# Use of Intravenous devices for administration of fluid therapy in Neonates

**Reference Number:**

NHSCT/12/534

**Target audience:**

This applies to all clinical staff, nurses and midwives administering intravenous fluids using intravenous devices and intravenous administration equipment notes to neonates.

**Sources of advice in relation to this document:**

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_NHSCT Mission Statement_  
To provide for all the quality of services we would expect for our families and ourselves
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1. Introduction

An updated policy for Antrim Hospital Neonatal Unit was developed for safe administration of intravenous fluids following an alert from the National Patient Safety Agency (NPSA) which was sent via the Department of health and Social services for Northern Ireland (DHSSPSNI). This in response to a review of a case in the United Kingdom of over administration of intravenous fluids to a neonate. The issue there was the incorrect use of a three way tap which allowed this to occur. Whilst this procedure is never used within Antrim Hospital Neonatal Unit, it has led to a re-examination of the ongoing administration of intravenous fluid therapy by the clinical staff, and the development of a new written policy.

2. Purpose

To reduce the risks associated with the

- Prescription, administration and monitoring of intravenous (IV) fluid therapy; and the intravenous device used and the intravenous administration equipment required for neonates.

3. Policy Statement

The Trust will ensure that registered nurses/midwives and nurse practitioners are supported and facilitated in the delivery of appropriate, safe and effective management of intravenous fluid therapy and use of intravenous administration equipment.

Provide training and updates to ensure that clinical staff are appropriately trained in undertaking this clinical procedure.

Clarifying roles and responsibilities of those involved.

Implementing clinical governance arrangements to assure safe high quality practice.

Requiring that the Trust Intravenous Infusion Therapy for Children Prescription and Administration Chart is used.

Adopting HSC (SQSD) 14/10 Prevention of over infusion of intravenous fluid and medicines in neonates which is based on the NPSA/2010/RRR015 guidelines.

Ensuring that all staff involved in administrating Intravenous fluid therapy is aware of this policy and its specific recommendations.

4. Target audience

This applies to all clinical staff, nurses and midwives administrating Intravenous fluids, using intravenous devices and intravenous administration equipment to neonates.
5. Roles and responsibilities

The NHSCT Chief Executive has the responsibility for ensuring that the Trust meets all its statutory and legal requirements and adheres to guidance issued by the DHSS&PS in respect of governance.

All clinical staff involved must comply with the documentation requirement to use Trust Intravenous Prescription Sheet.

All clinical staff involved must ensure that they have received adequate training in the use of intravenous equipment and devices used to administer Intravenous fluids to neonates.

6. Governance measures

All staff are required to be aware of and implement mandatory reporting of potential clinical incidents through the local Incident Reporting mechanism.

All staff will receive yearly mandatory training in the use of intravenous infusion pumps.

All intravenous medical devices undertake yearly servicing.

7. Procedure for the administration of intravenous fluid therapy

- All intravenous fluids are clearly written on fluid prescription sheet
- Intravenous fluids must be checked by 2 registered nurses, one of whom should be the registrant who administers the Intravenous fluids
- Check the Intravenous fluid to be erected against the prescription sheet.
- The check includes the type of fluid, the strength of fluid, expiry date, and a visible check to ensure integrity of packaging and that the infusion is clear, not coloured or cloudy and is particle free.
- When using a syringe pump to administer intravenous fluids or medicines to neonates a Bag of Fluid Must Not be Left Attached to the Syringe.
- Ensure clamp on Intravenous extension set is closed before connecting Intravenous giving set prior to commencement of Intravenous fluids.
- Ensure administration equipment is loaded into the infusion pump correctly before connecting to the infant, ensuring that intravenous infusion is labelled venous line.
- Once erected double check the infusion rate and total volume to be infused against the prescription sheet, then open clamp at Intravenous extension set situated at the cannula site.
- Check that blood glucose level prior to commencement of Intravenous fluids is within normal clinical levels and document.
- Fluids erected by nurse/midwife erecting and the nurse/midwife checking require signing on prescription sheet and also medical device asset id number of intravenous pump is documented on prescription sheet.
- All clamps on intravenous administration sets must be closed before removing the administration set from the infusion pump, or switching the pump off. This is required regardless of whether the administration set has an anti-free flow device.
- Ensure that all discontinued infusions have been disconnected from infant.
- When intravenous infusion is completed, attending nurse/midwife to sign on Intravenous prescription sheet date and time of completion.
8. Equality, Human Rights and DDA

The policy is purely clinical / technical in nature and will have no bearing in terms of its likely impact on equality of opportunity or good relations for people within the equality and good relations categories.

9. Alternative formats

This document can be made available on request on disc, larger font, Braille, audio-cassette and in other minority languages to meet the needs of those who are not fluent in English

10. Sources of advice in relation to this document

The Policy Author, responsible Assistant Director or Director as detailed on the policy title page should be contacted with regard to any queries on the content of this policy.
References:


## Prevention of over infusion of intravenous fluids and medicines in neonates

### Prior to commencing each infusion

- a) When using a syringe pump to administer intravenous fluids a bag of fluid should not be left attached to the syringe.

- b) Ensure administration equipment is loaded into the infusion pump correctly before connecting the infusion to the baby.

- c) Double check the infusion rate and total volume to be infused with another registered nurse and against the prescription.

### During each infusion

- a) Check and document the infusion rate and total volume infused hourly.

- b) Double check the infusion rate and total volume infused hourly.

- c) Monitor the baby throughout the infusion and record observations at least hourly and more frequent if required.

- d) If the baby deteriorates, consider the possibility of fluid overload alongside other potential causes.

- e) Check blood sugar level within one hour of start of dextrose infusions, and subsequently in accordance with the clinical management plan.

- f) Close all clamps prior to the removal of an administration set from the infusion device.

### At handover of care

- a) Double check the infusion rate and total volume to be infused with the registered nurse taking over care.

- b) For babies receiving dextrose infusions check the most recent blood sugar level is within acceptable limits in accordance with the clinical management plan.

- c) Ensure that all discontinued infusions have been disconnected from the baby.