

Using a Burette in Newborn Intensive Care Unit (NICU)

Procedure Responsibilities and Authorisation

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| 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 |
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| 03 | Maggie Rainbow | Nov 2012 | Due for review |
| 04 | Joyce Mok | July 2015 | Due for review |
| 05 | Joyce Mok | March 2019 | Due for review |
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Using a Burette in Newborn Intensive Care Unit (NICU)

1 Overview

1.1 Purpose

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

1.2 Scope

Waikato District Health Board (DHB) 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 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. Often this results in the loss of a line.

1.5 Definitions

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| IV | Intravenous infusions |
| CVL | Central Venous Line (Central Venous Access Device known as in NICU) is an intravenous catheter placed via a blood vessel into a great vein (in NICU these are most commonly PICC lines) |
| CVL fluid | Continuous infusions administered via umbilical venous line, CVL or Broviac line |
| VTBI | Volume to be infused |

2 Clinical Management

2.1 Competency required

Registered Nurse with Waikato DHB generic IV certification

2.2 Procedure

- 1) Keep drip chamber filled with fluid.
- 2) When a burette is used, attach an orange medication label sticker on the light protection bag to indicate a burette is hanging under the bag.

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- 3) **Must check the burette at beginning of the shift and whenever VTBI finished or alarm; and never set VTBI more than the fluid volume is in the burette** because this is when air can get running through.
- 4) No more than 4 hours volume should be programmed as VTBI at a time to allow warning for burette to be refilled before it is empty and air enters the line.
- 5) Check the burette with each new setting to ensure there is adequate volume in burette for VTBI.
- 6) When medications are added, i.e. sodium chloride, potassium chloride or dextrose 50% solution made up as per prescription, e.g. 100mL + additives. VTBI to be set no more than 4 hours of fluid volume, but always with safety margin so burette does not completely empty and time allowed to check calculate and reconstitute new solution to burette.
- 7) If 4 hours 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

3 Evidence base

3.1 Associated Waikato DHB Documents

- Arterial Line: Catheterisation and Set Up Umbilical and Peripheral Arterial catheter in Newborn Intensive Care Unit (NICU) (1637)
- Arterial Lines – Sampling, Nursing Management and Removal in NICU (1638)
- Blood Transfusions by Aliquots or Infusion - Nursing Management in NICU (4822)
- Arterial Lines – Sampling, Nursing Management and Removal in NICU (4936)
- Epidural Care & Management for Neonates and infants in Newborn Intensive Care Unit (NICU) (2835)
- Subcutaneous Insulin Infusion for Infants (0392)

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