Aseptic Non Touch Technique (ANTT) Workbook

Principles to Minimise Infection related to Invasive Procedures and Management of Invasive Devices

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Next Review: Feb 2017
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Statement of Indemnity

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Version Control

This is Version (1.0) of the ‘Aseptic Non Touch Technique (ANTT) Workbook: Principles to Minimise Infection related to Invasive Procedures and Management of Invasive Devices’ and will remain current until (2016) – or earlier when modifications required. The current version will be available for access on the Intranet and identified hyperlinked address as required (i.e.)


Authors

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Process for ANTT Training and Assessment Completion

Attend ANTT presentation OR Complete ANTT Workbook OR E-Learning Package

Successfully complete ANTT Questionnaire (p.9 ANTT Workbook)

Provide completed ANTT Questionnaire to Educator or Infection Control for marking & sign off

As relevant, complete Clinical Skills Assessment which demonstrate ANTT principles.

Assessors: Infection Control CNC Nursing Staff Development officers Trained assessors in your area

Glossary of ANTT Terms

It is important to become familiar with the terminology used in the ANTT framework. A thorough understanding of the core components will support effective clinical decision-making.

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aseptic Non Touch Technique (ANTT)</td>
<td>ANTT is a standardised approach to prevent microbial contamination during the performance of invasive clinical procedures or maintenance of indwelling medical devices through the protection of Key-Parts and Key-Sites 1 2.</td>
</tr>
<tr>
<td>Aseptic fields</td>
<td>These fields provide a controlled aseptic working space. There are two types of aseptic fields – Critical and General (see below).</td>
</tr>
<tr>
<td>Cleaning, Disinfection and Sterilisation</td>
<td>Cleaning: reduces the bioburden and removes foreign material. In healthcare it is typically performed with water, soap or detergent and material such as paper towel or detergent wipes. Disinfection: the destruction of pathogenic microorganisms, usually through thermal or chemical means. Sterilisation: the process by which all viable forms of microorganisms (including spores) are destroyed.</td>
</tr>
</tbody>
</table>
| **Critical Aseptic Field** | Critical Aseptic Fields are used when:
- Key-Parts/Sites cannot be protected with covers and caps or handled at all times by a non-touch technique; or
- open and invasive procedures requiring large working areas for long durations $^{2,3,4}$.  

The critical aseptic field is managed as a Key Part - only sterilised equipment may come in contact with the Critical Aseptic Field. **N.B.** Alcowipes and 1-2% Alcoholic Chlorhexidine swab sticks are not sterile.

Sterile gloves and often, full barrier precautions are required e.g. surgery in an operating theatre. |
| **General Aseptic Field** | General Aseptic Fields promote asepsis when:
- Key-Parts are easily protected by Micro Critical Aseptic Fields and non-touch technique;  
- the main aseptic field does not need to be managed as a Key-Part $^{2,3,4}$. |
| **Key-Parts** | Key-Parts are critical components of the procedural equipment that must remain sterile and that come into contact (direct/indirect) with the Key-Sites (e.g. the puncture site), any infusion fluid, or with any other active Key-Parts connected to the patient $^2$.  

Examples of Key-Parts are:
- needles or introducers;  
- surgical instruments such as scalpel blades, forceps, and retractors;  
- invasive devices such as central venous access device or urinary catheters. |
| **Key-Sites** | Key-Sites refer to the area of the patient that is involved in the procedure or intervention, e.g. wound or IV insertion site, that must be protected from microorganisms $^2$. |
| **Micro Critical Aseptic Fields (MCAF)** | MCAFs, such as caps, covers or packaging on syringes, needles, access devices, instruments or wound care products, help to protect Key-Parts. The inside of these caps, covers or packaging have been sterilised and thus provide an optimum aseptic field for Key-Parts $^{2,3,4}$. |
| **Standard ANTT** | Standard ANTT is used for clinical procedures of short duration, technically simple and/or involve few small Key-Parts, e.g. indwelling catheter insertion, simple wound dressing, IV insertion $^3$. |
| **Surgical ANTT** | Surgical ANTT is utilised for clinical procedures of longer duration (i.e. > 20 mins), technically complex and involve large open Key-Sites, e.g. perioperative procedures, complex wound dressings and CVAD insertion $^3$. |
Aseptic Non-Touch Technique (ANTT)

The National Safety and Quality Health Service Standards: Preventing and Controlling Healthcare Associated Infections (Standard 3) requires that all healthcare workers use ANTT in their practice. ANTT is an evidence-based methodology for practice that protects patients during invasive clinical procedures by employing infection prevention and control measures that minimise the presence and transfer of pathogenic organisms. The ANTT Approach provides six (6) standardised principles and safeguards for clinical staff to understand and undertake safe aseptic technique during a wide range of clinical procedures and to define, control and monitor standards of aseptic technique.

