To start this ANTT training slide show

go to the top menu bar and select

‘View. Then ‘Slide Show’

Slides will change automatically every 30 seconds.
Or, use the right/left arrow keys to change manually.

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ANTT is 3 things:

• A Practice Framework (or set of rules) for aseptic technique - intended for all clinical procedures…. …“From surgery to community care”.

• A collection of clinical guidelines for the common clinical procedures which improve aseptic practice by standardising it.

• A method of implementing an aseptic standard which establishes clinical compliance in large staff groups.

ANTT follows IPS, RCN, EPIC2, DH, WHO and APIC guidance. It is EPIC2 endorsed.
Why is having a standard aseptic technique so important?

Audits performed in many healthcare organisations show that aseptic technique is often ineffective.

Implementing and enforcing a clinical standard will:

• improve standards of practice by reducing variability.

• facilitate audit and evidence generation in aseptic technique.

• reassure patients.

• in order to best protect patients, a standard aseptic technique is an explicit requirement of a number of Governments (e.g. The UK and Australia).
Examples of failures in asepsis during aseptic technique observed in NHS Trusts (2006-2010).

- Contamination of Key-Parts
- Poor cannulation site care
- Poor hand cleaning
  - Confused terminology
  - Highly variable practice
  - Inappropriate equipment
  - Non conducive environments
- Poor aseptic field management
- Poor Key-Part cleaning

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The ANTT-Approach is a systematic way of applying safe aseptic technique. It is based on the Principles and Safeguards set out in the ANTT Clinical Practice Framework. These are explained in this presentation.
Principle 1

The aim of ANTT for invasive clinical procedures or maintenance of an invasive medical devices is always asepsis.

**Sterile**
Free from micro-organisms
In
Not achievable in typical health care settings.

**Asepsis**
Free from pathogenic organisms. Achievable in typical health care settings.

**Clean**
An important action
removing dirt to help achieve asepsis. But not a satisfactory standard in itself for invasive procedures.

Why is this important?
It is clear from the definitions above that a sterile technique or sterile field is not possible in typical healthcare settings. Therefore, asepsis is the aim of aseptic technique. It is also accurate and achievable terminology.
Principle 2

Asepsis is achieved by protecting Key-Parts and Key-Sites from microbiological Contamination from the health care worker & the immediate environment.

Why is this important?
Key-Parts and Key-Sites are the critical components of any invasive clinical procedure that if contaminated are likely to infect the patient.
Principle 3
ANTT needs to be efficient as well as safe
(Surgical-ANTT is used for complicated procedures and Standard-ANTT for uncomplicated procedures)

Why is this important?
To be cost effective and efficient, technically simple procedures require a simpler approach to maintaining asepsis (Standard-ANTT) than complex procedures (Surgical-ANTT).
The ANTT Approach (to achieving asepsis)

1  Key-Part/Key-Site Risk Assessment

**Surgical-ANTT**
- Environmental measures
- Hand cleaning or surgical hand scrub
  - Sterilized gloves
- Suitable mouth / eye protection
- Sterilized gown if full barrier precautions

**Standard-ANTT**
- Environmental measures
- Hand cleaning
- Non-sterilized gloves. Sterilized gloves if Key-Parts must be touched
- Personal protective equipment

2  Basic (but important) Infective Precautions

**A main Critical Aseptic Field**
- Sterilized drape(s)

Key-Parts are protected within one large aseptic field.

Only sterilized equipment can be placed in the aseptic field, sterilized gloves are required to maintain asepsis.
(i.e. The main aseptic field is "Managed Critically").

**Micro Critical Aseptic Fields**
(Caps & covers etc.)

Key-Parts are protected with individual Micro Critical Aseptic Fields (MCAF's).

**A main General Aseptic Field**
- Disinfected or disposable tray

With Key-Parts protected by MCAF’s, essential but non sterilized equipment may be placed in the aseptic field (i.e. The main aseptic field is ‘Managed Generally’).

3  Aseptic Field Selection & Management

**Non Touch Technique is desirable**
Despite wearing sterile gloves, Key-Parts/Sites are not touched unless essential to

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

4  Non Touch Technique

5  Decontamination

Effective decontamination of the procedure area, equipment and the health professional is essential to break potential ‘chains of infection’.
Principle 4
Risk assessment to determine type of ANTT should be based on the technical difficulty of achieving asepsis.

