3. ROUTES OF ADMINISTRATION

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3.1 Subcutaneous Injection:

A registered nurse (RN) or licensed practical nurse (LPN) may administer certain medications by the subcutaneous route as listed in the drug monograph. The volume of an intermittent subcutaneous injection is not to exceed 2.5 mL. Volumes in excess of 2.5 mL will be given in divided doses at different sites. In children, no more than 1 mL may be given at one site.

See CPD M-100 (Medication Administration, Subcutaneous (Intermittent and Continuous)

3.2 Administration of a Medication by Continuous Subcutaneous Infusion:

This procedure may be performed by all RN's competent to perform the procedure; consultation is available from the Palliative Care Team. LPNs may administer continuous subcutaneous infusions for hydration only (ie. non-medicated).

- All medication administered by continuous subcutaneous infusion requires an infusion pump. Hypodermoclysis solutions which do not contain medication (e.g. D5W) do not require an infusion pump.
- Refer to the drug monographs for any medication-related or prescribing restrictions.
- Subcutaneous infusion flow rates are ideally 1 to 10 mL/hour in minimal volume; rate should not exceed 25 mL/hour.
- For continuous opioid infusions, if patient is not palliative, they must be monitored as outlined in Continuous Opioid Infusions (Policy 3.7) and as per CPD P-075 (Pain Assessment and Documentation). Palliative patients will follow Palliative Care Unit (PCU) specific monitoring guidelines.

See CPD M-100 (Medication Administration, Subcutaneous (Intermittent and Continuous)

3.3 Intramuscular Injections:

A registered nurse (RN) or licensed practical nurse (LPN) may administer medications by the intramuscular route. The volume is not to exceed 5 mL in adults of average weight. Volumes in excess of 5 mL will be given in divided doses at different sites. Maximum volume for infants (birth to 1 year): 0.5 mL; for children 1-2 years: 1 mL; children 2-12 years: 2 mL.

3.4 Intradermal Injections:

All registered nurses may administer intradermal injections.

3.5 Epidural, Intrathecal Injections:

Epidural and intrathecal injections are restricted to physicians only.

Refer to CPD P-104 (Pain – Post Intrathecal Opioid Injection) and I-095 (Intrathecal Baclofen).

Refer to Appendix I for administration policy of intrathecal cytotoxic drugs.

3.6 Continuous Epidural Infusion of Local Anaesthetics and Opioids:

May be administered in critical and selected non-critical care areas provided nursing staff responsible for the care of the patient receiving the epidural infusion are properly inserviced before initiation of the treatment course.

- The patient must have venous access either by an IV line or a saline lock for the duration of the epidural infusion and 24 hours after the epidural is discontinued.
- Epidural bags may only be prepared by the Pharmacy Department.
- The rate of administration of an epidural infusion must be controlled by a dedicated automated infusion control device with **locked key pad**.
- While the patient is in PACU, patient is to be monitored as per CPD C-155 (Care of the Post-Anesthetic Patient)
- While the patient is on a nursing unit, patient to be monitored as

per CPD P-090 (Epidural Nursing Management of the Patient – Acute Care) and as per POPS orders.

- Resuscitation equipment, oxygen and drugs to treat cardiovascular collapse, respiratory arrest and convulsions must be readily available.

- The Palliative Care Unit (PCU) is exempt from above monitoring policies. PCU will follow unit specific monitoring guidelines.

3.7 Continuous Opioid Infusions:

- Opioid infusions must be delivered via an automated infusion control device.

- Naloxone must be readily available.

- Refer to CPD P-075 (Pain Assessment and Documentation) for monitoring of respiratory rate, sedation scale and vital signs.

- The Palliative Care Unit (PCU) is exempt from above policies. PCU will follow unit specific monitoring guidelines.

It is understood that there is no maximum dose for opioid infusions. Respiratory rate and sedation scale are the only acceptable assessments of adverse opioid effect.

3.8 Patient Controlled Analgesia:

Follow policies for administration and monitoring as per CPD P-131 (Pain: IV Patient Controlled Analgesia (PCA), CPD P-075 (Pain Assessment and Document) and appropriate pre-printed orders.

3.9 Administration of Continuous Peripheral Nerve Block (CPNB)

- CPNB must be infused using a dedicated automated infusion control device with **locked keypad**.

- Patient to be monitored as per CPD P-100 (Continuous Peripheral Nerve Block (CPNB): Nursing Management of the Patient - Acute Care) and appropriate pre-printed orders.