



PROCEDURE	
Infant Feeding - Formula	
Scope (Staff):	Nursing, Allied Health
Scope (Area):	PMH

This document should be read in conjunction with this [DISCLAIMER](#)

Aim

To prevent hospital acquired infections through safe preparation, handling and administration of infant formula.

Risks

Powdered infant formula is not a sterile product and may be contaminated with pathogens that can cause serious illness for vulnerable infants if not prepared, handled and administered correctly.^{1, 2}

Definitions

Single Use: equipment that has been approved for use by the Therapeutic Goods Administration (TGA) for only one episode of use on one patient only and is to be disposed of immediately after that use.

Single Patient Use: equipment has been approved for use by the TGA for more than one episode of use on the one patient only. Unless the manufacturer specifies otherwise, equipment labelled 'single patient use' can be reprocessed between uses for the same patient.

Reusable Equipment: means a device that is approved for use by the TGA for more than one episode of use and for reuse on multiple patients following appropriate reprocessing.

Key Points

- Infant formula requires accurate reconstitution and hygienic preparation to ensure its safety and is to be prepared in the designated infant formula room (IFR) by trained food handling technicians only.³
- Fortified and specialised formulas must be ordered by the ward dietitian in consultation with the treating medical team.
- Parents/carers are strongly advised to use hospital supplied *single-use* bottles/teats and infant formula where possible as sterilisation of personal equipment is not supported at the hospital.

Breastfed Infants

- For infants who are usually breastfed consent must be sought from the mother to administer formula if:
 - the infant requires formula for medical reasons
 - the infant's mother may not be available to breastfeed her baby
- The parent is to sign the nursing admission documentation for their 'consent for infant formula'. Where the mother is not present to give written consent, the nurse is to obtain verbal telephone consent and document date/ time consent given in the patients' medical record.

ORDERING FEEDS

Standard formula

- Ordered on the daily feed order list, and includes:
 - Infant Formula (2.7 - 2.9kJ/mL)
 - Thickened Infant Formula
 - Boiled Water
 - Preterm Formula (Neonates)
 - 24kcal/30ml Infant Formula (Neonates; 3.4kJ/mL)
 - 28kcal/30ml Infant Formula (Neonates; 3.9kJ/mL)
 - Soy Infant Formula
 - Lactose Free Infant Formula
- Feeds are routinely delivered to the wards at 10.30 and 13.30. Standard infant formula can be ordered as soon as the child is admitted by ringing the Infant Formula Room (IFR) between 0700 and 15.30 and leaving a telephone message.
 - When ordering via answering machine state: Time of call, child's name, formula type, ward, volume and number of feeds required.

Special formula

To be ordered via the dietitian only

- ***Weekdays*** 08.30-17.00hrs: contact ward dietitian
- ***Weekend*** 08.30-17.00hrs: contact the on-call dietitian via switch.
- ***After hour's***: a range of special feeds is available in the after-hours fridge (see [out of hours](#) stock below)
 - If a patients' usual specialised formula is not available the treating medical officer will decide if an alternative formula is clinically appropriate until the feed can be ordered the following day.
 - On the rare occasion a particular special formula is unavailable but clinically necessary, the on-call dietitian should be contacted for advice.

- **Patients with metabolic disorders:**
 - S.O.S carbohydrate powder is available in the Emergency Department with instructions for reconstitution. The dose will be determined by the Metabolic Consultant.

EMERGENCY SUPPLIES/OUT OF HOURS STOCK

- Order standard formula via IFR answering machine service as above
- Interim supplies can be obtained from the stock or after hour’s refrigerator on Level 6 Charles Boan Building until deliveries occur.
- Emergency supplies can be obtained by paging an orderly
- Extra supplies of infant formula are stocked in some ward areas and the after-hours fridge as below:

After Hours Fridge: Standard Stock		Extra Ward stock:		Location
Infant Formula	500mL x 1	Infant Formula	500mL x 1	5C
Thickened Infant Formula	250mL x 2	Thickened Infant Formula	500mL x 1 150mL x 2	5A 8A
Lactose Free	250mL x 4	Lactose Free	500mL x 1 150mL x 2	5A 8A
Soy Formula	250mL x 4	Soy Formula	500mL x 1	5A
EleCare	250mL x 1	EleCare	250mL x 1	6B
Pepti-Junior	250mL x 2	S.O.S powder	Sachets	ED
* Ketocal 4:1 LQ (Tetrapak)	200mL x 6			
* Ketocal is for emergency use only. Contact dietitian at 08.30 the following day if Ketocal is used out of hours so that the patients’ usual formula can be ordered. Refer to Dietitian instructions for dilution and monitoring requirements. Refer also to Emergency Management Guidelines				

Patients Own Formula

- The IFR will prepare patient-own formula at the request of the ward on condition the tin provided is unopened, within date and is labelled with the patient details. Any unused formula is to be collected from IFR on discharge and returned to the parent/carer.
- If it is unavoidable to prepare a formula feed on the ward (i.e. patients admitted after hours and no alternative feed available) the parent or nurse can prepare a feed.
 - Provide parent with the health facts: [Powdered Infant Formula Preparation in Hospital](#) and appropriate equipment
 - The nurse is to prepare the feed in the ward milk room using aseptic technique. The nurse must ensure the dietitian is informed the following day.

