

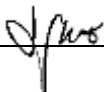


**SDRN:** Scottish Diabetes Research Network

# Administration of Medications & Fluids via a Peripheral Intravenous Cannula

**Clinical S.O.P. No.: 22**

Version 1.0

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Approved by:	
Review date:	November 2016



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## DOCUMENT HISTORY

Version number	Detail of purpose / change	Author / edited by	Date edited
1.0	New SOP	Louise Greig / Alison Sudworth	

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## 1. Introduction

Peripheral intravenous infusion is a procedure whereby a device is placed into a patient's vein. A cannula is a flexible tube containing a needle that may be inserted into a blood vessel. The needle is removed once the cannula is in position. This then enables venous access for the administration of medications and fluids via this route. The intravenous route is one of the fastest ways to deliver fluids or medications.

## 2. Objectives

To describe the procedure for the administration of fluids and medications via a peripheral venous cannula and manage and minimise the potential risks associated with this procedure.

To ensure patient safety and impart safe working practices for nurses carrying out this procedure.

## 3. Responsibilities

Medications/fluids will be administered by a member of the medical team or by research nurses who have undertaken and completed a recognised training course and demonstrate they are competent in the administration of intravenous medications via a peripheral venous cannula.

It is the responsibility of the individual to ensure they are appropriately trained/certified to carry out this procedure safely and that they are documented on the trials delegation log to carry out this procedure.

The person administering the medication must exercise professional judgement when applying their knowledge and skills in any given situation.

The nurse should have knowledge of indications for the therapy and any possible side effects or potential adverse reactions arising from this intervention. Up to date knowledge of the therapeutic uses, normal dosage, side effects and contra indications of the drug being administered is essential.

## 4. Equipment List

- Couch or chair for the patient
- Trolley/tray
- IV stand
- Antiseptic gel/rub
- Disposable gloves
- Alcohol impregnated wipe
- Tourniquet
- Cannula (e.g., 18 Gauge – green, 20 Gauge – pink, 22 Gauge-blue)
- Gauze swabs
- Tape to secure the cannula

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- 3 way connectors/adapters
- Syringe (for saline flush)
- Sterile sodium chloride for flush
- Giving set
- Intravenous solution
- Blood sample tubes
- Sharps bin
- Orange plastic disposable bag

## 5. Procedure

- The delegated member of staff must ensure the correct participant is identified. The identification elements that require to be confirmed are surname, forename, date of birth, research study name/number and if appropriate hospital identification number (CHI - Community Health Index).
- Explain the procedure to the participant and obtain informed consent and provide the patient with written information on the planned procedure. This process should be clearly recorded in the study specific documentation.
- Throughout the procedure document all medications/fluids administered via the cannula/intravenous line.
- Medication will be administered against a prescription and must be clearly documented and be absolutely certain of all dosages and timings concerning the administration of any medications and fluids.
- Record medications/fluids on a study specific intravenous prescription chart or create the necessary documentation for the study.
- The prescription should clearly specify the substance to be administered, its route, form, strength, dosage, timing and frequency of administration. Start and finish dates/times for the administration of all medications/fluids should be clearly recorded.
- Labelling of medications to be administered should be clear and contain the following – patient ID, strength of medication, route of administration.
- Before administering medications/fluids check Lot numbers and expiry dates on all containers.
- Before administering IV medication, the medication should be checked with another designated member of the study team who appears on the delegation log of the study.
- Label all syringes with the flush or medication to be administered to the participant. This must be done by the person preparing the syringe

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- An aseptic technique should be used to prepare and administer all intravenous medications/fluids.
- The first dose of any IV medication, either bolus or infusion, should be given by a member of the medical profession.
- A member of the study team medical staff should be available at all times during administration of IV Fluids/Medication.
- Before administering any medications/fluids check if a saline flush is required.
- Only study specific medications/fluids as stated in the protocol should be added to infusions.
- Expel any air from the syringe of any medications/fluids you are about to administer as a direct bolus intravenous injection.
- Prior to, during and on completion of, the administration of intravenous fluids/medications the following observations should be carried out – blood pressure, pulse and temperature.
- In the event of a participant experiencing an adverse reaction stop the infusion and inform a member of the medical staff immediately in order for a clinical assessment to be carried out. Record the participant's vital signs and complete an adverse event form.
- If any blood spillage occurs the nurse/delegated person should clean up the spillage in accordance with local infection control policies.

## 6. Additional information

- Record date and time of cannulation procedure.
- Document all system equipment used for this procedure e.g., type of cannula used, 3 way tap, giving set etc.
- If unsuccessful after 2 attempts consider referring to another competent health care worker to carry out procedure.
- Keep the number of lines, lumens and stopcocks to a minimum consistent with clinical need.
- If administering medications etc then check all expiry dates on containers.

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### **7. Management of errors or incidents in the administration of medicines.**

- Report all drug administration discrepancies immediately.
- Record details in the patient's documentation.
- Investigate the context and circumstances of the incident and review safety procedures as necessary.

### **8. Patient focused risks associated with giving intravenous medications & fluids via a PVC**

- The use of peripheral intravenous cannulae and the administration of drugs and solutions via such equipment can occasionally result in complications.
- Overload of fluid leading to heart failure or pulmonary oedema.
- There is a low risk of delivering an air bubble into the circulation resulting in an embolism as solid masses cannot travel through a narrow channel it is difficult to inject air through a peripheral IV at a dangerous rate. (It must be remembered though that the use of a peripheral vein means that the flow will pass through the lungs before passing through the body and air bubbles can leave the blood through the lungs.
- It is important that if complications occur they are documented & managed appropriately.

### **9. Staff focused risk factors associated with PVC's**

- All blood should be considered potentially infectious and handled accordingly.