part' is the part of sterilised equipment that must remain aseptic, e.g. a syringe hub, and must only come into contact with other key-parts or key-sites:
   - sterile items are used once and disposed into a waste bag
   - only aseptic items come into contact with the key-site
   A ‘key-site’ is the area on the patient such as a wound or Intravenous (IV) insertion site that must be protected from microorganisms.
   The fundamental principle of ANTT is that, *aseptic key-parts must only come into contact with other aseptic key-parts or key-sites*. To achieve this, the HCW must first identify and then protect at all times the key-parts and key-sites of any procedure.

2. Hand Hygiene
   Hand hygiene must be performed in accordance with the DHHS Hand Hygiene Policy. In Surgical ANTT (see below), a surgical hand scrub may be required. It is known that hand cleaning is often inadequate and that even correct hand hygiene cannot always remove all pathogenic organisms. Therefore, a non-touch technique, the skill of being able to identify key-parts and key sites and not touch them directly or indirectly, is a vital component of achieving asepsis.

3. Glove use
   Gloves should be worn when it is anticipated that contact with blood, potentially infectious materials, mucous membranes and non-intact skin may occur.
   If Surgical ANTT is required or it is necessary to touch key-parts or key-sites directly during Standard ANTT, then sterile gloves must be used to minimise the risk of contamination. Otherwise, non-sterile gloves are typically used.

4. Aseptic Fields
   During clinical procedures, the use of aseptic fields is important in controlling the procedure environment and protecting key-parts and key-sites. ANTT employs two types of aseptic field that require different management depending on whether their primary purpose is to promote or ensure asepsis
   a) Critical aseptic fields (*ensuring* asepsis)
      - Used when key-parts/sites are large or numerous and can’t be easily protected by covers or caps or can’t be handled with a non-touch technique
      - Invasive procedures requiring a large aseptic working area
      - examples e.g. Central Venous Catheter insertion
      - The critical aseptic field is managed as a key-part so that only equipment that has been sterilised and is aseptic can come into contact with it
      - Sterile gloves and often, full barrier precautions (sterile gown, mask and hair covering and the use of sterile drapes) are required

      **Micro critical aseptic fields (*ensuring* asepsis)**
      - A small critical aseptic field used to protect a specific key-part, e.g. a syringe cap, needle cover or equipment packaging.
      - These items have been sterilised and provide an optimum aseptic field for key-parts.

   b) General aseptic fields (*promoting* asepsis)
      - General aseptic fields are used for Standard ANTT when key-parts are easily protected by critical micro aseptic fields and non-touch technique
      - The main aseptic field does not have to be managed as a key-part
      - Non-sterile gloves can be used unless it is necessary to touch key-parts, in which case sterile gloves must be worn
5. Standard or Surgical ANTT
Asepsis is maintained with either Standard or Surgical ANTT

- **Standard ANTT:**
  - Requires a main general aseptic field and micro critical aseptic fields.
  - Non-sterile gloves. Sterile gloves should be used if it is necessary to touch key-parts
  - Clinical procedures included in Standard ANTT are generally of short duration, technically simple and involve a few small key-sites
  - Examples – Indwelling catheter insertion, simple wound dressings, IV insertion

- **Surgical ANTT:**
  - A main critical aseptic field with or without the utilisation of micro critical aseptic fields, sterile gloves and often, full barrier precautions
  - Clinical procedures included in Surgical ANTT are generally longer, technically complex and involve large open key-sites
  - Examples - surgical procedures, large complex wound dressings, CVC insertion

