



**Singapore Healthcare
Management 2019**

Intramuscular Injection - Hit it Right: A Patient Safety Initiative



**KK Women's and
Children's Hospital**
SingHealth

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INTRODUCTION

KKH provides services to a diverse population of patients ranging from Neonates to Adult (women). There was no standard practice in the administration of intramuscular (IM) injection. This resulted in different practices that could have compromised patient safety and may have an adverse outcome. A review was done to ensure nurses had a better understanding and a standard protocol to follow in both Women and Children services for the administration of an IM injection after patient's feedback on the difference in practices by nurses.

AIMS

1. Improve the understanding and process by the nurses for the Administration of an IM Injection for the woman services
2. Align the KKH Policy and Procedure (PnP) for Women and Children 'Administration of IM Injection'
3. Develop an educational brochure for nurses to provide a standardized education for all patients and their caregivers.
4. Improve overall patient experience and safety

METHODOLOGY

Based on patient's feedback, a workgroup was formed. It consisted of one nurse representative each from Pediatrics, Obstetrics, Gynae Oncology, Urgent O&G Clinic and Nurses Development Unit.

From the period July 2018 to January 2019, the workgroup members discussed on how to improve and standardize the practice and developed and tested the IM Competency Checklist (Figure 1) and educational brochure for nurses (Figure 2).

Figure 1. IM Competency Checklist

KK WOMEN'S AND CHILDREN'S HOSPITAL COMPETENCY CHECKLIST FOR ADMINISTRATION OF INTRAMUSCULAR (IM) INJECTION BY REGISTERED NURSE (ADULT & PEDIATRICS)				
Name of Assessor: _____ Employee No: _____ Dept / Ward: _____ Date: _____		Name: _____ Employee No: _____		
Instructions for assessor: 1. Assess staff according to the performance criteria. 2. Place a tick (✓) for 'Met', a cross (x) for 'Not Met' or (NA) for 'Not Applicable', in the columns provided for each competency assessment. 3. Comment on the staff's performance and give reasons if not competent. 4. Reassess the staff a second time or till he/she is competent.				
S/N	CRITERIA	COMPETENCY ASSESSMENT		
		1	2	3
PART 1 - ADMINISTRATION IN IM INJECTION				
1.	Check Electronic Medication Administration Record (eMAR) / Procedure Form for: - Right patient, medication, dose, time, route, dose, frequency. - Drug allergy and GPEC status. - Time of last dose / stat dose given.			
2.	Perform hand hygiene.			
3.	Wipe the work surface area and disposable kidney dish with alcohol wipes.			
4.	Prepare syringes: - Disposable syringe with: a) Sterile syringe of appropriate size b) Sterile needles of appropriate size c) Alcohol swabs d) Prescribed medication e) Compatible sterile solvent for reconstitution as necessary f) Adhesive plaster g) Polythene bag h) Sharps disposal container			
5.	Countercheck the prescribed medication with co-signer.			
6.	Perform hand hygiene.			
7.	Prepare the pre-mixed medication according to Dilution and Infusion Charts / Pharmacy Guidelines in the presence of co-signer.			
8.	Push and position COW at patient's bedside / outside isolation room.			
9.	Keep the unit dose bag if any.			
10.	Confirm with patient / caregiver drug allergy and GPEC status.			
11.	Explain procedure to the patient / caregiver.			
12.	Assist patient to a comfortable position.			
13.	Select injection site and locate site using anatomical landmarks.			
14.	Assess size and integrity of muscle; inspect skin surface for bruises or signs of infection. Palpate site for masses and tenderness.			
15.	Check chosen site with alcohol swab from the reaction site, subject to a circular motion for about 5cm and allow to air dry for at least 30 seconds.			
16.	Administration of intramuscular injection: - Hold the skin taut with non-dominant hand by spreading the skin between the thumb and index finger. - Hold the syringe between thumb and fingers of the dominant hand and insert the needle safely at a 90° angle to the skin surface. - Stabilize syringe and aspirate by pulling back on the plunger if there is a blood return, remove and change the needle. NB: Aspiration before injection of vaccines or toxins is not necessary because no large blood vessels are present at the injection sites, and might be more painful for infants. - Inject medication according to the recommended speed.			
17.	Slightly cover the injection site with a cotton swab and remove the needle smoothly along the line of insertion.			
18.	Dispose syringe and needle into puncture resistant container / sharps box immediately.			
19.	Document in Inpatient Charge Form.			
20.	Apply gentle pressure to the site and do NOT massage site.			
21.	Remove the cotton swab when bleeding stops. Apply adhesive bandage if required.			
22.	Advise patient to observe for any signs of adverse drug reactions and to inform the nurse immediately and document on ClinDoc.			
23.	Perform hand hygiene.			
24.	Document medication administration in the eMAR / Outpatient Injection / Medication Record immediately.			
25.	Observe, record and report any adverse reaction to the doctor.			
26.	Discard used syringes.			
27.	Dispose of unused reconstituted medication according to guidelines.			
28.	Wipe the work surface with alcohol wipes.			
29.	Perform hand hygiene.			
30.	Document in Inpatient Charge Form.			

