# SLHD: Royal Prince Alfred Hospital Policy

## Disinfection and Decontamination of Feeding Equipment

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<tr>
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<th>RPAH_PD2017_032</th>
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<tr>
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<td>Neonatal Clinical Nurse Consultant, Infection Control Consultant, Lactation Specialist, Clinical Educators, Nurse Unit Manager</td>
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Disinfection and Decontamination of Feeding Equipment

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SLHD – RPA - Policy Disinfection and Decontamination of Feeding Equipment

1. Introduction

Milk is an excellent medium for growth of bacteria, and can also harbour blood borne viruses. Therefore, it is essential that equipment used for the purpose of collecting breast milk and feeding premature, sick and or healthy newborns to be cleaned, submitted to sterilization and high level disinfection in between use by different patients and thoroughly cleaned in between uses by same patient.\(^6, 10, 12\) Healthcare facilities (HCFs) need to ensure that all healthcare workers (HCWs) are provided with clear instructions on the equipment used, such as: single use, single patient use, or reusable, and their correct processing, in order to provide education to parents.\(^7\)

Following a small review of two hospitals by the Department of Health Victoria, it was found that HCFs were recommending different levels of processing for feeding related equipment and incorrectly classified these devices as 'non-critical' in the past.\(^13\) It has been accepted since, that infant feeding equipment and breast pump collection equipment are classified as semi-critical items, under the Spaulding Classification (1968) and when reused by multiple mothers and infants in a hospital environment, require sterilization or a minimum high level disinfection after each use.\(^3\)

At RPA, reusable bottles and pacifiers are used, together with ‘single patient’ disposable breast pump collection equipment and ‘single patient’ use reusable nipple shields. Cleaning and thermal disinfection are applied to all teats, bottles and feeding equipment reused by different patients and cleaned in between uses for all expressing milk equipment, which are currently discarded within 24 hours from opening. Mothers with infants at NBC receive instructions by nursing staff on how to perform the cleaning of milk expressing equipment in between each use, when to discard the milk expressing disposable kits and clean nipple shield in hospital and home.

Chemical disinfectants and commercial home sterilisers, including boiling and microwave methods, are not in use at RPA NBC. Therefore, they will not be included in this policy.

2. The Aims / Expected Outcome of this Policy

- Prevent contamination and transmission of infection, by appropriate management and monitoring of all equipment used for the purpose of expressing breast milk and feeding infants.
- Support healthcare professionals in preventing cross contamination and dissemination of diseases amongst premature and sick neonates, by performing appropriate disinfection of feeding equipment and disseminating information towards empowering families of premature and sick newborn infants on following procedure correctly.

3. Risk Statement

SLHD Enterprise Risk Management System (ERMS) Risk # 256

- Cross contamination of feed due to incorrect cleaning and disinfection of feeding related equipment.
- Breastpump expressing kits inside the hospital setting can lead to increased mortality and co-morbidity in infants.
4. **Scope**

Cleaning and disinfection of reusable bottles, teats, caps, covers and dummies is performed daily by ward assistants at RPA NBC.

It is responsibility of all staff members caring for families within NBC to become familiar with this procedure, ensure its compliance and complete the “Expressing Pump kit” stamp daily in the observation charts.

5. **Implementation**

All healthcare professionals at NBC RPA should be familiar with this procedure, which is included on the induction material provided to nursing staff and ward assistants.

6. **Key Performance Indicators**

- Audits and data collection on equipment and practices are to be constantly monitored within the unit, such as temperature governance records from disinfector.
- NSW Health requires all healthcare workers to comply with principles of Infection Prevention and Control policies.\(^{10}\)
- Accurate documentation in the observation charts stating the date milk expressing kit has been supplied to mothers and education on cleaning in between uses provided.