Depending on the variables below

• The number and size of Key-Parts & Key-Sites.
• The procedure environment
• Degree of invasiveness
• Procedure duration
• User competency

….ask this question

**ANTT RISK ASSESSMENT**
*In order to maintain asepsis of Key-Parts and Key Sites, does the main aseptic field need to be managed critically’?*

(i.e. Only sterilized and aseptic equipment can come into contact with the aseptic field).

**Why is this important?**
Because risk assessment needs to be logical (not based on diagnosis or age etc) and reproducible between healthcare workers.

[www.the-antt.org](http://www.the-antt.org)
Safeguard 1

Basic infective precautions such as hand cleaning significantly reduce the risk of Healthcare Worker and environmental contamination of Key-Parts and Key-Sites

Why is this important?
Even though the core elements of ANTT (Protecting Key-Parts with non-touch technique) will best ensure asepsis, it is well established that basic infective precautions like hand cleaning and glove use are important supporting elements.

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Safeguard 2

Key-Part and Key-Site identification and protection

Key-Sites are open wounds, including insertion and puncture sites.

Key-Parts are the parts of the procedure equipment that come into direct or indirect contact with other Key-Parts, any liquid infusion or Key-Sites.

Key-Parts must only come into contact with other aseptic Key-Parts or Key-Sites.

www.the-annt.org
Safeguard 3

**Non-touch technique** is a critical skill that protects Key-Parts & Key Sites from the Healthcare worker and the environment – in both Surgical and Standard-ANTT.

**Why is this important?**
Because the best way to protect a Key-Part or Key-Site is simply not to touch it. Even in Surgical-ANTT, Key-Parts should not be touched (wherever practically possible) because even sterile gloves can become contaminated inadvertently by the health care worker or the environment.

[www.the-antt.org](http://www.the-antt.org)
Safeguard 4

Aseptic fields protect Key-Parts and Key-Sites from the immediate environment. Surgical and Standard-ANTT require different aseptic field management.

General Aseptic Field (Not managed critically)

Critical Aseptic Field (Managed Critically)
- Micro Critical Aseptic Field
A General Aseptic Field is used which does not require critical management.

Because...

Micro Critical Aseptic Fields can easily and optimally protect the Key-Parts.

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Surgical-ANTT - The main critical aseptic field must be managed critically because due to their size and number, Key-Parts cannot easily be protected with caps and covers etc. (Micro Critical Aseptic Fields).

Critical Aseptic Field Management means that only sterilized and aseptic equipment can come into contact with the Critical Aseptic Field.
Principle 5
Aseptic practice should be standardised

Why is this important?
Having a standard reduces variability in practice and reduces the potential for poor practice. It facilitates audit and evaluation. It has also been shown to facilitate ‘peer monitoring’. I.e. If a standard exists it is much easier for peers to informally monitor practice standards. Lastly, having a standard approach to care reassures patients.
Principle 6
The biggest risk to patients is the healthcare worker. Safe aseptic technique is reliant upon effective board level leadership, staff training in infection control, safe environments and fit for purpose equipment.

Why is this important?
Because safe aseptic technique is dependant upon these ‘foundations’. In particular, it has been shown that effective Board level leadership is essential.
‘The ANTT Approach’

**Key-Part / Key-Site Risk Assessment**

**Surgical-ANTT**
- Environmental risks removed or avoided.
- Working areas/surfaces are disinfected.
- Staff activity is strictly controlled.

**Standard-ANTT**
- Environmental risks removed or avoided.
- Work surfaces are cleaned or disinfected.

**Environmental Management**

**Personal & Equipment Decontamination & Protection**

- Hand cleaning or surgical hand scrub
- Sterilized gloves
- Suitable mouth / eye protection
- Sterilized gown if full barrier precautions
- ‘Scrubbing IV hubs’ etc

- Hand cleaning
- Non-sterilized gloves. Sterilized gloves are worn if Key-Parts must be touched
- Personal protective equipment
- Scrubbing IV hubs etc.

**Aseptic Field Selection & Management**

**Critical Aseptic Field**
- Sterilized drape(s)

Key-parts are protected within one large main Critical Aseptic Field.

Only sterilized equipment can be placed in a Critical Aseptic Field, sterilized gloves are required to maintain asepsis.

