

Subcutaneous fluid and medication

Contents

Purpose	1
Applicability.....	1
Low molecular weight heparin (LMWH).....	2
Gravity fed sub cutaneous infusions.....	2
Intermittent sub cutaneous medication bolus.....	3
Continuous sub cutaneous medication administration.....	3
Monitoring of all infusion or injection sites	3
Insulin – all routes.....	3
Associated material/supporting resources	5
References.....	6

Purpose

The administration of sub cutaneous medications and fluids will be undertaken in such a manner as to reduce the risk to the patient/personnel involved, follow best practice standards and optimise patient outcomes.

Applicability

Scope for hypodermoclysis (gravity fed) infusions (NOT via Niki T 34/GH syringe driver)

A peripheral IV endorsed nurse with another peripheral IV endorsed nurse as per their scope of practice

Exception: SMHS registered nurses who have obtained endorsement for only sub cutaneous infusion administration and monitoring

Scope for Niki T 34 Syringe pump use/training

In the adult oncology haematology setting in Christchurch Hospital Campus all registered nurses are trained in the use of Niki T34 management

All other areas must contact the Palliative Care Service during normal working hours to commence syringe pumps and the team will train the staff.

During afterhours contact B5 or the on-call palliative care team for support/guidance/advice. A GH syringe driver could be utilised until advice and guidance is available in the use of the Niki T 34. The team can be contacted through the hospital switchboard.

Only peripheral IV endorsed staff can check and deliver medication via the Niki T 34. This is a double independent check route.

Scope for Alaris GH Syringe drivers

Only peripheral IV or CVAD endorsed staff can check and deliver medication via the GH Syringe driver. This is a double independent check route.

Scope for sub cutaneous insulin injections

Nursing, Midwifery, Medical Staff, Students of Nursing and Midwifery as per scope in the CDHB Students Responsibilities with Medication and Fluid Policy, other Approved Persons in the Hospital Service setting. This is a double independent check route.

Low molecular weight heparin (LMWH)

Scope for sub cutaneous LMWH injections

Nursing, Midwifery, Medical Staff, Students of Nursing and Midwifery as per scope in the CDHB Students Responsibilities with Medication and Fluid Policy, other Approved Persons in the Hospital Service setting. This is a double independent check route.

Refer to the Lippincott procedure on sub cutaneous administration in the Low molecular weight heparin section, after reading the following CDHB policy statements

Ensure the patient's current weight is recorded on the patient's drug chart if the medication is for therapeutic (treatment) requirements

For 60mg doses or greater invert the syringe allowing for the air bubble to float to plunger end before discarding the medication not required.

Do not expel the air bubble from syringe before the injection.

Tap the syringe so that the air bubble rises to plunger end.

The manufacturer states the injection must be given at a 90-degree angle

Gravity fed sub cutaneous infusions

Refer to the [Lippincott procedure on sub cutaneous fluid administration \(Hypodermoclysis\)](#), after reading the following CDHB policy statements

Never use an electronic pump for sub cutaneous fluid infusions

Select appropriate infusion site using clinical judgement and in consultation with the patient

If the abdominal area is selected avoid the umbilicus by 5cm

A 22 gauge is used for sub cutaneous infusions

Assess the patient's skin/tissue to determine the best angle for needle insertion for infusion – 30 to 45-degree angle is recommended; choose the best angle to ensure the infusion enters the sub cutaneous tissue layer.

Ensure that the needle is removed after insertion.

Document the insertion time and date in the clinical record.

Intermittent sub cutaneous medication bolus

In situations where medication is prescribed as incremental boluses consider using a sub cut catheter for initial and repeat doses.

Continuous sub cutaneous medication administration

For administration of medication for symptom control in Oncology and Palliative care refer to the Palliative Care Guidelines/End of Life Care and Bereavement site (on PRISM).

To be delivered by Alaris GH Syringe Driver or Niki T 34 Syringe Pump

Monitoring of all infusion or injection sites

The cannula insertion site should be monitored at least every four hours for leaking, exudate, localised heat, localised inflammation, pain, tenderness, hardness, burning, itching, unresolved blanching, excessive oedema, redness or necrosis.

