

Burette use in Newborn Intensive Care Unit (NICU)

Procedure Responsibilities and Authorisation

Department Responsible for Procedure	NICU
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Target Audience	Nurses
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Procedure Review History

Version	Updated by	Date Updated	Summary of Changes
03	Maggie Rainbow	Nov 2012	Due for review
04	Joyce Mok	July 2015	Due for review
05	Joyce Mok	March 2019	Due for review
06	Kimmy Fulgencio	July 2022	Due for review

Burette use in Newborn Intensive Care Unit (NICU)

1 Overview

1.1 Purpose

To administer Intravenous/Central Venous Line (IV/CVAD) fluid when using a burette safely without risk of the burette running empty and air entering giving set line.

1.2 Scope

Te Whatu Ora Waikato staff working in NICU.

1.3 Patient group

Babies and infants in NICU

1.4 Rationale

As our burettes do not hang perfectly perpendicular and our infusion pumps work by drawing fluid through, the line does not occlude when the burette is empty. The pump will continue to draw air through and this will not alarm until it reaches the air-in-line detector. This may result in the loss of an IV/CVAD line.

1.5 Definitions

CVAD	Central Venous Access Device is an intravenous catheter placed via a blood vessel into a great vein (in NICU these are most commonly PICC lines)
CVAD fluid	Continuous infusions administered via umbilical venous line, CVAD or Broviac line
PIV	Peripherally inserted Intravenous cannula
VTBI	Volume to be infused

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2 Clinical Management

2.1 Competency required

Registered Nurse (RN) with Te Whatu Ora Waikato generic IV certification and NICU specific CVAD certification if using centrally placed lines

2.2 Procedure

- 1) Keep giving set drip chamber filled with fluid.
- 2) When a burette is used, attach an orange medication label sticker on the light protection bag to indicate that a burette is hanging under the bag.
- 3) RN must check the burette at beginning of the shift and whenever VTBI is finished or pump has alarmed "near end of infusion". DO NOT set VTBI that is more than the fluid volume in the burette so that the burette gets refilled before it runs empty and air does not get into the line.
- 4) VTBI to be set should be no more than 4 hours of fluid volume.
- 5) Check the burette with each new setting or change in rate to ensure there is adequate volume in burette for VTBI.

When medications are added into the burette (i.e. sodium chloride, potassium chloride or dextrose 50% solution added into 100 ml of prescribed fluid) VTBI should still be no more than 4 hours of fluid volume. Please do not wait for burette to empty before reconstituting new solution if this is still required. If the 4 hour volume exceeds capacity of the burette, discuss with medical staff regarding putting additives directly into bag of maintenance fluid.

2.3 Potential complications

- Air embolism
- Loss of infusion line due to formation of small blood clot

3 Evidence base

3.1 Associated Te Whatu Ora Waikato Documents

- [Arterial Line Catheterisation in Newborn Intensive Care Unit](#) procedure (1637)
- [Arterial Line – Sampling, Nursing Management and Removal in NICU](#) procedure (1638)
- [Blood Transfusion in the Newborn Intensive Care Unit \(NICU\)](#) procedure (1645)
- [Central Venous Lines Umbilical Venous Line Management in NICU](#) procedure (4936)
- [Epidural Care and Management in the New Born Intensive Care ...](#) procedure (2835)
- [Subcutaneous Insulin Infusion for Infants in Newborn Intensive Care](#) guideline (0392)

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