(i.e. The main aseptic field is “Managed Critically”)

**Micro Critical Aseptic Fields**
(Caps & covers etc.)

Key-Parts are protected with individual Micro Critical Aseptic Fields (MCAF’s).

**General Aseptic Field**
- Disinfected or disposable tray

With Key-Parts protected by MCAF’s, essential but non sterilized equipment may be placed in the aseptic field

(i.e. The main General Aseptic Field is ‘Managed Generally’)

**Non-Touch Technique**

- Non-Touch Technique is desirable
  Despite wearing sterile gloves, Key-Parts & Key-Sites are not touched unless necessary to do so

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

**Decontamination**

**Environmental Management**

- Environmental risks removed or avoided.
- Working areas/surfaces are disinfected.

**Personal & Equipment Decontamination & Protection**

- Hand cleaning
- Non-sterilized gloves. Sterilized gloves are worn if Key-Parts must be touched
- Personal protective equipment
- Scrubbing IV hubs etc.

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**Decontamination**
‘The ANTT approach’

The Principles and Safeguards that constitute The ANTT Practice Framework are ‘translated’ into clinical practice by ‘The ANTT-Approach’.

The ‘ANTT-Approach’ involves 5 core steps that healthcare workers follow in order to ensure aseptic technique is delivered systematically and safely. i.e. Practice is standardized.

The advantage and unique aspect of ANTT is that the core steps of the ‘ANTT-Approach’ are the same for complicated (Surgical-ANTT) and uncomplicated Procedures (Standard-ANTT).

Take a look at the next few slides to see for yourself……

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‘The ANTT Approach’
‘The ANTT Approach’

Key-Part / Key-Site Risk Assessment
‘The ANTT Approach’

1. Key-Part / Key-Site Risk Assessment
2. Environmental Management
‘The ANTT Approach’

1. Key-Part / Key-Site Risk Assessment
2. Environmental Management
3. Personal & Equipment Decontamination & Protection
‘The ANTT Approach’

1. Key-Part / Key-Site Risk Assessment
2. Environmental Management
3. Personal & Equipment Decontamination & Protection
4. Aseptic Field Selection & Management
‘The ANTT Approach’

1. Key-Part / Key-Site Risk Assessment

2. Environmental Management

3. Personal & Equipment Decontamination & Protection

4. Aseptic Field Selection & Management

5. Non-Touch Technique
‘The ANTT Approach’

1. Key-Part / Key-Site Risk Assessment
2. Environmental Management
3. Personal & Equipment Decontamination & Protection
4. Aseptic Field Selection & Management
5. Non-Touch Technique
6. Decontamination
**‘The ANTT Approach’**

1. **Key-Part / Key-Site Risk Assessment**

2. **Surgical-ANTT**
   - Environmental risks removed or avoided.
   - Working areas/surfaces are disinfected.
   - Staff activity is strictly controlled.

3. **Environmental Management**
   - Hand cleaning or surgical hand scrub
   - Sterilized gloves
   - Suitable mouth / eye protection
   - Sterilized gown if full barrier precautions
   - ‘Scrubbing IV hubs’ etc

4. **Personal & Equipment Decontamination & Protection**
   - Critical Aseptic Field
     - Sterilized drape(s)
     Key-Parts are protected within one large main Critical Aseptic Field.
     Only sterilized equipment can be placed in a Critical Aseptic Field, sterilized gloves are required to maintain asepsis.
     (i.e. The main aseptic field is “Managed Critically”).

5. **Aseptic Field Selection & Management**

6. **Non-Touch Technique**
   - Non-Touch Technique is desirable
     Despite wearing sterile gloves, Key-Parts & Key-Sites are not touched unless necessary to do so

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**Decontamination**
‘The ANTT Approach’

**Key-Part / Key-Site Risk Assessment**

**Surgical-ANTT**
- Environmental risks removed or avoided.
- Working areas/surfaces are disinfected.
- Staff activity is strictly controlled.

**Standard-ANTT**
- Environmental risks removed or avoided.
- Work surfaces are cleaned or disinfected.

**Environmental Management**

**Personal & Equipment Decontamination & Protection**

**Surgical-ANTT**
- Hand cleaning or surgical hand scrub
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  - Suitable mouth / eye protection
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**Standard-ANTT**
- Hand cleaning
- Non-sterilized gloves. Sterilized gloves are worn if key-parts must be touched
- Personal protective equipment
- Scrubbing IV hubs etc.

