IM Injections: Is There A Safer Way????

By Jackie Rothermel, RN
If nurses on 5B medical-surgical unit at UPMC St. Margaret Hospital received current evidence regarding safer IM injections, will they consider changing practice?
1. How many years have you been a nurse?
   0-10 11-20 21-30 30<

2. What is your educational level?
   Diploma--Associate--BSN--MSN<

3. What is your preferred site for IM injections?
   Dorso-gluteal---Ventrico-gluteal

4. Which IM injection site do you feel is safest for the patient?
   Dorso-gluteal---Ventrico-gluteal

5. Which IM site were you taught as the preferred site during your nursing education?
   Self explanation answer
Pre-Survey Results of 18 Respondents

1. How many years have you been a nurse?
   0-10 (58.8%) 11-20 (29.4%) 21-30 (5.9%) >30 (5.9%)

2. What is your educational level?
   Diploma (88.9%) -- Associate (5.6%) -- BSN (0) -- MSN<(5.6%)

3. What is your preferred site for IM injections?
   Dorso-gluteal (55.6%) --- Ventro-gluteal (44.4%)

4. Which IM injection site do you feel is safest for the patient?
   Dorso-gluteal (50%) --- Ventro-gluteal (50%)

5. Which IM site were you taught as the preferred site during your nursing education?
   Self explanation answer: Dorso: 10   Ventro: 4   Other: 4
Goals

• To educate nurses regarding current evidence for safe IM injections.

• To change practice from dorso-gluteal site to the safer ventro-gluteal site for better patient outcomes.
Potential Complications of IM Injections

- Infection
- Injection fibrosis
- Muscle Contracture
- Sciatic nerve injury
- Hemorrhage/hematoma in patients with bleeding disorders
- Pain
- Abscesses/gangrene
Former Practice

- **Dorsogluteal**: Upper Outer Quadrant of Gluteus maximus (buttocks)
• **Vento-gluteal:** Upper outer lateral hip area/ the Gluteus medius

*Place heel of right hand over patient’s left greater trochanter (or visa versa) and position your index finger toward the anterior superior iliac spine. Stretch your middle finger away from your index finger. The center of the resulting triangle formed by your fingers and the iliac crest is your injection site- move away hand prior to injection to avoid self-injury!*
### Pros and Cons for Each Site

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<th>Sites</th>
<th>Pros</th>
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| Dorso-gluteal | • Needle aspiration should be undertaken  
• Traditionally favored  
• Observed in clinical practice  
• Easy to locate landmarks | • Unnecessary/unacceptable risk  
• Close proximity to sciatic and major blood vessels/damage risk  
• Poor absorption of vaccine/meds  
• Dorso-gluteal muscle atrophy in the emaciated patient  
• Greater rate of abscesses |
| Ventro-gluteal | • Safe for all ages and first choice; no major complication have been attributed; taught in nursing programs  
• Increased muscle thickness makes it less likely to inject into thinner SUB Q  
• Free from major nerves and blood vessels  
• Used for volumes up to 5ml  
• Bony landmarks are easy to palpate for accuracy of IMI | • Small area for injection  
• Difficulty locating the site  
• What was taught vs. educating nurses on current evidence  
• Obvious deformities/scarring  
• Difficult to locate site on obese or thin patients  
• Paralysis of the tensor fasciae latae muscle- very rare |
Will Nurses Change Their Practice?

• After exposure to current evidence regarding the safest IM site, will nurses consider changing their practice?

• Results will be measured by a post-survey after multi-modal educational efforts are completed.
Results of Post-Survey (15)

1. How many years have you been a nurse?
   0-10 years (12 or 80.0%)  11-20 years (0.0%)  
   21-30 years (0.0%)  30 or more years (3 or 20.0%)

2. What is your educational level?
   Diploma-10 (66.7%)  Associate Degree-2 (13.3%)  
   BSN-3 (13.3%)  MSN or higher-1 (6.7%)

3. Would you change practice after the education based on new evidence regarding safer IM injections?
   A. Yes -14 (93.3%)  B. No (0.0%)  C. N/A -already prefer ventro-gluteal -1 (6.7%)
The Next Step!

1. Disseminate information
2. Present to Clinical Practice Council
3. Change current policy to correlate with current evidence
4. Policy refers to Lippincott—already recommends ventro-gluteal
References