<table>
<thead>
<tr>
<th>Procedure</th>
<th>Standard /Surgical ANTT</th>
<th>Rationale/typical procedure</th>
</tr>
</thead>
<tbody>
<tr>
<td>IV therapy</td>
<td>Standard ANTT</td>
<td>Key parts can typically be protected by optimal critical micro fields and non-touch technique. Key sites are small. Procedures are technically simple and &lt;20 mins duration.</td>
</tr>
<tr>
<td>Simple wound dressings</td>
<td>Standard ANTT</td>
<td>Key parts and sites can be protected by optimal critical micro fields and non-touch technique. Procedures are technically simple and &lt;20 mins duration.</td>
</tr>
<tr>
<td>Complex or large wound dressings</td>
<td>Surgical ANTT</td>
<td>The complexity, duration or number of key parts may demand a critical aseptic field.</td>
</tr>
<tr>
<td>Urinary catheterisation</td>
<td>Standard/ Surgical ANTT</td>
<td>An experienced healthcare worker can perform catheterisation with the use of a main general aseptic field, micro-aseptic-fields and a non-touch technique. However, less experienced healthcare workers may require a critical aseptic field.</td>
</tr>
<tr>
<td>Cannulation</td>
<td>Standard/ Surgical ANTT</td>
<td>Although technically quite simple the close proximity of healthcare worker hands to the puncture site and key parts may demand sterile gloves – dependant upon healthcare worker competency.</td>
</tr>
<tr>
<td>PICC/CVC insertion</td>
<td>Surgical ANTT</td>
<td>The size of the CVC or PICC line, invasiveness, numerous key parts and equipment and duration will demand a critical aseptic field and full barrier precautions.</td>
</tr>
<tr>
<td>Surgery</td>
<td>Surgical ANTT</td>
<td>Surgical access involves deep or large exposed wounds, numerous key parts and equipment and long procedures. Standard operating room precautions required.</td>
</tr>
</tbody>
</table>

6. Wound management - ANTT and Clean wound management technique

Wound management is practised according to the best available evidence for optimising outcomes for the individual, their wound and their healing environment.

**Standard and Surgical ANTT in wound care**

To determine whether the wound care requires Standard or Surgical ANTT assess the technical difficulty of the procedure, the number and size of key parts and key sites, the procedure environment and user competency. Standard or Surgical ANTT must be applied if any of the following criteria are met:

- the individual is immunosuppressed
- the wound enters a sterile body cavity e.g. nephrostomy, central venous line
- during the perioperative period
- the wound healing environment is compromised
- bones/tendons exposed
- acute wounds (less than 14 days duration) or large wounds of an acute aetiology (For burns management refer to the statement below*)

* Burns:
  - In relation to the management of burns the fundamental principles of Standard or Surgical ANTT are still applicable
  - When skin-substitutes are used Surgical ANTT must be used
  - In those units where patients with burns are managed the use of non-sterile potable tap water is permitted, with adherence to all other principles of ANTT

**Clean Wound Management Technique**

Clean wound management technique is a modified aseptic non-touch technique. Materials that have been sterilised are required and it adopts the same aims and objectives as ANTT. Wound cleansing is the only modification. A clean wound management technique involves washing or showering of wounds with potable (drinking) tap water if the individual, their wound and their healing environment are not compromised.

A clean wound management technique should not be used if Surgical ANTT is required or if any of the above criteria are present.

See Appendix 4 for further details on clean wound management technique and the community context.

**Terminology:**

**Sterile:** ‘Free from microorganisms’

A sterile technique aims to achieve total freedom from microorganisms. It is not possible to achieve a true sterile technique outside the controlled environment of a laminar flow cabinet or a specially designed operating theatre.

**Asepsis:** ‘Free from infection or infectious (pathogenic) material’

An aseptic technique aims to prevent microorganisms on hands, surfaces and equipment being introduced to susceptible sites. It is achievable in both clinical and non-clinical settings.

**Clean:** ‘Free from dirt, marks or stains’

Although cleaning followed by drying of equipment and surfaces can be very effective it does not necessarily meet the quality standards of asepsis. However, when there are high levels of contamination on equipment and skin, cleaning will help render them aseptic. To be confident of achieving asepsis an application of a skin or hard surface disinfectant is required either during cleaning or afterwards.
Aseptic Non-Touch Technique (ANTT)

Appendices:
Appendix 1: Procedure for performing ANTT
Appendix 2: Decision Making Process for ANTT
Appendix 3: Clinical guidelines for specific procedures
Appendix 4: Clean Wound Management Technique

References:
2. TIPCU (2011), Aseptic Non Touch Technique; A guide for Health care Workers, Department of Health and Human Services.

