

<p>Status: Guideline: offers direction and guidance on good practice, need not necessarily be strictly adhered to.</p>	<p>Policy No: AIG 03 Version No: 0 Date Approved: 01/03/11 Review Date: 01/03/13</p>
<p>Title: Guidelines for Administration of an Intramuscular Injection</p>	
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<p>Cross Reference: AIP01; ICG01; ICG02; ICG03; ICG05</p>	

1.0 Purpose

The purpose of this guideline is to ensure the safe administration of intramuscular 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

- Only nursing staff will administer intramuscular injections.
- It is the responsibility of all nursing staff involved in administering intramuscular 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 nursing staff are familiar with the guidelines.

4.0 Definitions

Intramuscular injection is the injection of a substance directly into a muscle. It is used for particular forms of medication that are administered in small amounts. Intramuscular injections are often given in the deltoid, vastus lateralis, ventrogluteal and dorsogluteal muscles. The medication should be administered with a needle long enough to reach the muscle without penetrating underlying structures.

Examples of medications that are sometimes administered intramuscularly are: codeine, olanzapine, streptomycin, diazepam and many vaccines.

5.0 Guidelines

Equipment

- Medication administration chart
- Prescribed drug
- Gloves
- Tray / receiver
- Appropriate size sterile needles
- Appropriate size sterile syringe
- Small clinical wipe / tissue
- Sharps bin
- Alcohol swab
- Place the sharps container within arm's reach (preferably in a secured area) to allow for easy disposal of sharps.

Guidelines for administration of an intramuscular 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 as per Best Possible Health Medication Administration Sheet.
- Wash and dry hands thoroughly (Ref: Guidelines for Hand Hygiene, ICG02).
- Put on gloves. Put on apron if required as per guidelines for use of protective clothing (Ref: Guidelines for the use of Personal Protective Clothing for Staff ICG01).
- Open the syringe barrel at the plunger end and remove the syringe. Check that the plunger will move freely inside the barrel.
- Taking care not to touch the nozzle end, hold the syringe in one hand and open the needle packaging at the hilt (coloured end). Attach the needle firmly to the syringe and loosen, but do not remove the cover. Place in the tray/receiver.
- Select the drug in the appropriate volume, dilution or dosage and check the expiry date.

- If a glass ampoule of liquid is being used, ensure that all the contents are in the bottom of the ampoule, tap the neck of the ampoule gently, then break off the top, using a clinical wipe/tissue to protect your fingers. Inspect the solution for glass fragments; if present discard. If a plastic ampoule is being used, break off the top, taking care not to touch the top of the ampoule with your fingers. Pick up the syringe and needle and allow the needle cover to slide off into the tray. Wipe the top of the vial with 60–70% alcohol (isopropyl alcohol or ethanol) using a swab or cotton-wool ball.
- Carefully insert the needle through the neck of the ampoule and into the solution, taking care not to allow it to scrape against the bottom of the ampoule as this blunts the needle.
- Draw back on the plunger, using your thumb and middle finger on the plunger with your index finger against the flange of the syringe, until the required amount is in the syringe.
- If the medicine is in powder form, tap the neck of the ampoule gently, draw up the diluent, clean the rubber stopper of the ampoule with an alcohol swab and allow it to dry. Inject a small amount of the diluent into the ampoule. Mix thoroughly by gently agitating or rolling the ampoule until all the powder has dissolved. Inspect the contents. When the solution is clear proceed to withdraw the amount prescribed.
- Holding the ampoule upside down at eye level, pull back the plunger to draw the liquid into the syringe. Make sure that the needle remains below the surface of the liquid to prevent air being drawn into the syringe.
- Withdraw the amount of drug required.
- Replace the ampoule in tray.
- Hold the syringe upright at eye level and encourage any air to rise to the top of the syringe. Gently tap the barrel of the syringe if necessary to make air bubbles rise to the top. Expel the air by gently pressing the plunger until droplets of liquid are seen at the top of the needle.
- **Needleless system** • If a needleless system is available:
 - Wipe the rubber septum of the multidose vial with an alcohol swab
 - Insert the spike into the multidose vial
 - Wipe the port of the needleless system with an alcohol swab
 - Remove a sterile syringe from its packaging;
 - Insert the nozzle of the syringe into the port
 - Withdraw the reconstituted drug.
- Evaluate the service user's knowledge of the medication being offered. If this knowledge appears to be faulty or incorrect, offer an explanation of the use, action, dose and potential side effects of the drug/s involved.

- Engage with the service user to select the site of administration, and ask/assist the service user to adopt a suitable position.
- The service user should be positioned so as to relax the muscle.
- The 'Z track' technique should be used at all times.
- 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.
- Stretch the skin around the chosen site slightly with your non-dominant hand.
- Holding the syringe like a dart with your dominant hand, insert the needle swiftly and firmly at an angle of 90° to the skin, leaving about 1cm of the needle showing.
- With the ulnar border of your hand against the skin, hold the coloured part of the needle to prevent movement.
- If there is no blood flashback, depress the plunger steadily, not too quickly, until the syringe is empty.
- Wait 10 seconds before withdrawing 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). (Ref: Guidelines for the Safe Handling and Disposal of Sharps, ICG 03).
- Observe for any bleeding and apply pressure and a dressing if required.
- Monitor for signs of localized redness, swelling, bleeding, or inflammation at injection site.
- Ensure the service user is comfortable.
- Remove gloves, wash and dry hands thoroughly.
- Document the procedure in the service user's medication administration sheet
- Put away all equipment.

6.0 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 user's 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).
- When undertaking injections, gloves DO NOT provide protection against needle-stick or other puncture wounds caused by sharp objects.
- DO NOT allow the needle to touch any contaminated surface.
- DO NOT reuse a syringe, even if the needle is changed.
- DO NOT touch the diaphragm after disinfection with the 60–70% alcohol (isopropyl alcohol or ethanol).
- DO NOT enter several multidose vials with the same needle and syringe.
- Single-dose vial use is preferred as there is a low likelihood of contamination.

6.1 Site of Administration: The most common sites for intramuscular injections are the gluteus maximus and the lateral aspects of the vastus lateralis (one of the quadriceps). When the gluteal muscles are used, injections should be made on the upper, outer quadrant of the buttock to avoid damaging the sciatic nerve. Smaller intramuscular injections, such as vaccinations, are usually given into the deltoid area.

7.0 References

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WHO Best Practices for Injections & Related Procedures Toolkit March 2010