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| <p><b>Status: Guideline:</b> Offers direction and guidance on good practice, need not necessarily be strictly adhered to.</p> | <p><b>Policy No: AIG 02</b><br/><b>Version No: 0</b><br/><b>Date Approved: 01/03/11</b><br/><b>Review Date: 01/03/13</b></p> |
| <p><b>Title:</b><br/>Guidelines for Administration of a Subcutaneous Injection and Prefilled Syringe</p>                      |  |
| <p><b>Written by:</b><br/>Clinical Practice Project Group</p>   |  |
| <p><b>Approved by:</b><br/>National Risk Management Committee<br/>Joe Wolfe and Associates</p>                                |  |
| <p><b>Cross Reference:</b> AIP01; ICG01; ICG02; ICG03; ICG05, BPH02</p>   |  |

### 1.0 Purpose

The purpose of this guideline is to ensure the safe administration of subcutaneous injections to Cheshire Ireland service users.

### 2.0 Scope

This guideline refers to all Cheshire service users who require assistance with the administration of subcutaneous injections.

### 3.0 Responsibility

- It is the responsibility of all care/support and nursing staff involved in administering subcutaneous injections to Cheshire service users to have the necessary knowledge and practical skills to carry out the procedure safely.
- It is the responsibility of service managers to ensure care/support staff who are involved in administering subcutaneous injections have successfully completed Cheshire Ireland approved training, and have clinical supervision and support provided by a registered nurse.
- Care staff administering Insulin will be supervised and monitored by a Cheshire nurse, Community Diabetic Nurse Specialist/Diabetic Community Health team or if administering Oromorph by the Palliative Care Team/G.P.
- It is the responsibility of service managers to ensure staff are familiar with the guideline and that only care staff who have received Cheshire Ireland approved training in Medication Management will administer subcutaneous injections.
- It is the responsibility of the nurse to verify competence of the care/support staff and to monitor compliance.

## 4.0 Definitions

**Subcutaneous route:** Drugs administered via the subcutaneous route are deposited into the fatty layer of tissue just beneath the skin, where there is little blood flow. This ensures that the medication will be absorbed by the person at a slow, continuous rate. Drugs that may be administered using this route include insulin, hormones, various heparin preparations and oromorph.

## 5.0 Guidelines

### Equipment

- Medication administration chart
- Prescribed drug
- Tray/receiver
- Appropriate pre-prepared/pre-filled syringe/reusable form for use with a cartridge
- Small clinical wipe/tissue
- Place the sharps container within arm's reach (preferably in a secured area) to allow for easy disposal of sharps.

### Guidelines for Administration of Subcutaneous Injection

- Assemble the necessary equipment
- Ensure privacy for the procedure
- Engage with the service user to explain the procedure and gain consent
- Check the service user's medication administration sheet to ensure correct drug, dose, date and time of administration, route and method of administration.
- Wash and dry hands thoroughly (Ref: Guidelines for Hand Hygiene, ICG02).
- Engage with the service user to find what their choice of site will be, influenced by the amount of subcutaneous tissue available. Remove the appropriate garment to expose the chosen site.
- If using an alcohol swab, clean the chosen site with the swab for 30 seconds and allow to dry for 30 seconds.
- To prevent injection into muscle, gently pinch the skin up into a fold at the intended site of injection. Insert two-thirds of the needle, smoothly and quickly at an angle of 45° to the skin.
- Before administering an injection, it is not necessary to aspirate, i.e. to pull back on the syringe plunger after needle insertion.
- Release the skin you are grasping.

