

Peripheral intravenous therapy

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Policy

Staff and approved persons with 1st Level certification in peripheral IV management will adhere to the below requirements

Purpose

To guide staff on the scope of peripheral IV therapy and safe, appropriate management.

Scope

All 1st level certificated persons, Medical Practitioners and Approved persons and all staff involved in the double independent checking role with peripheral IV medication/fluid.

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Associated documents

- [Roles and Responsibility Policy Vol 12](#)
- [CDHB Fluid and Medication Checking Procedure](#)
- [Self-Learning Package \(SLP\) for IV Level 1 Certification](#)
- [Infection Prevention and Control policy Vol 10](#)
- British National Formulary (BNF)
- Notes on Injectable Drugs (NZ Hospital Pharmacists Association Inc.)
- Royal Children's Hospital Melbourne, Paediatric pharmacopaedia <http://www.rch.org.au/pharmacopoeia> New Ethical's Catalogue (MIMS)
- [Patient Identification policy Vol 11](#)
- Health Care Waste - Which bin does it go in (ref 1191)
- [IV link site](#)

Requirements for Level 1 Certification Attainment and Recertification

- Successful completion of:
 - The CDHB Level 1 certification programme, both theory and practical components, on orientation to the CDHB
- Certification is required to be completed within four months of commencing employment

Exception

Specialist Mental Health where certification is not required

- It is the individuals responsibility to maintain their practice competency as there is no requirement for recertification
- If the staff member or approved person has not practiced IV management for over 12 months they are no longer considered IV certificated and must re certificate when they return to an IV management role
- Level 1 certificated staff and approved persons must adhere to the Roles and Responsibilities Policy Vol 12

General IV Procedural Requirements

- Roles and responsibilities for staff and approved persons involved in medication and fluid management are outlined in the Roles and Responsibilities policy

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- Use approved methods of medication and fluid reference (as per Associated Documents) or contact pharmacy
- A non-coring blunt needle will be used to draw up fluid from a poly amp
- A filter needle will be used when drawing up contents of a vial/glass ampoule
- With incremental dosing e.g. Opioids IV. Attach patient identification information and an additive label to the syringe. Use the same administrator for each incremental dose, and perform the double independent check procedure prior to each subsequent dose. A new syringe cap is to be attached after each incremental dose. Discard the syringe at the end of the shift/patient procedure. Controlled Drugs must be returned to the drug safe between incremental doses where the drug and patient will not be under constant surveillance by the administrator (e.g. ward settings). Refer to the Controlled and Recorded Drug Register Documentation and Monitoring Requirements Policy for information on discarding unused drugs Policy
- A new sterile cap(combi loc device) must be applied to continuous infusions which have been temporarily stopped for short periods of time to ensure asepsis is maintained

Child Health Specific IV Infusion Requirements

- An inline buretrol must be attached to the line
- The buretrol will have a maximum fluid volume of no more than 2 hours at any one time (to minimise the risk of inadvertent fluid or medication bolus)
- All fluid will be delivered via a volumetric pump
- These requirements also apply to Paediatric CVAD use

Line Changes and Labelling/Identification

- Label all IV lines with time and date of commencement
- Use an additive label where medication has been added to either the syringe or IV infusion bag
- Where multi drug infusion/administration is in progress all administration set **lines** must have the drug identified on the distal end of each line used
- Always trace tubing from the patient to the point of origin before connecting or bolusing
- Apply a patient label to the administration infusion line in situations where the patient will be disconnected/separated from the infusion

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temporarily, to ensure that the line correlates to the correct patient on reconnection

- Label **incremental** dosing syringes with the patient ID information
- Intermittent IV infusions require line/giving set changes after each administration

IV Giving Sets

- An IV giving set that is in use to infuse fluid or medication via a peripheral IV cannula must be disconnected and discarded and not reconnected to a newly inserted or existing CVAD.
- Reconnecting the existing IV giving set poses a risk for infection which compromises the patient, CVAD and the prescribed treatment.
- Continuous IV infusions require a line/giving set change at least every 72 hours (**Exceptions:** where specific medication requirements exist e.g. Blood and Blood products (blood filters changed every 8 hrs.), e.g. Ciclosporin and TPN lines changed every 24hrs)
- Refer to Drug Information resources, pharmacy or other policy for clarification where required.

Flushing and Cannula Management

- Peripheral cannulae must be removed/resisted
 - no less frequently than every 72hrs (**Exception** - Child Health)
 - at the first signs of phlebitis score of 2
- Where an extension set **has not been attached** at insertion and the patient requires more than 24hrs of IV therapy, an extension set must be attached aseptically. Extension sets reduce the risk of mechanical phlebitis
- When flushing an extension set attached to the end of a cannula, use the clamp to provide positive pressure at the end of the flush to assist in avoiding red cell occlusion of the cannula
- A flush pre and post bolus/intermittent infusion administration must occur with at least 5 mLs IV 0.9% Sodium Chloride. These do not require prescribing
- With Intermittent medication therapy infusions the line must be flushed post administration with 30 mLs of 0.9% Sodium Chloride to ensure the patient receives the whole dose
- Where a 30 mL infusion line flush is required post administration this flush this will not require prescribing, you are administering the rest of the drug dose not the flush
- The recommended method for flushing an intermittent infusion line is to attach a 100ml bag of 0.9% Sodium Chloride and infuse 30 mLs of this