Figure 2. Educational Brochure

Intramuscular Injection													
What is an intramuscular injection? An intramuscular injection is a technique of administering a medication into the muscle. This method of injection allows the medication to be absorbed into the bloodstream quickly.													
Following an intramuscular injection, you should <ul style="list-style-type: none"> - Not rub or massage injection site - Wear comfortable, loose clothing that would not irritate the injection site - Remove the plaster after 2 hours 													
The side effects of intramuscular injections are: <table border="1"> <thead> <tr> <th>Minor</th> <th>Major</th> </tr> </thead> <tbody> <tr> <td>Swelling, redness, bruise and / or pain at the injection site</td> <td>Formation of pus</td> </tr> <tr> <td>Slight bleeding at the site, stop bleeding by applying pressure for 1-2 minutes</td> <td>Damage to the tissue, causing permanent pain</td> </tr> <tr> <td>Lump or hard tissue at the injection site</td> <td>Serious allergic reactions to medication such as difficulty in breathing or facial swelling (rare)</td> </tr> <tr> <td>Mild rashes</td> <td>High fever</td> </tr> <tr> <td>Irritability (for children)</td> <td></td> </tr> </tbody> </table>		Minor	Major	Swelling, redness, bruise and / or pain at the injection site	Formation of pus	Slight bleeding at the site, stop bleeding by applying pressure for 1-2 minutes	Damage to the tissue, causing permanent pain	Lump or hard tissue at the injection site	Serious allergic reactions to medication such as difficulty in breathing or facial swelling (rare)	Mild rashes	High fever	Irritability (for children)	
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What should you do for minor side effects? Observe the injection site for the next few days. These symptoms should resolve. If the symptoms persist after 2 weeks, consult a general practitioner.													
What should you do for major side effects? Seek medical attention immediately. If you are in the hospital, inform any available medical staff. If you are at home, we advise you to return to the hospital for review. <ul style="list-style-type: none"> - Walk in to Urgent O&G Center (UOGC) at Women's Tower Basement 1 (for women) - Walk in to Children's Emergency Department at Children's Tower, Basement 1 (for children) 													
For enquiries, please contact: <ul style="list-style-type: none"> - The clinic / ward where you or your child received the injection 													

FINDINGS

QUESTIONNAIRE

The questionnaire findings; nurses are confident in administering IM Injection (Table 1) however they have no standard advice to patients on coping with side-effects and preferred an education leaflet to provide for patients/caregiver.

