Guideline Name: Continuous Subcutaneous Infusion (CSCI) Syringe Driver - McKinley T34 Lock On Pump

**Aims of Syringe Driver Use**

- Promote stable plasma concentration of medication used for maximum symptom control
- Eliminate the need for repeated injections, suppositories or oral medication

The procedure must be carried out by a Registered Nurse who must ensure that they are fully competent to carry out this procedure. As part of orientation, each new nurse must be made aware of the Hospice procedure, attend a Syringe Driver Workshop at Hospice in the Weald as necessary and complete a syringe driver assessment.

**Items required when commencing a CSCI**

- Syringe pump and plastic lock box
- Lock box key
- 9v Battery
- Label
- Holster (optional)
- Prescription chart
- Luerlock syringe of appropriate size
- Blue needles
- Water for injection or NaCl as prescribed
- 100cm Infusion set with butterfly needle or Sof-set as appropriate
- Occlusive film dressing e.g. Tegaderm
- Medication to be administered
- Blue tray

**Procedure**

Explain the procedure to patient and/or relatives.

1. **Choose syringe type and size:**
   
   Normally 20ml. Luer-lock syringes are recommended to prevent disconnection from infusion line. A 20ml should be the minimum size used. (NB. the T34 can take a 2 – 50ml syringe).

2. **Draw up medication:**
   
   Each medication should be drawn up individually before adding the appropriate solution for dilution.

3. **Syringe must be labelled with:**
   
   * Patients name, Date of Birth
   * Medication and dosage
4. **Setting up the T34 Pump:**

- Insert the battery
- Ensure the barrel clamp arm is down and there is no syringe in place
- Press the ON/OFF key to power up
- Press the INFO key to check battery level
- Use the FF/BACK key to move the actuator for syringe placement
- Lift up the barrel clamp arm
- Load the syringe
- Select the syringe size/brand using the scroll keys
- Press YES to confirm correct syringe
- Read the infusion summary

**a. If this is to renew an infusion previously set up and does not require the giving set to be changed then:**

Confirm the infusion summary by pressing YES. Press YES to start the infusion.

**b. If this is to set up a syringe driver and/or replace a giving set:**

**Do not press Yes to start the infusion**

- Remove the syringe, connect the giving set and prime the line.
- Re-adjust the actuator and re-insert the syringe.
- Replace the barrel clamp cover.
- Select the size/brand of syringe.
- **Press YES to resume infusion.**
- Press YES to confirm the setting.
- Insert the needle and secure with an occlusive film dressing.
- Press YES to start the infusion.

5. **Choose an appropriate infusion site:**

- The most suitable sites are usually upper limbs, chest wall, abdomen, upper back or thighs
- Avoid any oedematous areas
- Insert needle subcutaneously at an angle of 45°
- 90 degree needle insertion for Sof-sets
- Make a loop of giving set to prevent sudden painful removal of needle
- Secure in place with occlusive film dressing e.g. Tegaderm. This allows the site to be clearly observed

6. **Placement of the Syringe Driver:**

- Place the syringe driver in the lock box provided
- Place away from the light in a pocket or shoulder holster for an ambulant patient
- The key pad on the syringe pump can be locked by pressing lock on via the blue information button

7. **Documentation:**

Details of the setting up of each syringe driver and the reloading of it must be documented on the syringe driver prescription chart by the nurse who has performed the procedure and must include:
* Medication and doses drawn up
* Date and time infusion was commenced
* Rate of syringe driver ml/hour
* The syringe driver identification number

The following observations should be recorded every 4 hours on the syringe driver prescription chart:
* Time remaining
* Volume to be infused (VTBI)
* Volume infused (VI)
* Observation of needle insertion site for signs of inflammation, tenderness, hardening of area or pain

Observation should also include and findings documented as appropriate:
* Signs of precipitation or discolouration in line or syringe
* Monitoring of the patient’s symptoms

8. **Reloading the Syringe Driver:**
* Every 24 hours draw up a fresh supply of medication required for the following 24 hours, having re-assessed the medication/dosage requirements.
* Any remaining medication should be disposed of according to the Destruction and Disposal of Medicines Policy.

9. **Considerations**
* Syringe drivers should not be exposed to water as it causes extensive damage.
* Great care should be taken not to drop or damage the syringe driver.
* Syringe drivers will be serviced annually.
* Keep out of direct sunlight and take care not to over-warm.

10. **Drug Compatibilities**
Not all drugs are suitable for subcutaneous administration\(^1\). If unsure, check the compatibility chart\(^2\), speak with Senior Nurse or Doctor on call to discuss or telephone Medicine Information Department, Tunbridge Wells Hospital 01892 632695.

11. **Mechanical Failure/ Critical Incident**
If the alarm sounds ensure that you have read the information on the screen before silencing the alarm.

Should a mechanical failure or incident occur, contact McKinley who will produce a report of the syringe drivers use.

12. **Discontinuation/Decontamination**
When syringe driver is discontinued, the following measures must take place to ensure security of expensive equipment and to minimise the risk of cross-contamination.

a. Any remaining medication containing controlled drugs should be disposed of using a CD disposal kit. The amount discarded should be recorded on the syringe driver prescription chart.

b. Syringe driver must be cleaned thoroughly with Detergent wipes. Alcohol wipes MUST NOT be used.

c. Clear plastic lock box to be washed in warm soapy water and dried thoroughly.

d. Batteries to be stored appropriately and any sharps disposed of safely.

e. When returning syringe driver to cupboard, ensure documentation is completed in green file.
f. The syringe driver MUST be stored with the barrel clamp arm in the closed position inside the lockable box.

References:


A web-based instruction guide can be found at www.mckinleymed.co.uk/training/t34/

Related Policies:

Destruction and Disposal of Medicines (Policy 5.2)
Administration of Medicines (Policy 5.1)