Royal Hospital for Women (RHW)
NEONATAL BUSINESS RULE
COVER SHEET

Health
South Eastern Sydney
Local Health District

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FORMER REFERENCE(S)	RHW NCC LOP ANTINEOPLASTIC MEDICATIONS – ADMINISTRATION IN NEWBORN CARE CENTRE 2019 CEC High Risk Medicine Standard - Anticancer medicines 26 Feb 2024 CEC Handbook- CEC Infection Prevention and Control Practice Handbook SESLHD- Aspetic Technique SESLHDPD/271
EXECUTIVE SPONSOR	Sally Wise, Nursing Co- Director Neonatal Services Srinivas Bolisetty, Medical Co- Director Neonatal Services
AUTHOR	E Jozsa (CNS)
SUMMARY	To provide guidelines for the administration of antineoplastic medications used for neonates in Newborn Care Centre.
Key Words	Antineoplastic, hazardous drug, intravenous administration, oral administration

Antineoplastic Medication Administration (Neonate)

RHW CLIN104

Contents

Antineoplastic Medication Administration (Neonate)

RHW CLIN104

This Clinical Business Rule (CBR) is developed to guide safe clinical practice at the Royal Hospital for Women (RHW). Individual patient circumstances may mean that practice diverges from this Clinical Business Rule. Using this document outside RHW or its reproduction in whole or part, is subject to acknowledgement that it is the property of RHW and is valid and applicable for use at the time of publication. RHW is not responsible for consequences that may develop from the use of this document outside RHW.

Within this document we will use the term woman, this is not to exclude those who give birth and do not identify as female. It is crucial to use the preferred language and terminology as described and guided by each individual person when providing care.

1 BACKGROUND

The aim of this CBR is to provide guidelines for the safe administration of intravenous antineoplastic (cytotoxic) medications via peripheral intravenous cannula (PIVC), peripherally inserted central catheter (PICC) or other central venous access device (CVAD) and for the safe administration of enteral antineoplastic medications via intragastric tube (IGT).

NOTE:
Only health care professionals who have attained competency in safe administration, handling and waste management of hazardous drugs (as per institutional guidelines) should perform this procedure.
Competency is attained through eVIQ education portal and unit assessment, this is mandatory for staff members every 2 years.

2 RESPONSIBILITIES

2.1 Staff

2.1.1 Medical – identification of neonates requiring treatment, prescription of medication, monitoring neonates' response to treatment.

2.1.2 Nursing – to complete eVIQ online education, administration of antineoplastic medication, monitoring patient response.

2.1.3 Pharmacy- to dispense and transfer medication to NCC. Dispose of excess or expired medication.

3 PROCEDURE

3.1 Equipment

3.1.1 General (required for every administration)

- Personal Protective Equipment (PPE) (Appendix 1)

- Cytotoxic trolley; surface cleaned with neutral detergent
- Medication(s) to be administered in leak proof, sealable bags/containers (stored in fridge)
- Blue tray
- Cytotoxic label (Picture 1)
- Plastic-backed absorbent sheet (bluey) x 2
- Gauze square
- Hazardous/cytotoxic zip lock bag
- Hazardous/cytotoxic waste bag
- Spill kit

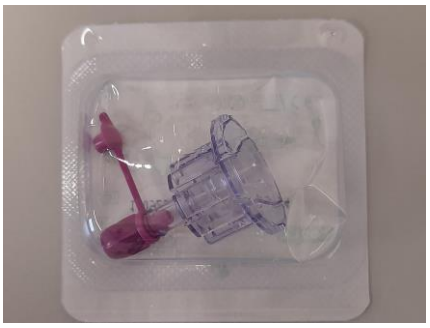
3.1.2 Intravenous administration

- Sodium chloride 0.9% label (sterile for PICC/CVAD)
- Sterile plastic sheet (only required for PICC/CVAD)
- Extension lines x 2
- Three way tap
- 10 mL syringe for flushing cannula before and after administration of medication
- 10 mL sterile sodium chloride 0.9% ampoule
- Drawing up needle
- 2% chlorhexidine + 70% alcohol swabs x3

3.1.3 Enteral administration

- Feeding syringe
- Drawing up device (Picture 2)
- Water for injection
- 2.5 mL feeding syringe