Stakeholders Consulted:
CCCS Infection Prevention and Control Team
RHH Infection Prevention and Control Unit
Site/Facility ADONs
Infection Prevention and Control Medical Advisors (RHH and CCCS)
Burns Consultant
Continence Consultant
Wound Care Consultant
Vascular Access Consultant

Key Words:
Infection prevention control
Infection control
Wound care
IV therapy
Blood culture
Peripheral cannulation
Urinary catheterisation

Audit Tools:
Compliance with aseptic-non touch technique should be regularly audited. The audit tools below are provided to be used by clinical staff.

THO-South ANTT general audit tool.docx
THO-South ANTT Peripheral IV cannulat
# APPENDIX 1

## Procedure For Performing ANTT

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
</table>
| 1. | **Perform Hand Hygiene**  
With alcohol based hand rub or hand wash |
| 2. | **Clean Trolley/work surface**  
With detergent and water or detergent wipe |
| 3. | **Identify and gather equipment for procedure**  
Gathering equipment at this point allows the trolley/surface to dry properly and minimises HCW interaction with the environment during aseptic preparation. |
| 4. | **Perform Hand Hygiene**  
With alcohol based hand rub or hand wash  
This occurs immediately before the assembly field drape and equipment etc. in order to promote asepsis. |
| 5. | **Prepare field**  
Assemble equipment taking care to identify and protect all the key-parts using non-touch technique. |
| 6. | **Perform Hand Hygiene**  
With alcohol based hand rub or hand wash. |
| 7. | **Prepare patient**  
Clean key-parts as applicable  
Use gloves where appropriate, such as removing a bloodstained dressing |
| 8. | **Perform Hand Hygiene**  
With alcohol based hand rub or antiseptic hand wash  
Reapply new gloves if required (sterile or non-sterile depending on likelihood of touching key-parts/sites) |
| 9. | **Perform Procedure**  
Sterile items are used once and disposed into waste bag  
Only aseptic items come in contact with the key-site  
A non-touch technique should be used even if the HCW is using sterile gloves |
| 10. | **Dispose of sharps and equipment then dispose of gloves**  
Sharps are best disposed of at the point of use |
| 11. | **Perform hand hygiene**  
With alcohol based hand rub or hand wash |
| 12. | **Clean trolley/work surface and perform hand hygiene**  
Reusable trays are reprocessed at the end of the procedure to prevent cross infection between patients and staff |
APPENDIX 2

Decision Making Process for Surgical or Standard ANTT

‘The ANTT Approach’

1 Key-Part/Key-Site Assessment
To determine whether the procedure requires Standard or Surgical-ANTT, assess the technical difficulty of the procedure, the number and size of key-part & key-sites, the procedure environment and user competency. Then ask:

‘To maintain asepsis of key-parts and/or key-sites, does the main aseptic field need to be managed critically’?

If yes, if no,

2 Basic (but important) infective precautions

Surgical-ANTT
- Hand cleaning or surgical hand scrub
- Sterilized gloves
- Sterilized gown if full barrier precautions

Standard-ANTT
- Hand cleaning
- Non-sterilized gloves, Sterilized gloves if key-parts must be touched
- Personal protective equipment

3 Aseptic Field Selection

Critical Aseptic Field
- Sterile drape(s)
- Micro Critical Aseptic Fields are used where practical to do so for optimum protection

Micro Critical Aseptic Fields
- Caps & covers etc. and a General Aseptic Field
- Disinfected or disposable tray

4 Aseptic Field Management

Critical Aseptic Field Management
- Only sterilized equipment can be placed in the aseptic field, sterilized gloves are required to maintain asepsis

Micro Critical Aseptic Field Management
- Key-parts are protected with Micro Critical Aseptic Fields, Asepsis of the immediate procedure environment is therefore promoted by General Aseptic Field Management

5 Key part protection by Non Touch Technique

Non-Touch Technique is desirable
- Despite wearing sterile gloves, key-parts or Key-sites are not touched unless necessary to do so

Non-Touch Technique is essential
- Non-touch technique is essential at all times

6 Effective Decontamination

Effective decontamination of the procedure area, equipment and the health professional is essential to break potential ‘chains of infection’.