Feed requirements

- Infants up to 6 months of age require approximately 100kcal/kg/day - some will require more, some less. As with breastfed infants bottle feeding to demand is appropriate for most healthy, term infants.
- Infants with specific medical and nutritional requirements must be referred to the dietitian by the treating medical team.
- All infants less than 12 months admitted to hospital are to commence a fluid balance chart. Document volumes of feeds taken and monitor wet/dirty nappies.
- Infants who are sick may take less than usual volumes or for clinical reasons require restricted fluid intake. Monitoring and measurement of all intake and output may be required for these infants, including weighing of all nappies and regular weight measurements as requested by the treating medical team and/or dietitian.

Approximate feed volumes for healthy infants: Guide only²	
1 to 4 days old	<ul style="list-style-type: none"> • Commence at 30–60 mL/kg/day and increase over the next few days
5 days old to 3 months	<ul style="list-style-type: none"> • 150 mL/kg/day • Preterm, may require up to 180–200 mL/kg/day
3 to 6 months	<ul style="list-style-type: none"> • 120 mL/kg/day
6 to 12 months	<ul style="list-style-type: none"> • 100 mL/kg/day • Some infants may reduce to 90 mL/kg/day • Infants of this age also take solid foods

Warming Infant formula¹

Bottles of sterile ‘ready to feed’ pre-term formulas may be available in some wards/units (neonates, infant ward, PICU) and are stored at room temperature. There is no requirement to warm these feeds except for parent/infant preference.

Feeds are only to be removed from the ward fridge immediately before needed and warmed in the ward milk room.

Do not use microwave oven for warming feeds.^{1, 2}

- Wash hands before preparing feed.
- Decant volume of required feed into a sterile disposable bottle and replace lid.
- Stand the bottle in a jug/container of warm tap water (do not use boiling water) for no more than 15 minutes. Ensure the water level does not reach the top of the bottle/ teat. Periodically shake or swirl the feed to ensure even warming.
- Before attempting to feed the child, mix the feed thoroughly and test the milk temperature with a few drops on your inner wrist.
- Use the feed immediately and discard any feed that has not been consumed within one hour.²

Cleaning Feeding Equipment

Milk is an excellent medium for the growth of bacteria and poorly cleaned feeding equipment can be a source of infection:⁴

- Hospital supplied sterile bottles and teats are for *single use* only and are to be discarded at the end of each feed.
 - If non-disposable *specialised* bottles and teats and are to be used for the same patient during hospital stay, the equipment must be cleaned thoroughly after every feed.
 - *Note: Equipment is not to be washed in patient sinks or baby baths.*⁴
 - Provide parent with equipment and cleaning instruction as follows:⁴.

Equipment

- A clean, plastic cleaning bowl
- Mild hospital detergent
- Bottle brush (single-patient use) or cotton buds
- A container with a lid for storing equipment
- Patient labels (containing UMRN, DOB, Name)

Cleaning Instructions

- Place bowl in sink
- Separate all parts
- Rinse parts thoroughly under cold running tap water over the bowl – use bottle brush or cotton tips to remove milk residue from grooves and teat.
- Discard dirty water
- Fill bowl with warm water and add mild detergent
- Wash all pieces of equipment
- Rinse thoroughly under hot running tap water
- Leave equipment to drain and air dry on paper towels
- Once dry, store in lidded container; label container with patient sticker.
- Clean wash bowl with hospital detergent wipe after each use.

Reprocessing

- *Single patient use* equipment is to be discarded on patient discharge or when no longer required by the patient.
- For equipment that is TGA approved for re-use, clean as above and send to HSSD on patient discharge or when no longer required by the patient.

Related policies, procedures and guidelines
Operational Directive (OD 0369/12) - Reprocessing of Infant Feeding Equipment in Western Australian Healthcare Facilities
Nutritional Feeds Order Form (for discharge)

References
<p>1. World Health Organization, Safe preparation, storage and handling of powdered infant formula Guidelines 2007. Available from: http://www.who.int/foodsafety/publications/micro/pif_guidelines.pdf.</p> <p>2. National Health & Medical Research Council. Infant Feeding Guidelines for Health Workers. p.75. Canberra: NH&MRC; 2012. Available from: http://www.nhmrc.gov.au/files_nhmrc/publications/attachments/n56_infant_feeding_guidelines.pdf</p> <p>3. Food Standards Australia New Zealand, Standard 2.9.1 Infant Formula Products. FSANZ Canberra 2011.</p> <p>4. Department of Health Western Australia - Communicable Disease Control Directorate. Reprocessing of infant feeding equipment in health care facilities. Perth: Department of Health WA; 2012. Available from: http://www.health.wa.gov.au/circularsnew/pdfs/12865.pdf.</p>

Useful resources
Nutrition and Dietetics (CAHS Intranet link)
Powdered Infant Formula Preparation in Hospital (Health Facts: parent instruction)
Child and Antenatal Nutrition Manual. WA DoH 2014
Infant Feeding Guidelines – Information for health workers National Health and Medical Research Council (2012).
Infant Nutrition Council: Safe Preparation, Storage and Handling of Powdered Infant Formula (webpage)
Newborn Feeding King Edward Memorial Hospital - Clinical Guidelines <i>Section B: Obstetric and Midwifery Care, Section 8</i> (January 2012).

This document can be made available in alternative formats on request for a person with a disability.

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