Picture 1



Picture 2

3.2 Clinical Practice

3.2.1 INTRAVENOUS ADMINISTRATION

3.2.1.1 Preparation

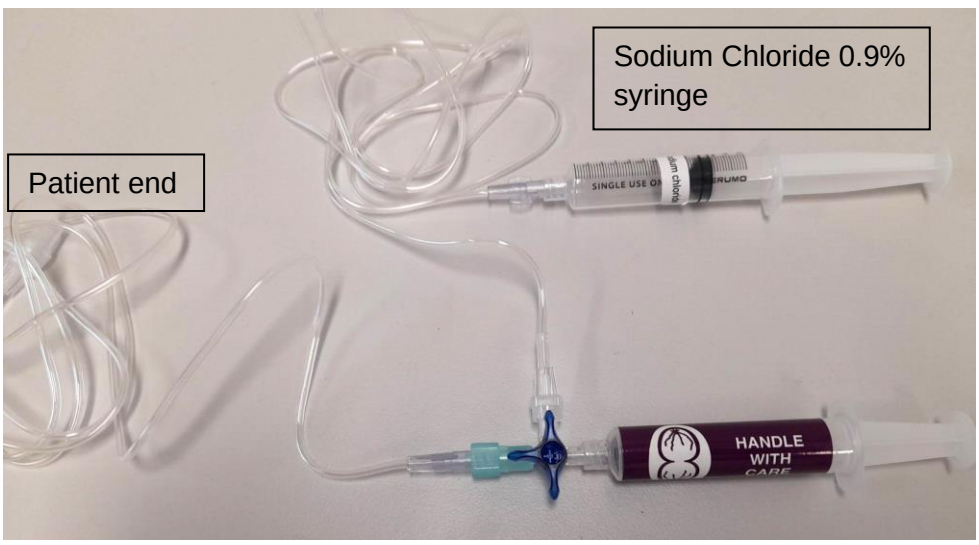
1. Consider patient history regarding previous side effects and adverse events.
2. Ensure the medication order is correct.

3. Transport medication to the patient in a sealed and labelled “Cytotoxic” container from medication room on a blue tray lined with a plastic backed absorbent sheet (bluey).
4. Ensure cytotoxic label attached to CVAD/PICC line or PIVC.
5. Ensure the CVAD/PICC line or PIVC is secured and sit can be visualised.
6. Perform hand hygiene and don cytotoxic PPE.
7. Place a plastic backed protective sheet (bluey) underneath the CVAD/PICC line or PIVC.
8. Check that the intravenous infusion flows freely or capped PIVC is patent.
9. Remove gloves and perform hand hygiene.
10. Don cytotoxic gloves.
    - Don sterile gloves over cytotoxic gloves (only required for PICC/CVAD).
11. Second RN to don cytotoxic PPE (only required for PICC/CVAD).
12. Check medication/s with another accredited health professional against prescription and treatment protocol.
13. Set up equipment in blue tray lined with plastic backed absorbent sheet [bluey] (for PIVC) or with the help of second accredited RN on trolley covered with sterile plastic sheet (for PICC/CVAD):
    - Medication/s to be administered
    - Sodium chloride 0.9% ampoule for flush
    - Sodium chloride 0.9% label- sterile only for PICC/CVAD
    - Extension lines X 2
    - Three way tap
    - Drawing up needle
    - Gauze square
    - 2% chlorhexidine + 70% alcohol swabs x3
14. Inspect medication packaging for leakage, drug cloudiness and particulate matter.
    - If particulate matter or cloudiness present, contact pharmacy for further instructions
    - If leakage noticed, contain and clean any spill following procedure available in cytotoxic spill kit.
    - Contact pharmacy for further instructions if required
    - Report any leaks or spills in Incident management system (IMS+)
15. Perform **Time out** procedure. [Appendix 2]

3.2.1.2 Administration

1. Draw up 10 mL of sodium chloride 0.9% and label syringe.
2. Connect syringe to an extension line. (Picture 3)
3. Connect extension line to three way tap. (Picture 3)
4. Connect second extension line to the top port of three way tap. (Picture 3)
5. Prime all ports of three way tap with sodium chloride 0.9%. (Picture 3)