- Slowly deliver the drug. On completion, pause briefly before withdrawing the needle as this helps to prevent backtracking.
- Withdraw the needle smoothly and quickly.
- Apply pressure to any bleeding point.
- **DO NOT RESHEATH THE NEEDLE.** Dispose of sharps immediately. Discard used sharps and glass ampoules immediately after use in the location where they were used, disposing of them into a robust sharps container that is leak and puncture resistant. (Use of sealed, puncture and leak-proof sharps containers helps to prevent access to used devices).
- Monitor for signs of localized redness, swelling, bleeding, or inflammation at injection site.
- Ensure the service user is comfortable.
- Remove gloves and wash and dry hands thoroughly.
- Document the procedure in the service user's medication administration sheet.
- Put away all equipment. Some drugs (e.g. insulin) must be kept in the refrigerator.

## **Troubleshooting**

### Practical guidance on glove use in injection practice

- **DO NOT** use gloves for routine intradermal, subcutaneous and intramuscular injections
  - If the health worker's skin is intact.
  - If the service user's skin is intact.
- Glove use: Wear non-sterile, well-fitting, single-use gloves, when there is a likelihood of coming into direct contact with a service users' blood or other potentially infectious materials (e.g. body fluids, moist body substances and saliva [in dental procedures], mucous membranes and non intact skin).
  - If the health worker's skin is NOT intact (e.g. through eczema, or cracked or dry skin).
  - If the service user's skin is NOT intact (e.g. through eczema, burns or skin infections).

When undertaking injections, (Gloves DO NOT provide protection against needle-stick or other puncture wounds caused by sharp objects. Needles, scalpels and other sharps should be handled with extreme caution).

### **Guidelines for Measurement of Blood Glucose Level**

If insulin is to be given, blood glucose levels must be checked 20 minutes before each meal. The guidelines below should be followed.

- Wash hands.
- Take out service user's glucose monitoring pouch (have sharps box also).
- Put on gloves.
- Tell service user you are going to check his blood glucose level.
- Make sure service user's hands are clean, especially tips of the fingers.
- Ascertain which finger was last pricked so the same finger is not being pricked all the time.
- Prepare blood glucose monitoring machine (e.g. Accme machine).
- When blood drop is ready, put on test strip and place in glucose monitor.
- Check blood glucose level to Sliding Scale Sheet for specific insulin medication.
- Prepare specific insulin medication pen to recommended dose and calibrate insulin pen accordingly.
- Record Blood Sugar Levels and amount of units of insulin given.

## **7.0 Appendices**

### **7.1 Site of Administration:**

- Selecting the proper site for the injection is key to minimizing discomfort associated with the injection. The most widely used and usually the preferred site is the lower abdomen, about an inch away from the belly button. Another popular site is the front of the thigh, about half way down and right in the middle. Finally, the fleshy back of the upper arm as well. It does not matter which site is chosen unless G.P. or the **service user** gives you specific instructions.
- People who receive regular injections, such as those with diabetes, are advised to rotate sites, as repeated injection into the same site may cause scarring and hardening of the subcutaneous tissue.
- It is recommended to avoid using sites for injection where there is evidence of tissue scarring, inflammation or other lesions (Jamieson, 2002). (Multiple injections given in the same extremity should be separated by a minimum of 1".)
- Use ice before the injection to numb the skin if the service user is concerned about pain, but make sure to clean it with an alcohol wipe after applying the ice. Generally speaking, the injection will be less painful wherever there is a little more fatty tissue.
- Ensure service users who use insulin pens have their own individual pouches in which all the pens, needles lancets, glucometer are stored and then the insulin pen itself is usually stored in a separate labeled container in a fridge (Insulin Pens -2011 Irish Medicines' Board).

## 8.0 References

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Higgins, D. (2004) Practical Procedures: Subcutaneous Injection. *Nursing Times*, 100(50), pp.32-33.

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*How to Administer Subcutaneous (SC) Injections*

[www.immunize.org](http://www.immunize.org) • [www.vaccineinformation.org](http://www.vaccineinformation.org) • [admin@immunize.org](mailto:admin@immunize.org)

*Choosing Your Own Injection Site* By Nicole Galan, RN, About.com Guide 2009.

*Insulin Pens*, Diabetes Resource Manual HSE 2009.