**Aseptic Field Selection & Management**

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**Non-Touch Technique**

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

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

**Decontamination**
Let’s test the ANTT-Approach on administering an antibiotic into a peripheral cannula

ANTT RISK ASSESSMENT:
‘To maintain asepsis of Key-Parts and/or Key Sites, does the main aseptic field require Critical Management?’
(i.e. Only sterilized and aseptic equipment can come into contact with the aseptic field).

ANSWER: No it doesn’t. There are only a few small Key-Parts & connecting a syringe into a port is technically very simple.

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Let's test the ANTT-Approach on administering an antibiotic into a central line

**RISK ASSESSMENT:**
‘With Standard-ANTT, can I ensure aseptic Key-Parts only come into contact with other aseptic Key-Parts or Key-Sites’?

*i.e. By using a general aseptic field, non-touch technique and caps and covers (Micro Critical Aseptic Fields) to protect Key-Parts*

**ANSWER:** Yes. There are only a few small Key-Parts & connecting a syringe into a port is technically very simple.

www.the-antt.org
But by this assessment, practice is exactly the same for central line access as peripheral access....is that right?

Yes. That’s why the picture didn’t change. The equipment and technical challenge is identical for both routes. So why would the technique be different?

In ANTT the focus is always on the technical difficulty of the procedure. Not the patients diagnosis or type of IV access.

Central IV access

Peripheral IV access

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But I’ve always used a ‘Sterile Technique’ for central access!

For peripheral and central IV access, there is NO need or value in wearing sterile gloves unless you need to touch a Key-Part.

It’s not any more difficult to connect these two Key-Parts for central lines as it is for cannulas.

The only reason to wear sterile glove is if you are not competent to protect Key-Parts by using caps and covers etc. and a non-touch technique.
Aseptic practice is further standardised by:

Using step by step picture based **Clinical Guidelines** to standardise the common aseptic procedure.

These guidelines will be displayed as practice prompts in clinical areas and compliance is mandatory.

Please take a look at the IV guideline ......
Preparing and administering an IV medication using Standard-ANTT

**Principles of ANTT**
- Protect key-parts & sites at all times by:
  - Risk assessment.
  - Effective hand cleaning.
  - A non-touch technique.
  - Using appropriate infective precautions.

**ANTT**
Aseptic Non Touch Technique

**Peripheral & Central Intravenous Therapy (Preparation & Administration)**

1. Clean hands with alcohol hand rub or soap & water
2. Clean tray according to local policy - creating a general aseptic field. While it dries...
3. Gather equipment place around tray
4. Clean hands with alcohol hand rub or soap & water
5. Apply non sterile gloves (use sterile gloves if you must touch key-parts)
6. Open equipment, prepare IV injections protecting key-parts using non-touch-technique (NTT)

**If IV port is exposed and gloves are not contaminated**

- Scrub key parts
  - Using NTT, use a 5% isopropyl alcohol wipe.
  - Rinse the port tip for total of 30 seconds using different areas of the wipe.
  - Then wipe away from the tip.
  - Allow to dry for 30 seconds.

**If IV port is not exposed and/or gloves are contaminated, clean hands & re-glove**

- Clean tray according to local policy
- Dispose of gloves then immediately...
- Clean hands with alcohol hand rub or soap & water

**Documentation**

- Administer drugs using NTT
- Dispose of sharps & equipment

Type your Hospital or Community name here

www.the-antt.org
Step 1

- Clean your hands effectively with soap and water or alcohol hand rub. If you’ve just done this after leaving another patient or location then you don’t have to repeat at this stage.

- Use the 6 stage hand washing technique shown later in this presentation.

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Step 2

- With clean hands clean all the surfaces of your plastic tray thoroughly according to local policy.

- Clean the inside first. Then the outside.

NB: These large plastic trays are now the standard aseptic field for all IV therapy. Paper trays are now banned for aseptic field use.

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Step 3

- Whilst the tray dries, gather all your equipment, medications etc., and place them around the tray
Step 4

• Now you have cleaned your tray and gathered your equipment you can perform your final hand clean before preparation.

• Clean hands with alcohol hand rub or soap & water (Depending on clinical circumstances & local policy).

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Effective hand washing technique (Soap & Water or alco-gel).