Antineoplastic Medication Administration (Neonate)



Picture 3

NOTE
Do not expel air from prefilled medication syringe

6. Connect cytotoxic medication syringe to the third port of three way tap ensuring lock connection is secure. (Picture 3)
7. Use sterile gauze to hold side port or hub while attaching medication to CVAD/PICC line or PIVC.
8. Clean PIVC with 2% chlorhexidine + 70% alcohol swab, let it dry. Repeat three times.
   - For PICC/CVAD second checker to clean side port or hub with 2% chlorhexidine + 70% alcohol swab, let it dry.
   - RN to repeat cleaning an additional two times.
9. Load cytotoxic syringe to syringe driver. (Picture 4)

Picture 4

10. Remove cytotoxic PPE and discard in cytotoxic waste bag.
11. Perform hand hygiene and program infusion pump, check rate with second checker. (Picture 4)
12. Monitor patient for signs and symptoms of extravasation and hypersensitivity and/or infusion related reactions.
    - If extravasation is suspected stop the infusion
    - Check the insertion site for signs of leakage and oedema
    - If any doubt DO NOTproceed
    - Review and manage according to the suspected extravasated drug
    - If hypersensitivity or infusion related reaction is suspected, stop the infusion and refer to protocol for management
    - Report any suspected extravasation, hypersensitivity or infusion related reaction in Incident Management System (IMS+).
    - NUM to report any suspected hypersensitivity or infusion related reaction to the Therapeutic Goods Administration (TGA) Adverse Event Reporting and forward a copy to pharmacy to be tabled at RHW Medication Safety Committee.
13. Upon completion of drug administration, flush the line with 3 mL sodium chloride 0.9% at the rate of medication administration via the pump. This is the separate syringe already attached to the three way tap. (Picture 5)

Picture 5

14. Perform hand hygiene.
15. Don cytotoxic gloves.
16. Disconnect administration set using gauze squares from CVAD/PICC line or PIVC.
17. Dispose of hazardous waste in purple zip lock bag including plastic backed absorbent sheets and gauze squares used.

18. Discard zip lock bag in cytotoxic bag.
19. Perform hand hygiene.
20. Document procedure and follow up care in patient's medical record.

3.2.1.3 Post-procedure

1. Keep cytotoxic label attached to CVAD/PICC line or PIVC to ensure line is correctly disposed in cytotoxic waste bag upon removal.
2. Continue safe handling precautions until 7 days after completion of medication(s).
3. Return any unused medications to pharmacy.

3.2.2 ENTERAL ADMINISTRATION

3.2.2.1 Preparation

1. Consider patient history regarding previous side effects and adverse events.
2. Ensure the medication order is correct.
3. Transport medication to the patient in a sealed and labelled "Cytotoxic" container from medication room on a blue tray lined with a plastic backed absorbent sheet (bluey).
4. Ensure cytotoxic label attached to IGT.
5. Perform hand hygiene and don cytotoxic PPE.
6. Place a plastic backed protective sheet (bluey) underneath the IGT.
7. Check medications against prescription with another health professional.
8. Perform **Time out** procedure. [Appendix 2]

3.2.2.2 Administration

1. Take out medication from cytotoxic container and place it on the blue tray.
2. Draw up medication/s via access device (Picture 2) from bottle using a non-touch technique.
3. Return bottle to cytotoxic container and close lid.
4. Wrap gauze around opening of IGT.
5. Administer the medication/s in accordance with food precautions and drug interactions.
6. Ensure the IGT is flushed with 1 mL of water for injection after administration of medication.
7. Dispose of hazardous waste including blueys, gauze square and administration devices in cytotoxic zip lock bag and close.
8. Dispose zip lock bag in cytotoxic waste bag.
9. Remove PPE and dispose in cytotoxic waste bag.
10. Perform hand hygiene.
11. Document procedure and follow up care in the patient's medical record.

NOTE
pH checking is not required prior to administration of cytotoxic medication via IGT.

3.2.2.3 Post-procedure

1. Take medication in its container back to medication room.
2. Keep cytotoxic label attached to IGT to ensure line is correctly disposed in cytotoxic waste bag upon removal.
3. Continue safe handling precautions until 7 days after completion of medication(s).
4. Return any unused medications to pharmacy.