Re-siting of the cannula should be undertaken at the **onset** of a site reaction of the surrounding skin, when there is dislodgement of the cannula or crystallisation of medications in the infusion line.

Site reaction will be indicated by any of the above signs or symptoms.

BD Saf-T-Intima or Insuflon must be changed if there is an infection, inflammation, the cannula has dislodged or as clinically appropriate.

Cannula should be removed as soon as clinically indicated when infusion or bolus therapy no longer required.

Insulin – all routes

Refer to the Lippincott procedure on Sub-cutaneous administration, Insulin administration after reading the following CDHB policy statements:

Use of patients own medication

A patient's own medications may be used while they are in hospital if the criteria for use of patient's own medications is met (refer to 'Use of Patient's Own Medications Policy').

Mixing insulin in an insulin syringe

Do not mix Glargine (Lantus) with any other insulin or solution

Site selection

In the hospital setting the preferred site for injection is the abdomen, avoiding the umbilicus by 5cm. Where the patient has had abdominal surgery select the thigh and lastly the arm for injection

Administration via an insulin syringe or pen

When the needle has been inserted and the insulin administered, leave the needle in place for a total of 10 seconds to avoid insulin leakage

The preferred insulin syringe for staff administration is the BD SafetyGlide™ 8mm.

Patients own pens are to be **used by patients only**, they are to complete the whole process themselves inclusive of removing and replacing pen needle. The preferred needle size is 31G x 5mm, unless otherwise clinically indicated. If they are unable to do this then insulin is to be administered by staff via a BD SafetyGlide syringe - 8mm (rationale: prevent needle stick injuries).

All cloudy insulins should be inverted 20 times to mix before administration.

[Lippincott procedure for Mixing Drugs](#)

[Lippincott procedure for Subcutaneous Injection – please refer to Insulin sections](#)

Storage of Insulin

Multi use insulin vials, cartridges and patient pens **IN USE** are not to be refrigerated but should be kept away from direct light and at room temperature in the medication room in a box/bin.

Discard after 28 days (4 weeks) from opening.

Refrigerate insulin **NOT** in use.

When opening a vial or cartridge, the date should be recorded on the approved sticker (refer to consumables section) and placed on the cartridge for both multi use and patient own insulin

Patients own insulin pens are to be labelled with the patient NHI and full name


Continuous Subcutaneous Insulin infusion (CSII) Pumps

If an adult patient is admitted with an insulin pump and cannot manage this themselves, they need to be changed to an alternative delivery system. For any advice needed contact the Diabetes Service via the hospital switch board.

Ensure patient **ALWAYS** has insulin onboard.

[Lippincott procedure for sub cutaneous insulin infusion, continuous](#)

Consumables

<p>Label #7 DO NOT USE AFTER OPENING</p> <p>Non-stock item</p> 	Item Type:	Goods billed by quantity
	Item Description:	Label - #7a Do not use after opening
	Category:	42142301
	UOM:	RL
	Unit Price:	11.56
	Supplier:	CDC Pharmecuticals
	Supplier Item:	360465
Needles for patients pens	<p>31G x 5mm diabetes Thin Wall Micro-Fine Plus BD (100 pkt) Oracle code 265920</p> <p>31G x 8mm Diabetes Thin wall Micro-fine BD (100 pkt) Oracle code 255308</p>	
BD SafetyGlide insulin delivery syringes	<p>Syringe Insulin 0.5ml Thin-Wall with 30GA 8mm Needle SafetyGlide BD, Oracle Code 267913</p>	

Associated material/supporting resources

[Infection Prevention and Control related policies](#)

Fluid and Medication Checking Procedure ref 2402384

CDHB Roles and Responsibilities policy ref 2401678

Student Nurse Midwife Roles and Responsibilities (ref 2401682) and associated charts

Oxygen and Infusions chart ref 2401442 or electronic medication/fluid chart

[Resource for Alaris GH syringe driver](#)

[Subcutaneous administration of medications \(Palliative Care Service Website\)](#)

[Lippincott procedure for Mixing Drugs](#)

[Lippincott procedure for Subcutaneous Injection – please refer to Insulin sections](#)

[Lippincott procedure for Subcutaneous insulin infusion, continuous](#)

References

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Manufacturer's instructions