APPENDIX 3

Clinical Guidelines for Specific Procedures

ANTT principles and method are incorporated into a range of clinical guidelines (see attached below) for the most common clinical procedures. These help further standardise aseptic technique and have been sorted into acute, community and THO-south wide.

These clinical guidelines can be printed out, laminated and displayed in the work place as a reminder or in a prominent place where equipment is gathered and preparation for that procedure is likely to occur.

**ACUTE**

Acute Care - Wound care (Standard) THO-South

Acute care - Peripheral venepuncture

Acute Care - Blood culture collection THC

Acute Care - Peripheral cannulation

Acute Care - Periph & central IV therapy

**COMMUNITY**

Community - Periph & central IV therapy

Community - Peripheral venepuncture

Community - Wound care THO-South.doc

**THO-South**

THO- South Urinary Catheter.doc

Relevant protocols/guidelines:

- Wound dressing RHH clinical guideline
- Venepuncture RHH clinical guideline
- Blood culture collection RHH clinical protocol
- Peripheral Intravenous PIV Catheter - Adult - RHH - Clinical Guideline
- Urinary Bladder Catheterisation - RHH - Clinical Guideline
APPENDIX 4

Clean Wound Management Technique

A risk assessment must be undertaken to ensure this process is appropriate for the type of wound being dressed. The basic principles of ANTT must be adopted and dressing pack/sterile materials used. Sterile scissors must be used to cut the primary dressing in contact with the wound.

1. Clean trolley/tray/work surface with detergent and water or detergent/disinfectant wipe.
2. Use good quality potable (drinking) tap water or water that is boiled and allowed to cool for cleansing the wound
3. Use a non-touch technique
4. Preventing infection is as equally important as with ANTT

Variance in procedure for standard ANTT or Clean wound management technique

<table>
<thead>
<tr>
<th></th>
<th>Standard ANTT</th>
<th>Clean wound management technique</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gloves</td>
<td>Gloves must be worn*</td>
<td>Gloves must be worn*</td>
</tr>
<tr>
<td>Dressing trolley/tray/work surface</td>
<td>detergent and water or detergent/disinfectant wipe.</td>
<td>detergent and water or detergent/disinfectant wipe.</td>
</tr>
<tr>
<td>Cleansing solution</td>
<td>Sterile water/ sterile saline 0.9% OR prescribed cleansing solution.</td>
<td>Potable (drinking) tap water</td>
</tr>
<tr>
<td>Dressings</td>
<td>Sterile</td>
<td>Sterile</td>
</tr>
<tr>
<td>Scissors to cut primary dressing (in contact with wound)</td>
<td>Sterile</td>
<td>Sterile</td>
</tr>
</tbody>
</table>

* The minimum standard required is non-sterile gloves. Sterile gloves may be worn if it is anticipated that key-parts or key-sites will be touched.

Community Setting

A bucket or bowl may be used to wash ulcerated lower limbs with a clean wound management technique.

- Buckets and bowls must be used exclusively for washing ulcerated legs and should be washed with hot soapy water between uses, dried thoroughly with disposable paper towel and stored upside down.
- The bucket/bowl should be lined with a new plastic bin liner to ensure cleanliness and prevent cross contamination if more than one wound.
- If patients with leg ulceration are suffering with a fungal foot infection, there is the potential to spread fungal infection to ulcerated legs. It is advisable to stop washing legs in bucket/bowl until the problem is resolved.