Palm-to-palm

Palm over back of the hand with interlocking fingers. Swap hands

Palm-to-palm, interlocking fingers

Rubbing of backs of fingers into palms

Rotational rubbing of thumb clasped over opposite palm, swap hands

Rotational rubbing of fingers into palms, swap hands

NB: It only takes 20-30 seconds to do this well
So what are the hand cleaning steps again?

Don’t move on until you can remember them – you will be assessed and observed.

Use the same technique whether you are cleaning your hands with soap and water or using alcohol hand rub.

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Step 5

- Put on non-sterile gloves

Glove wearing at the drug preparation stage is necessary to protect the clinician from drug exposure (COSHH regulations). It also helps protect the patient should you inadvertently touch the Key-Parts.
Step 6

- Open equipment and prepare drugs. Protect Key-Parts using non-touch-technique.

- Touch non Key-Parts with confidence.

- After drug prep - **go straight to the patient.** Do not contaminate your gloves.

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A small point….but one many people ask

“What is and what isn’t permitted in the aseptic tray”?

Ideally, nothing goes in the tray which isn’t required for the procedure

However, in a well organised tray, one might include an unopened alcowipe or syringes protected in their paper packaging.

Remember, for Standard-ANTT you are aiming for asepsis of the Key-Parts not sterility or asepsis of the whole procedure area.
This would be ideal – the Key-Parts are protected
because…

• The paper wrapping is dry and likely to be aseptic
• The key-Parts are protected by ‘Micro Critical Aseptic Fields’
• The aseptic field is organised
Step 6a

- Expose the patients IV access port, ensuring free unrestricted access

- By the way. If you do this before Step 1 you save yourself time because you can skip Steps 6b to 6d.
Step 6b

• But, if you had to expose the patient’s IV access at this stage you will need to re-establish the asepsis of your hands

• Dispose of your gloves
Step 6c

- Re-clean your hands with alcohol hand rub or soap and water

(Cleaning hands after glove removal is vital because wearing gloves encourages the growth of potentially pathogenic micro-organisms naturally found on and in your skin).

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Step 6d

- Re-apply non-sterile gloves
Step 7

• Clean Key-Parts (in this instance the patient’s IV access port):
  — With a large wipe of 2% Chlorhexidine & 70% alcohol
  — Apply friction by scrubbing the port tip hard with different parts of the wipe for 20 seconds.
  — Allow to dry - this usually takes about 20 seconds

NB: If Key-Parts aren't dry they are not aseptic.

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Step 8

- Administer drugs using a non-touch-technique

(Non-touch-technique means not touching the Key-Parts and not letting the Key-Parts touch anything else. Aseptic Key-Parts should only touch other aseptic Key-Parts)
Step 9

- Dispose of sharps & equipment
Step 10

- Clean your tray

(Not doing so is a perfect way of cross-infecting patients, and your colleagues)
Step 11

Dispose of gloves.
Step 12

- Clean hands with soap & water or alcohol hand rub

*The clock is now ticking.....*

After removing gloves (when your hands are at their dirtiest) you need to clean your hands immediately - before touching and contaminating the environment or other patients.
The following *practices and equipment are prohibited* in this organization during ANTT procedures.
• Do not **DROP** your equipment into your tray

(There is a risk some Key-Parts will touch the tray)

• Key-Parts should **NEVER** be touched

• Only Key-Parts should touch other Key-Parts
Don’t leave Key-Parts unprotected and exposed

Key-Parts should always be protected (By Critical Micro Aseptic Fields).

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NEVER flick off Key-Parts such as needles or caps

(Your gloved thumb is likely to touch the Key-Part)
• Don’t do this to identify your drugs (The bungs often leak around the needle making things wet - so no longer aseptic).

• It also increases risk of needle stick injury and would be dangerous if they were to fall out the tray).

• Use labels if you need to identify syringes.

www.the-antt.org
Paper trays are banned
(Because they do not provide adequate sized aseptic fields that can be controlled (cleaned).

Use plastic trays
Clean well before and after use
(According to local policy)

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What now?

Answer the Questionnaire, take this with you to your assessment.

Copies of your Questionnaire and Assessment form will be sent to SaAS Education.

QUESTION 5

PICTURE

Plastic spike for drawing up

www.the-antt.org
For the latest ANTT guidelines and updated information please see:

www.the-antt.org

enquiries@the-asap.org

Thank you

It’s now down to you