3.3 Documentation

- eRIC
- Antineoplastic drug time out checklist

3.4 Abbreviations

PIVC	Peripheral Intravenous Cannula	PICC	Peripherally Inserted Central Catheter
CVAD	Central Venous Access Device	IGT	Intragastric tube
PPE	Personal Protective Equipment		

3.5 CBR Implementation Plan

The revised CBR will be distributed to all medical, nursing and midwifery staff via @health email. The CBR will be discussed at ward meetings, education and patient quality and safety meetings. Education will occur through in-services, open forum and local ward implementation strategies to address changes to practice. The staff are asked to respond to an email or sign an audit sheet in their clinical area to acknowledge they have read and understood the revised CBR. The CBR will be uploaded to the CBR tab on the intranet and staff are informed how to access

3.6 Related Policies/procedures

- RHW NCC Nursing CBR - Intragastric Tube Insertion and Maintenance
- RHW NCC Nursing CBR - Intravenous Line Management
- RHW NCC Nursing CBR - PICC Line - Insertion and management
- RHW NCC Nursing CBR - Peripheral Intravenous Cannula Insertion and Dressing
- CEC Handbook- CEC Infection Prevention and Control Practice Handbook
- CEC **High Risk Medicine Standard -** Anticancer medicines
- SESLHD- Assptic Technique SESLHDPD/271

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1. Use vancouver

2. Ensure relevancy and currency of references and keep succinct. Ideally none older than 10 years.
3. Remove any references that are no longer relevant or no longer used when LOP updated

4 ABORIGINAL HEALTH IMPACT STATEMENT DOCUMENTATION

- Considerations for culturally safe and appropriate care provision have been made in the development of this Business Rule and will be accounted for in its implementation.
- When clinical risks are identified for an Aboriginal and/or Torres Strait Islander woman or family, they may require additional supports. This may include Aboriginal health professionals such as Aboriginal liaison officers, health workers or other culturally specific services

5 CULTURAL SUPPORT

- For a Culturally and Linguistically Diverse CALD woman, notify the nominated cross-cultural health worker during Monday to Friday business hours
- If the woman is from a non-English speaking background, call the interpreter service: NSW Ministry of Health Policy Directive PD2017 044-Interpreters Standard Procedures for Working with Health Care Interpreters.

6 NATIONAL STANDARDS

- Standard 1 Clinical Governance
- Standard 3 Preventing and Controlling Infections
- Standard 4 Medication Safety
- Standard 5 Comprehensive Care
- Standard 6 Communicating for Safety

7 REVISION AND APPROVAL HISTORY

Date	Revision No.	Author and Approval
23/5/2019	1	E Jozsa (CNE) NCC LOP Committee
23/8/2024 26/09/2024	2	E Jozsa (CNs) NCC CBR Committee Endorsed by NCC CBR Committee
10/02/2025	2	Endorsed by RHW BRGC

Appendix 1 Personal Protective Equipment (PPE)

Gloves
Glove use is essential and should be chosen to maximise protection by minimising permeability. Standard surgical gloves may not provide the required level of protection due to drug and/or carrier permeability.

- are disposable
- should be purpose manufactured or manufacturer recommended
- must be long enough to cover wrist cuffs of gown while arm is bent or stretched
- should be changed:
  - at the end of a procedure
  - prior to contact with another patient
  - at intervals of 30 minutes OR as recommended by the manufacturer OR when punctured torn or contaminated

Note: Workcover guidelines of Australia discuss wearing one pair as part of standard PPE, unless attending to a hazardous spill where 2 pairs are recommended.

Gowns
Gowns designed for use with hazardous drugs should be made of an impermeable material and should be changed as per the manufacturers' instructions. Care should be taken when removing the gown to minimise the risk of personal contamination.

- be long sleeved with elasticised wrists and have a closed front
- be disposed of immediately (as contaminated waste) if overt contamination occurs
- not be worn in non-clinical areas e.g. offices, tea rooms

Protective eye wear
Protective eye wear should be worn to protect against liquid splashes to the mucous membranes of the eye.