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- Cannulae must be flushed with 0.9% Sodium Chloride at least once per shift to maintain patency. When no IV medication/fluid administration is prescribed, the administrator must document this flush in the medication chart to ensure traceability
- Cannulae must be flushed at least once per 8 hrs. with an established interval flushing plan recorded within the patients care plan

Documentation

- IV 0.9% Sodium Chloride flushes do not require documentation when used prior and post bolus or for intermittent therapy access/de access
- Document this once per 8hr flush to keep patency on the drug chart
- **Exception:** Flushes will be recorded on the fluid balance chart where the patient is haemodynamically compromised or required as part of their Fluid Balance management

Cannula Rotation/Removal

- The cannula site must be rotated /resited every 72hrs in adults or at the first sign of phlebitis (score = or above 2) or with any other complication.
- **Exception:** Child Health where cannulae are only rotated/resited when clinically indicated. Refer to Neonatal policy for neonates
- All **community placed** cannulae need to be identified and documented in the clinical notes. The cannula must be re sited as soon as practicable. Documented rationale is required in the clinical notes if the cannula has not been resited within 24 hours.
- Use the designated 'IV pressure pads' upon removal of the cannula, removing the pad after 2 hours.

Intermittent Disconnection of an IV Giving Set





- A new sterile cap (combi loc device) must be aseptically attached to the end of the administration set when disconnecting the system from the cannula
- Do not attach the exposed end of the administration set to a port on the same infusion set ('looping') – this poses a risk of contamination

Phlebitis Scoring


- Phlebitis scoring will be performed on each occasion prior to accessing the cannula or at least every 8hrs
- Patients with infusions who have been assessed as understanding the complications of the therapy will have their site monitored at each point of contact, this rationale must be documented in the clinical notes

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- With infusions, sites will be monitored hourly and the phlebitis score documented for all children and adult patients who are unable to understand or communicate side effects of the therapy
- Where particular medication infusion instructions/policy exists follow these instructions for phlebitis assessment and documentation
- Phlebitis scores are to be documented on the patients Observation Chart for bolus therapy or on the Fluid Balance Chart for infusion therapy
- Actions and rationale will be documented in the patients clinical notes where a phlebitis score is = or above 1

Picture	Score	Actions
	0 No symptoms	No signs of phlebitis Observe cannula
	+1 Erythema at access site with or without pain	Possible 1 st signs phlebitis Observe cannula
	+2 Pain at access site with erythema and /or oedema	Early phlebitis Resite cannula & treat site
	+3 Pain at access site with erythema and/or oedema, streak formation, palpable cord	Moderate phlebitis Resite cannula & treat site. Take swab & send to lab

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	<p>+4 Pain at access site with erythaema, Streak formation, Palpable venous cord 2 cm in length, purulent drainage (in Child Health less or equal to 1cm)</p>	<p>Advanced thrombophlebitis</p> <p>Resite cannula & treat site. Take swab & send to lab</p>
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Electronic Infusion Pump requirements

- Where Guardrails have been incorporated into infusion devices the technology will be used for all drug infusions listed within the required drug library profile set up for that area.
- Any changes to the dose/rate or time delivery of the infusion should be checked by 2 authorised persons (refer to the Roles and Responsibilities policy Vol 12) and signed by both persons to confirm the correct patient and dose/rate.
- Pumps must have the alarm system activated at all times
- Pumps must be plugged into the mains power at all times when in the patient is not mobilising or when not in use
- In Child Health and Neonates ensure pump pressure settings are correct for the patient's age and infusion requirements
- Clean pumps with detergent and water and disinfect if required as per Infection Prevention and Control Policy

Documentation requirements

- See above for labelling lines/medication/fluids and phlebitis scoring documentation
- Therapy effects, variances or complications must be documented within the patients clinical notes

Other IV Therapy considerations

- Refer to the Central Venous Access Device (CVAD) policy for CVAD management requirements
- Refer to Fluid Balance Management Policy in regard to recording IV fluid therapy Vol 12
- For specific medications/fluids refer to local policy or the specific policy in Vol 12
- For incremental opioid administration refer to the policy in Vol 12

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- Refer to Verbal Orders Policy Vol 12 for the documentation of IV verbal orders

Measurement and Evaluation

- Certification database will hold certified staff and approved persons
- Clinical practice observations will be performed in all areas of peripheral IV use. The managers will be responsible for implementing improvements with the overall governance of the CDHB and West Coast IV Resource Group
- Incident management reviews

References

- Royal College of Nurses – Standards for Infusion Therapy, 3rd Edition , January 2010
- Intravenous Nursing New Zealand – Infusion Therapy Standards of Practice 2012
- CDC Guidelines for the prevention of Intravascular Catheter-Related infections,2011
- Journal of Infusion Nursing – Infusion Standards of Practice revised 2011
- Becan-McBride, K, 1999 “Laboratory Sampling: Does Process Affect the Outcome?; Journal of Intravenous Nursing, 22,137-142 (111
- DHBNZ Quality Safe Use of Medications Alert 9 December 2009 Intravenous Pump and Infusion Practices www.safeuseofmedicines.co.nz
- Medicines Act (1981, and amendments)

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