Stay current with standards of practice
Increase patient safety and comfort
Increase staff awareness
IM Injection Sites

- Current research indicates that the preferred IM sites for medication administration include the:
  - Deltoid muscle
  - Ventrogluteal muscle (hip)
  - Vastus lateralis muscle (side of thigh)
Is a preferred injection site because:
- Reduced risk of injury due to lack of nerves and blood vessels
- Allows faster uptake of medications
- Better access to muscle tissue
- Able to inject larger volume of medications including viscous medications
- This site can be used in children > than 7 months old

Source: Walsh, L. and Brophy, K. Staff nurses’s sites of choice for administering intramuscular injections to adult patients in the acute care setting. Journal of Advanced Nursing, 1034–1040.
Is a preferred injection site because:
- Better access to muscle tissue
- Reduced risk of injury due to lack of nerves and blood vessels
- Can be used for obese patients
- Preferred site in infants up to 7 months old

Dorsalgluteal muscle

- Is no longer recommended for IM injections because of the:
  - Increased risk of Sciatic Nerve injury
  - Increased difficulty in finding the landmarks needed for the injection
  - Increased possibility of subcutaneous (SQ) administration versus IM administration

Source: Walsh, L. and Brophy, K. Staff nurse's sites of choice for administering intramuscular injections to adult patients in the acute care setting. Journal of Advanced Nursing, 1034–1040.
IM Injections

- Size of the syringe, gauge, and length of the needle are determined by the:
  - Amount of medication
  - Viscosity of the medication
  - Injection site chosen
  - Patient’s weight
  - Amount of adipose tissue

The volume of medication administered via IM injection is usually 1–4 milliliters (ml)

- Deltoid muscle can be used for all IM injections 1 ml or less

- Ventrogluteal and Vastus lateralis muscles can be used for all IM injections
The appropriate gauge of the needle is determined by the medication being administered

- Biologics (medications in powdered form and mixed with sterile water) should be administered with a 20G–25G needle
- Aqueous solutions (such as antibiotics mixed in solutions) should be administered with a 20G–25G needle
- Oil–based solutions medications (such as Haldol) are administered with a 18G–25G needle.

Pediatric Recommendations

- 23G–25G needles should be used for all pediatric populations
- 23G needles should be used on infants and children with bleeding disorders
- The Vastus lateralis muscle is recommended because this muscle is usually the best developed
- Contains no large nerves or blood vessels

Needle Length

- Needle length is determined by:
  - The chosen injection site
  - The patient’s size
  - The amount of subcutaneous fat covering the muscle

- In general:
  - Vastus lateralis muscle use ½” to 1” needle
  - Deltoid muscle use ½” to 1 ½” needle
  - Ventrogluteal muscle use ½” to 1 ½” needle

Pediatric Recommendations

- 25 millimeter (mm) needle length should be used in all pediatric populations.
- Shorter needle length should be considered in very small infants and pre–term infants.

Z-track Method

- Z-track method
  - Is recommended for all IM injections
  - Reduces pain from the injection
  - Prevents leakage of medication into surrounding tissue

Adult Recommendations

- The Ventrogluteal muscle for all IM injections because the risk of injury is decreased, larger volume of medications can be administered, and better access to the muscle
- The Dorsal gluteal muscle is no longer used because of the increased risk of injury to the Sciatic Nerve and increased difficulty in finding landmarks to administer the medication
- 18G–25G needles can be used for all IM injections based on the patient’s size, injection site, and amount of subcutaneous fat covering the muscle
- Z-track method is used for all IM injections because of reduced pain from the injection and prevents seepage of medication into the surrounding tissue
Pediatric Recommendations

- Ventrogluteal muscle can be used in children 7 months and older
- Vastus lateralis muscle is used in infants up to 7 months of age because this muscle is best developed and it contains no large nerves or blood vessels
- 23G–25G needles are used with all injections for pediatric populations