Perceived Confidence Level of the Nurses

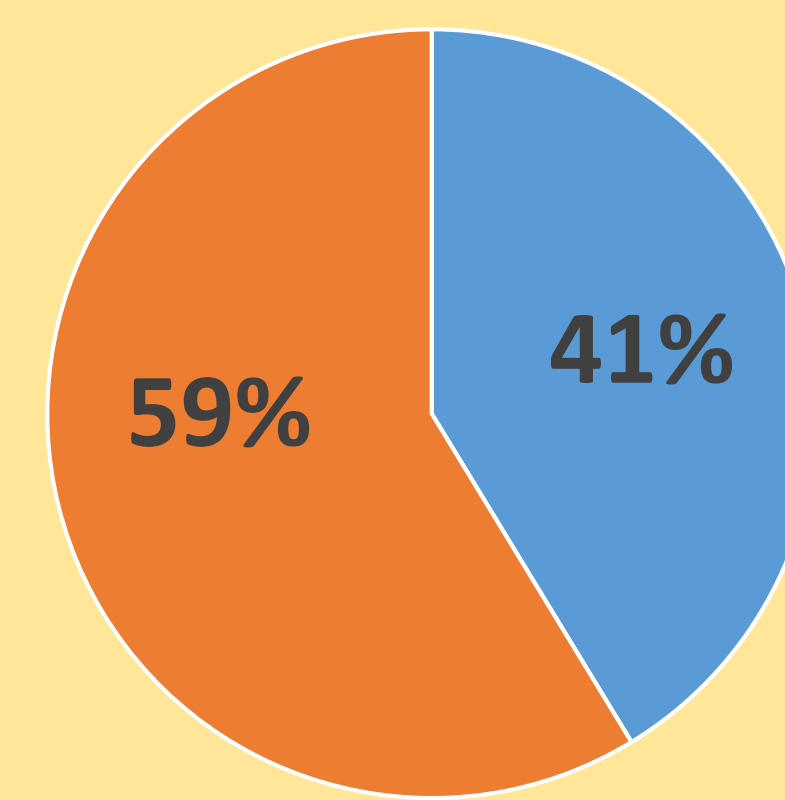


Table 1

EDUCATIONAL BROCHURES

After reading the educational brochure, 90% agreed that it was useful and it provided knowledge of practicing a standardized way of Administering IM Injection (Table 2).

Usefulness of the Educational Brochure for the Nurses

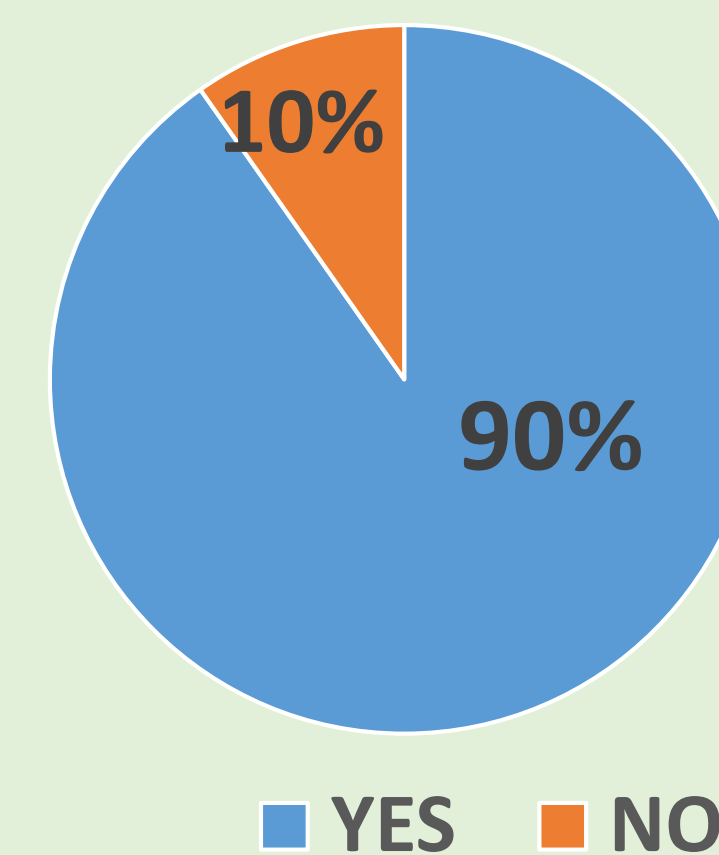


Table 2

RESULTS

Narrative feedback were also obtained from the nurses (Table 3). The information brochure allowed nurses to provide a systematic and standardized education to patients and their caregivers

Table 3 Narrative Feedback from Staff

"The pamphlet is helpful and contains essential information for us nurses".

"The pamphlet provides clear instructions, is informative and short and simple to understand".

"Its a visual guide on administering an IM injection and also allows us to give proper education to the patients".

"The pamphlet provides us with the management of side effects, which are well explained with relevant information".

CONCLUSION

This project has empowered nurses to provide a safe and standard quality care to all patients requiring IM injection, which aligns with our hospital's target zero preventable harm by 2022. It also helps to build a close collaboration between the nurses from different disciplines to strive toward providing better quality, safe and holistic patient care.