ASEPTIC TECHNIQUE IN THE NICU

Although the principles of aseptic technique are applied to all invasive procedures the level of practice changes depending on a risk assessment. A risk assessment is required to:

- Identify the key part (the part of equipment that must remain sterile and must not contact other key parts or key sites)
- Identify the key site (the area on the patient that must be protected from micro-organisms)
- Determine the type of aseptic technique to use - either Standard or Surgical (refer to Infection Control Manual - Framework for Aseptic Technique (Table 1))
- Determine the type of aseptic field to use - either General or Critical
- In the NCCU aseptic technique is a minimum 2 person procedure. See the following guides:
  - Blood Culture Guideline
  - Peripheral Cannulation
  - Peripheral and Central Intravenous Therapy
  - Venepuncture
  - Wound Care
  - Urinary Catherisation

STANDARD PRECAUTIONS
- Performing hand hygiene (5 moments for HH)
- The use of personal protective equipment
- The use of aseptic non-touch technique
- The use of sterile equipment
- The safe use and disposal of sharps
- Routine environmental cleaning. Decontaminate the working surface area with 70% alcohol solution prior to equipment set-up.
- Reprocessing of re-useable medical equipment and instruments
- Correct waste disposal

PROCEDURES FOR ASEPTIC TECHNIQUE

SURGICAL
- Insertion of central lines – UAC, UVC, Longlines, short CVC.
- Intercostal catheter insertion.
- Ventricular tap.

STANDARD
- Line management of central lines – i.e. Fluid/line changes, administration of medications.
- Lumbar puncture.
- IDC insertion.
- Wound dressings/changing drainage devices
- Peripheral line insertion
- Removal of central lines and drains
- Tracheostomy care
- Percutaneous dialysis (see PMH Renal Unit Protocols)
- Administering a blood transfusion
- Sampling from all lines

SKIN CLEANING FOR STANDARD ASEPTIC TECHNIQUE

> 27 weeks - use BD persist swabs (1% chlorhexidine / 75% alcohol). Allow to dry for 30 secs. Wash off excess solution after the procedure with sterile water or saline to prevent chemical burns.

< 27 weeks - use Povidine - iodine 10% solution swab. Allow to dry for 1 min then wash off all solution with sterile water or saline before the procedure. This is to avoid damaging the immature skin of these infants as chemical burns can be caused with the 70 - 75% alcohol contained in chlorhexidine swabs. It is still necessary to wash excess povidine - iodine 10% solution off as iodine can be absorbed through their immature non keratinised skin.

CLEAN PROCEDURES (SOME PROCEDURES WILL REQUIRE A SECOND PERSON)

>27 weeks – use Chlorhexidine 1% / alcohol 70% swab and allow to dry for 30 secs.

<27 weeks – use Povidine - iodine 10% swab and allow to dry for 30 secs. Wash off excess after the procedure. Once an Infant < 27 weeks gestation reaches 2 weeks of age, Chlorhexidine 1%/alcohol 70% swab may be used for IVI insertion if skin integrity has been maintained.

STANDARD PRECAUTIONS

• Performing hand hygiene (5 moments for HH)
• The use of personal protective equipment
• The use of aseptic non-touch technique
• The use of sterile equipment
• The safe use and disposal of sharps
• Routine environmental cleaning. Decontaminate the working surface area with 70% alcohol solution prior to equipment set-up.
• Reprocessing of re-useable medical equipment and instruments
• Correct waste disposal

FURTHER READING (WNHS INFECTION CONTROL)

Infection Control Aseptic Technique (ANTT) Resources
Hand Hygiene
Cleaning, disinfectant and sterilisation
Occupational exposure to blood and body fluids