7. **Procedures**

Feeding related equipment, such as: bottles, teats, pacifiers, teats and milk expressing collection kits are classified as “semi-critical”, which according to Spaulding Classification (1968) requires “high-level” thermal or chemical disinfection. (National Health and Medical Research Council (NHMRC) 2010, section BI.5.6)

Milk expressing and collection kits should not be reused by different mothers unless they have been sterilized in the sterile services department between different users. When used by the same mother, a detergent wash followed by thorough rinsing and drying after each use gives acceptable decontamination for most circumstances, as long as it is performed correctly.\(^{5,8,11}\)

**Key Points**

- Items undergoing disinfection must be thoroughly cleaned/decontaminated and rinsed prior to disinfection
- Feeding related equipment, such as bottle parts, teats, milk expressing kits, nipple shield and pacifiers must not be washed in hand wash basins, but inside their storage containers
- Mothers and staff must clean and reprocess the feeding related equipment in the ‘feeding room/milk dispensing room’
- Mothers staying in the RPA NBC Hostel must reprocess their feeding equipment in the feeding room inside the RPA NBC unit
- Containers used to store the milk expressing collection kits should be single patient use, washed daily, rinsed and thoroughly dried. These containers should be discarded, when no longer required by the one mother
• Milk expressing collection kits must be discarded daily and used only for 24 hours

• Prior to cleaning equipment don Personal Protective Equipment (PPE) as per standard precautions

• Neutral detergent is used for the cleaning of feeding equipment and must be cleaned and stored in the feeding room

• All feeding equipment parts are to be inspected before processing and discarded if signs of discoloration or damage is present

• Only neutral detergent to be used for the decontamination process. Single use detergent sachets are available and should be discarded after each use.

Disclaimer: Single patient use bottle brushes are not used or encouraged to be used to disinfect or decontaminate any feeding related equipment at RPA NBC.

Please Note: The Nurse Manager should be notified immediately if there are errors in the disinfecter cycles or process. When there is a disinfection failure, the load should be sent to CSSD.

All steps for procedures for cleaning and disinfection below were adapted from the reference Policies: PR2013_004 Decontamination of Breast Milk Collection Kits, Nipple Shields, Teats and Pacifiers by Newborn Care Centre-NSRHS and NSW Health. PD2013_015 Women’s and infants: Breastmilk in the ward areas- identification, storage, administration and cleaning of breast pump kits.

7.1 Cleaning in between uses of non-disposable ‘Single Patient’ use nipple shield & disposable ‘Single Patient’ use breast pump expressing kit

Nipple Shield
Nipple shield is a “single patient” non-disposable item. The nipple shield is provided in a “zip lock bag” with attached instructions on how to reprocess the nipple shield, and the bag can be used for:

Storage in between uses, only when clean and dry

Whilst in hospital, the nursing staff will instruct mothers on how to clean and store their own nipple shields.

Procedure

• In the feeding preparation room, nipple shields must be rinsed immediately after use with cold running tap water
• Wash with warm soapy water and ensure the water flows through the holes
• Once clean, the nipple shield should air dry or be dried with a clean disposable paper towel
• Once dry, stored in a clean container with a lid, or “ziplock bag” provided
• The storage container/ ziplock bag must be labelled with mothers/infant’s name
• Mothers at home with their infants in the NBC, are instructed to sterilise the shields daily at home
• Nipple shields should be taken home with mothers at discharge
Disposable ‘single patient’ use breast pump expressing kit

Nursing staff and the lactation teams, instruct parents on how to reprocess their own breast pump expressing kit at RPA NBC (see Appendix 1). This task is supervised and signed daily at the infants’ bedside chart, by the bedside nurse caring for the family.

Procedure
• The extension tubing from the breast pump expressing kit should not be washed, but wiped with a clean cloth in between uses and then dried
• Moisture should not enter the tubing, but if this occurs, the tubing should be discarded immediately
• Any equipment touching the floor should be discarded
• All equipment in direct contact with breast tissue and milk, should be disassembled and rinsed with cold water immediately after use, in order to remove excess milk residue
• Using the storage container for cleaning of the breast pump expressing kit:
  o all parts are immersed into warm soapy water (only neutral detergent to be used), thoroughly washed and rinsed in cold running water, in order to remove milk residue left
  o storage container for the milk expressing kit is to be kept clean and dry
• The storage container must be clearly labelled with the mother’s/infant’s name, cleaned daily, kept dry and disposed when the infants is discharged from RPA NBC.
• All cleaned parts are dried with clean disposable paper towel.
• The breast pump expressing kit is to be stored at infant’s bedside in a closed lid container.