- can be provided by:
  - goggles
  - protective eye wear with side shields
  - a transparent full face chemical splash shield
  - full face respiratory protective equipment
- should be cleaned with neutral detergent solution and allowed to air dry at the end of the shift or when contaminated

Respiratory protective equipment
Respiratory protective equipment (RPE) with a P2 (N95) particulate filter, is recommended to contain aerosols generated by handling hazardous drugs; surgical masks do not provide sufficient protection. Workers must be fit tested as per the manufacturer’s instructions to ensure the mask is the correct size, especially for those who wear prescription glasses.

- the positive and negative pressure seal of the respirator should be tested to ensure correct fit by gently exhaling and inhaling; if air escapes, or the respirator is not drawn into the face during inhalation, the respirator needs to be adjusted.

Overshoes

- should be made of impervious material with skid resistant plastic soles
- should be worn when cleaning a hazardous drug or related waste spill

Removing and discarding PPE

PPE should be removed in the following order and disposed of in the cytotoxic waste to minimise exposure to any potential contaminants on the exposed PPE.

Removing PPE if wearing one pair of gloves

1. Remove gloves
2. Perform hand hygiene with soap and water
3. Remove protective eyewear or face shield
4. Remove gown
5. Remove respiratory protective equipment
6. Perform hand hygiene with soap and water.

Appendix 2 Anti-cancer drug time out checklist

https://www.eviq.org.au/getmedia/f6418a4b-14be-4dbb-9a46-2240ac0c9623/ID-6-Anti-cancer-drug-administration-time-out-checklist-2023.pdf.

NSW GOVERNMENT

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Anti-cancer drug administration time out checklist

Hospital ID: MRN:
Surname:
Given names:
Date of birth: Sex: AMO:

Two health professionals (as approved by local policy) are to complete **time out** immediately prior to drug administration. The medical order should be verified, and any identified discrepancies should be discussed with the prescriber and pharmacist prior to administration.

Pronouns:
Preferred names:

Treatment protocol: Date: Cycle: Day:

Patient allergies/previous hypersensitivity drug reactions:

Action taken (if required):

	Drug 1	Drug 2	Drug 3	Drug 4	Drug 5
Drug name					
Time of drug check					
Correct patient	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Relevant laboratory values checked	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Medical authority for treatment to proceed	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Patient consent	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Correct drug, BSA dose & drug expiration*	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Dose reduction **	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Correct route (specify)	☐ IV ☐ PO ☐ IM ☐ subcut	☐ IV ☐ PO ☐ IM ☐ subcut	☐ IV ☐ PO ☐ IM ☐ subcut	☐ IV ☐ PO ☐ IM ☐ subcut	☐ IV ☐ PO ☐ IM ☐ subcut
Correct infusion line and fluid (if applicable)	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N	☐ Y ☐ N
Venous access patent	☐ Y ☐ NA	☐ Y ☐ NA	☐ Y ☐ NA	☐ Y ☐ NA	☐ Y ☐ NA
Correct rate and pump program checked	☐ Y ☐ N ☐ NA	☐ Y ☐ N ☐ NA	☐ Y ☐ N ☐ NA	☐ Y ☐ N ☐ NA	☐ Y ☐ N ☐ NA
Signatures and designation					
Signatures and designation					

If any of the questions are answered with 'No' **do not proceed with** drug administration.
Seek further advice from a medical officer, pharmacist or senior nurse.

Comments

Signature | Print name | Designation | Date

*Verify that all doses are correct according to protocol and patient parameters, e.g. weight, body surface area (BSA), eGFR and that maximum and cumulative doses are not exceeded for the dose or the course according to the protocol. **Check any dose reductions are correct according to the protocol, patient parameters and doctor's instructions.

E: feedback@eviq.org.au
W: eviq.org.au

NSW GOVERNMENT

Appendix 3 List of Cytotoxic Drugs used in NCC

Drug name	Drug Class	Cited in WorkCover as Cytotoxic	Minimum PPE requirements
Gancyclovir	**Antiviral**	**yes**	**Full PPE**
Valganciclovir suspension	**Antiviral**	**yes**	**Full PPE**

Reference: Workcover 2008

For a full list of Hazardous Drugs, please refer to eVIQ Hazardous Drugs Table- https://www.eviq.org.au/clinical-resources/administration-of-anti-cancer-drugs/909-hazardous-drugs-table#hazardous-drugs-tables