Standard Principles and Safeguards of ANTT Approach involve:

1. Risk Assessment - Identification and protection of Key-Parts and Key-Sites.
2. Environment Management - Clean trolley, work surface or tray with disinfectant, detergent and water or alcohol wipe.
   - Prepare patient for procedure.
3. Personal and equipment decontamination and protection - Performance of 5 Moments of Hand Hygiene.
   - Appropriate selection and use of gloves, i.e. sterile vs non-sterile.
   - Use of sterile equipment.
   - Sterile items do not come into contact with non-sterile items or Key-Sites.
   - Protection of Key-Parts within MCAFs.
4. Aseptic Fields - Selection, preparation and use of appropriate aseptic field, i.e. general vs critical.
5. Non Touch Technique - Sequencing practice to facilitate efficient, logical and safe ordering of tasks to avoid touching Key-Parts/sites directly.
   - If it is necessary to touch a Key Part/Site use sterile gloves.
6. Decontamination - Inactive Key-Parts (e.g. vascular access bung) must be rendered aseptic prior to re-use or accessing by effective cleaning and disinfection.

The underlying tenets of ANTT are:

- Always wash hands effectively.
- Never contaminate Key-Parts.
- Touch non Key-Parts with confidence.
- Take appropriate infection prevention precautions.

Hand Hygiene

Hand hygiene is the single most important factor in reducing hospital acquired infections. The Hand Hygiene Australia 5 Moments for Hand Hygiene and Centre for Healthcare Related
Infection Surveillance and Prevention (CHRISP) Hand Hygiene Program outline the guidelines for effective hand hygiene practice.

Hand Hygiene practice like ANTT is risk assessed and will vary related to whether the procedure/activity is classified as Surgical ANTT (requiring surgical hand hygiene) or Standard ANTT (requiring clinical hand hygiene).  

**Risk Assessment**

Whilst the principles and tenets of ANTT are consistent for all invasive procedures or management of indwelling medical devices, the ANTT technique will change according to risk assessment. Risk assessment includes assessment of technical difficulty, length of procedure, the size of Key-Sites, number of Key-Parts that require protection and staff competence.

In order to be efficient as well as safe, the ANTT Practice Framework defines what type of aseptic technique and precautions are required for both simple and complex procedures, and how to decide between the two approaches.

**Standard ANTT**

Standard ANTT is the technique of choice when procedures:

- Involve minimal Key-Parts and small Key-Sites.
- Contain Key-Parts that can easily be protected by caps, covers or packaging (Micro Critical Aseptic Fields).
- Are not significantly invasive.
- Are technically uncomplicated and/or short in duration (approximately < 20 minutes).

In Standard ANTT the main aseptic field is termed a General Aseptic Field. It does not have to be managed as a Key-Part and is used to promote rather than ensure asepsis. Non sterile gloves are usually worn for Standard ANTT procedures, unless it is assessed necessary to touch (direct/indirect) a Key-Part/Site or the staff member’s experience/competence in the task would indicate that sterile gloves should be worn.

**Surgical ANTT**

Surgical ANTT is demanded when procedures:

- Involve large and/or numerous Key-Parts.
- Are significantly invasive, e.g. large/open Key-Site or central venous system access.
- Are technically complex.
- Require extended procedure time (approximately > 20 minutes).

Surgical ANTT utilise a Critical Aseptic Field that must be managed as a Key-Part, i.e. the main aseptic field must only come into contact with sterilised equipment. Additionally, Surgical ANTT usually involves the wearing of surgical gown/barrier precautions and sterile gloves.
Aseptic Fields

ANTT uses Aseptic Fields to promote asepsis during procedures by providing basic protection from the environment. It is a designated work space that contains and protects the procedural equipment from direct and/or indirect environmental contact-contamination with microorganisms. These are either **General** or **Critical Aseptic Fields** (refer to Glossary). Examples of procedures for each of the aseptic fields include:

- **General Aseptic Fields** – simple wound dressing, administration of IV medication/fluids, IDC bag change, tracheostomy suctioning
- **Critical Aseptic Fields** – complex wound dressing, CVAD insertion, lumbar puncture, perioperative procedures