7.2 Disinfection of Reusable: bottles, teats, bottle tops, caps, dummies

Bottles, teats, tops and caps

Procedure
• Equipment must be disassembled and excess milk rinsed in cold running water
• Milk residue is removed by immersing parts into warm soapy water, thoroughly washed (only neutral detergent to be used) and rinsed
• Teats are turned ‘inside out’ and water squirted through the holes in the teat
• All parts are thoroughly rinsed in clean water
• All parts are to be immersed in neutral detergent and warm water and then rinsed
• Follow manufacturer’s instructions for use of disinfector.
• All parts are to be placed in appropriate receptacle tray in the disinfector
• Before unloading the disinfector, perform hand hygiene and wear gloves
• Clean teats are to be assembled inside a bottle
• Any bottle or teat with signs of discolouration and or distortion must be discarded.

Dummies

Dummies are thermally disinfected daily

Procedure
• Prior to disinfection:
  o Dummies must be rinsed in cold running tap water
  o Then immersed into warm soapy water and rinsed
  o Follow manufacturer’s instructions for use of disinfector.
• Placed in appropriate tray in disinfector
• Before unloading disinfector, perform hand hygiene and don gloves

- All bedside storage containers for dummies are to be discarded daily by ward assistants, kept clean, dry and dated
- Dummies are dispensed with the infant at discharge
- Dummies are to be inspected after processing for any evidence of damage, discolouration or leakage and discarded

7.3 Reusable breast pump expressing kit

**Procedure**

- Each part of the reusable breast pump expressing kit must be labelled prior to use, including the tubing (ensure label does not come off after disinfection)
- The extension tubing from the expressing kit does not require washing. However, it can be wiped clean, dried and stored dry at bedside in between uses. Moisture should not enter the tubing, but if this happens, the tubing must be discarded
- Any equipment touching the floor should be discarded
- All equipment in direct contact with breast tissue and milk, should be disassembled and rinsed in running cold water immediately after use
- Using the storage container for milk expressing collection kit:
  - all parts are thoroughly washed and rinsed in cold running water,
  - immersed into warm soapy water (only neutral detergent to be used) and rinsed
  - storage container for the milk expressing kit should also be kept clean and dry
- All labelled parts of breast pump expressing kit must be placed in appropriate tray in disinfector

*Follow manufacturer’s instructions for use of disinfector*
- Perform hand hygiene and wear gloves before unloading disinfector
- If any reusable breast pump collection part is noted to be unlabelled at any time during disinfection they must be send to CSSD for reprocessing
- Once disinfected and dry, the breast pump expressing kit is to be stored at infant’s bedside in a clean closed lid container
- Storage container used for the breast pump expressing kit must be clearly labelled with the mother’s/infant’s name, cleaned daily, kept dry and disposed at infants discharge from RPA NBC
- At discharge, all reusable breast pump collection parts must be send to CSSD.

7.4 Storage of equipment after disinfection

Disinfected feeding equipment should be kept in a refrigerator / or closed cupboard inside a closed lid container and stored dry \(^{10,14}\)

When unused after 24 hours from processing, decontamination and/ or disinfection must be repeated. \(^5\)
7.5 Validation

Also called performance check, the validation of the disinfection process must be performed by the operator of the machine and after each load.

The validation is achieved by:
- Performing close monitoring of disinfection temperatures achieved and registered on printouts at each load
- Visual inspection of each load
- Visual inspection of disinfectors internally and externally to ensure all parts of the machine are clean and functional
- Reporting to management any irregularity in the process or disinfectors
- Using thermal control strips and completing Meditrax® audit forms in the absence of printouts and at each load
- Completion of the inspection checklist daily
- Act upon irregular disinfection process, by reporting and sending the load to CSSD.

8. Definitions

<table>
<thead>
<tr>
<th>Breast pump expressing kit</th>
<th>Equipment used for the purpose of expressing breast milk. They can be reusable or disposable “single patient” use</th>
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<tr>
<td>Sterilising Department</td>
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<tr>
<td>Disinfection</td>
<td>Thermal or chemical destruction of pathogenic and other types of microorganisms. Disinfection is less lethal than sterilization because it destroys most recognized pathogenic microorganisms but not necessarily all microbial forms (e.g., bacterial spores).</td>
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<tr>
<td>Decontamination:</td>
<td>According to OSHA, “the use of physical or chemical means to remove, inactivate, or destroy blood borne pathogens on a surface or item to the point where they are no longer capable of transmitting infectious particles and the surface or item is rendered safe for handling, use, or disposal”. In health-care facilities, the term generally refers to all pathogenic organisms</td>
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<tr>
<td>Nipple shield</td>
<td>Silicone covers for nipple and areola to assist attachment of infant to breast for breastfeeding</td>
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Sydney Local Health District – Royal Prince Alfred Hospital

Policy No: RPAH_PD2017_032

Date Issued: October 2017

Compliance with Policy is Mandatory

### Feeding related Equipment

all equipment used for the purpose of expressing breast milk and feeding infants either expressed breast milk or infant formula e.g. breast pumps, membranes, valves, breast shields, bottles and teats.

