**General Principles**

- Check manufacturer’s guidelines and organisation’s protocol regarding preparation and set-up for changing the device
- Use aseptic technique when preparing and setting up infusion
- Check microbiological stability, physical and chemical compatibility of drugs used
- Ensure patient and family/carer receive full explanation of how the device works and indications for use
- A prescription from a medical officer or appropriately credentialled nurse practitioner is required before administering any medication
- Use a Luer-Lok® syringe to prevent risk of disconnection; recommended minimum syringe size is 20 ml to reduce risk of incompatibility, adverse site reactions, and minimise effect of priming the line
- Use Teflon/Vialon cannula to reduce risk of site inflammation
- When changing extension set and/or cannula, prime line after drawing up prescribed medications, and before connecting to the patient

**Syringe Sizes**

- 2 ml to 50 ml: BD, Monoject, Braun, Terumo

**Duration**

- 1 minute to 5 days in 1 minute intervals (not greater than 24 hours duration is recommended)

**Alarms – audible and visual**

- Occlusion
- Near end infusion
- End infusion
- End battery
- Load syringe
- Pump unattended
- Technical fault
- Syringe empty
- Low battery (15 minutes)
- Syringe dislodged

**Selection, Preparation and Maintenance of Subcutaneous Cannula Insertion Site**

- Site selection influenced by whether patient is ambulatory, agitated and/or distressed
- Select a site that is easily accessible eg. chest or abdomen, with a good depth of subcutaneous fat
- Select and use sites on a rotating basis
- Do not position cannula in areas that are:
  - Lymphoedematous or where lymphatic drainage may be compromised, e.g. in women who have had a mastectomy
  - Bony prominences or in close proximity to a joint
  - Inflamed or where there is broken skin
  - Sites of infection or tumour
  - Skin sites that have recently been irradiated
  - Where scarring is present or in skin folds
  - Wherever ascites or pitting oedema are present
- Site longevity varies from 1–14 days. Type of medication and type of cannula used will influence site longevity.

**Subcutaneous Infusion Sites**

- **Anterior Upper Arm**
  - Often limited subcutaneous tissue
  - Avoid dominant arm if patient still active

- **Anterior Chest Wall**
  - Good option
  - Avoid areas around access devices

- **Central Abdominal Wall**
  - Avoid over tumour sites and if ascites or obstruction

- **Posterior Chest Wall**
  - Scapular region
  - Consider if patient pulling at things difficult due to positioning

- **Posterior Upper Arm**
  - Reasonable choice as some subcutaneous tissue in emaciated patients

- **Anterior Upper Thigh**
  - Avoid if oedematous or lymphatic obstruction

**Image courtesy of Hume Region Palliative Care Consortium**