**Micro Critical Aseptic Fields (MCAF)**, such as sterile caps or the inside of sterile packaging can be used to protect Key-Parts within a General Aseptic Field

Key-Parts and Key-Sites

One of the core components of the ANTT approach is the identification and protection of Key-Parts and Key-Sites. Key-Parts and Key-Sites should be protected by non-touch technique, therefore if contaminated should be either disposed of or disinfected again (if reusable). The sterile components of a procedure are considered Active Key-Parts and remain that way until touched (then it would be rendered Inactive). **Example:** Healthcare staff are trained to pick up a syringe by the barrel to prevent touching the luer lock/slip attachment end; this is to ensure the end (Key-Part) remains ‘Active’ prior to connection with another Active Key-Part.

Key-Parts may be rendered **inactive** when no longer required or temporarily not in use. Key-Parts that are inactive must be rendered aseptic prior to re-use or accessing by effective cleaning and disinfection.

**Examples of Key Parts**

<table>
<thead>
<tr>
<th>Insertion of Urinary Catheter</th>
<th>Intravenous Therapy via peripheral/CVAD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Key parts include:</td>
<td>Key-Parts include:</td>
</tr>
<tr>
<td>- Forcep tips</td>
<td>- Leur lock/slip end on syringe, extension tubing, needleless connectors/bungs, taps or IV infusion line</td>
</tr>
<tr>
<td>- Urinary catheter – entire catheter till inserted and hub for injecting sterile water</td>
<td>- Needle tip and hub</td>
</tr>
<tr>
<td>- Urinary drainage bag connector slip</td>
<td>- IV fluid bag spikes</td>
</tr>
<tr>
<td>- Syringe tip</td>
<td>- Hub of central or peripheral access devices</td>
</tr>
<tr>
<td>- Needle tip and hub</td>
<td>- Implanted port needle and the hub end</td>
</tr>
<tr>
<td>- Sterile water for injection opening</td>
<td>- Dressing pad applied directly to the wound</td>
</tr>
<tr>
<td></td>
<td>- Rubber tops on medication vials</td>
</tr>
</tbody>
</table>
Aseptic and Non-Touch Technique Questionnaire

Please respond to the following questions by ticking or circling the most correct answer.

Provide this completed Questionnaire to the facilitator/educator for marking and sign off.

1. What ANTT strategies facilitate asepsis?
   - a. Hand hygiene
   - b. Non touch technique
   - c. Using new sterilised equipment
   - d. Cleaning inactive Key-Parts rendering them aseptic prior to use
   - e. All of the above

2. When should sterile gloves be used?
   - a. Protecting cracked skin from continued hand hygiene
   - b. When it is necessary to touch Key-Parts or Key-Sites directly
   - c. When protecting the healthcare worker from blood and body fluids
   - d. When protecting Key-Parts / Sites from chipped nail polish

3. When would you use critical aseptic fields?
   - a. When the Key-Parts / Sites can be protected by covers and caps
   - b. When non touch technique is mandatory and critical at all times
   - c. When Key-Parts / Sites cannot be easily protected at all times with covers and caps or handled at all times by a non-touch technique, or when open and invasive procedures require large working areas for long durations.
   - d. When sterile drapes are not available

4. Which of the following strategies support appropriate environment management?
   - a. Check packaging of equipment/consumables is intact, correctly wrapped and sterilisation date/indicator visible.
   - b. Wash hands and apply appropriate personal protective equipment
   - c. Clean trolley with disinfectant/detergent/ alcohol wipe before setting up aseptic field.
   - d. All of the above

5. Circle the 8 potential Key-Parts in the figure below

   Plastic spike for drawing up

   Plastic spike for drawing up

6. Determine how each of the following Skill Sets would optimally be managed. Select either Standard ANTT or Surgical ANTT.

<table>
<thead>
<tr>
<th>Skill Set</th>
<th>Standard ANTT</th>
<th>Surgical ANTT</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. IV Therapy</td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. CVAD insertion</td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. Angiogram</td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Simple wound dressing</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Assessment Outcome: Achieved □ Not Yet Achieved □

Assessee’s Name: ........................................... Work Unit: ...........................................
Assessee’s Signature: ........................................... Date: ........../ ........../ ........................
Assessor’s Name: ...........................................................................................................................
Assessor’s Signature: ........................................... Date: ........../ ........../ ........................
References