### Reprocessing

method to ensure proper disinfection or sterilization; can include: cleaning, inspection, wrapping, sterilizing, and storing.

### Reusable Equipment

means a device that is approved for use by the Therapeutic Goods Administration (TGA) for more than one episode of care and for reuse on multiple patients following appropriate reprocessing.

### Semi-critical Item

is an item according to the Spaulding Classification (1968) that has contact with intact non sterile mucosa or non-intact skin

### Single Patient Use

can be used multiple times on one patient. Single patient use devices are able to be reprocessed and reused on the same patient in accordance with the manufacturer's instructions.

### Single Use

can only be used once and should then be disposed of. Single use items may be labelled as: ‘single use’, ‘disposable’ or with ‘symbol ☐’

### 9. References


5. Gilks J, Price E, Hateley P, Gould D, Weaver G. 2012. Pros, cons and potential risks off and on-site decontamination methods used on neonatal units for articles indirectly associated with infant feeding, including breast pump collection kits and neonatal dummies. Journal of infection Prevention 13; 16. Retrieved from: [http://bji.sagepub.com/content/13/1/16](http://bji.sagepub.com/content/13/1/16)


14. Women’s and Babies: Breastmilk in the ward areas- Identification, storage, administration and cleaning of breast pump kits. RPAH_PD2013_015.


9.1 NSW Health Policies


10. National Safety and Quality Health Service (NSQHS) Standards

- Standard 1, Governance for Safety and Quality in Health Service Organisations
- Standard 2, Partnering with Consumers
- Standard 3, Preventing and Controlling Infections
- Standard 15, Corporate Systems and Safety

Compliance with Policy is Mandatory
Appendix 1

Instructions for the care and cleaning of your breast pump kit

For protection of your infant, this breast pump kit must be thoroughly cleaned after each use by following:

- Wash hands thoroughly before handling equipment
- Place your expressed breastmilk into a syringe or bottle, and then clean the expressing kit
- Dismantle the breast pump kit by unscrewing the bottle from the breast shield
- Rinse all parts that come in contact with breastmilk (not the tubing), in cold water
- Use the container given to you for storage to wash the breast pump kit in warm water, and add a small amount of detergent from the sachet
- Rinse thoroughly in warm water and be sure to remove all traces of your milk and soap
- Dry the parts with the clean disposable cloth provided
- Dry container with paper towel
- Store kit parts in container with lid on for use next time
- Discard the expressing kit every 24 hours and ask your midwife for a new one

Labelling, storage and checking of breastmilk

- Your infant should have an identification label on each ankle to ensure we can correctly identify him/her. If you find that one has fallen off please notify your midwife /nurse so that it can be replaced.
- The container that holds your expressed breastmilk needs to be labelled with a sticker that has your name and your infant’s name and medical record number – the same details that are on your infant’s identification label. Write date and time you expressed your milk on the label
- If you are not going to be giving your breastmilk at the next feed, it should be stored in the fridge.
- If you are expressing in the wards and have your infant in the NICU, your breastmilk should be then stored in the ward fridge until it can be taken to the nursery
- Once in the nursery, you and a nurse will check that your milk goes into the right container by signing with you the Safe Storage of Breast Milk Form
- Your breastmilk can be then kept for 48 hours in the fridge and 3 months in the fridge-freezer
- The container for storage of your breast pump kit needs to be labelled with you or your infants name

Immediately before giving expressed breastmilk to your infant, two midwives / nurses or midwife and mother must check that it is correctly labelled with the infant’s name, medical record number, date and time of expression. Your infant’s feed chart will be signed by two nurses.

This information sheet was adopted from: NSW Health.PD2013_015. Women’s and infants: Breastmilk in the ward areas- identification, storage, administration and cleaning of breast pump kits.