

UNIVERSITY COLLEGE DUBLIN An Coláiste Ollscoile Baile Átha Cliath UCD SCHOOL OF NURSING, MIDWIFERY& HEALTH SYSTEMS Scoil na hAltrachta, an Cnáimhseachais agus na gCoras Slainte in partnership with Mater Misericordiae University Hospital &

St Vincent's Healthcare Group





Medication Workbook: Stage 4 and 4.5

General Supernumerary and Internship Placements

BSc (Nursing) Integrated Children's & General Programme

Student Name:

Student Number:

Tel:

Email:

General Placements Signature Bank Each registered nurse who acts as a preceptor/co-preceptor for this student must sign this bank

Preceptor/Co-Preceptor Name (Print)	Preceptor/Co-Preceptor Signature	Preceptor/Co-Preceptor Initials	Clinical Area

General Placements Signature Bank (continued)

Preceptor/Co-Preceptor Name (Print)	Preceptor/Co-Preceptor Signature	Preceptor/Co-Preceptor Initials	Clinical Area

Completed in the following General Placements:

Practice Placements	Placement Area	Duration of Placement
4A supernumerary		
4B supernumerary		
4C supernumerary		
4C Internship		
4D Internship		

Introduction to General section of workbook

This workbook has been developed as a tool to assist you in gaining knowledge of commonly used medications for patients. The relevant worksheet must be completed during each practice placement in stage 4 & 4.5. Lectures on medication management delivered in the partner HEIs and the use of this workbook will assist you to link theory to practice and to become a competent nurse in relation to medication management.

Medication management is an important aspect of your clinical assessment. An example of the Domains and Performance Indicators specific to practice placements for the BSc. Children's & General Nursing are detailed in the tables below

Table 1: Examples Domains and Performance Indicators that pertain to Medication Administration on Adult Supernumerary	
placements	

Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6
1.1.(a,b,d,e)	2.1. (a,c,d)	3.1.(c,d,h)	4.1.(a,d,e)	5.1. (a,b,c)	6.1. (a,b,c)
1.2 (a,b)	2.2 a	3.2 (a)	4.2 (b,c,e)	5.2 (a,b,c,d,e)	6.2. (a,b)
1.3 (a,b,c,d)	2.3.(b,c,d,f*)				
	2.4. (a,b,c)				
	2.5 (a,b,c)				

Table 2: Examples Domains and Performance Indicators that pertain to Medication Administration on Children's Internship placements

Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6
1.1.(a,b,d,	e) 2.1. (a,c,d)	3.1.(c,d,h)	4.1.(a,d,e)	5.1. (a,b,c)	6.1. (a,b,c)
1.2 (a,b)	2.2 a	3.2 (a)	4.2 (b,c,e)	5.2 (a,b,c)	6.2. (a,b)
1.3 (a,b,c,	d) 2.3.(b,c,d,f*))			
	2.4. (a,b,c)				
	2.5 (a,b,c)				

*2.3 F: Assists the Registered Nurse in safe administration, ordering, checking & management of medicines while following legislation & professional guidance.

3.1 D: Safely and accurately carries out medication calculations for medication management by diverse routes of delivery

Year 4/4.5: At this level, the undergraduate nursing student will be expected to competently apply a systematic approach to the provision of person-centred practice to an allocation of persons under the *distant supervision* of a Registered Nurse. *Distant supervision is defined as the undergraduate nursing student providing safe and effective delegated nursing care to persons and supports family members. The undergraduate nursing student accepts responsibility for the provision of delegated care and recognises when the guidance and support of the preceptor and Registered Nurse is required and seeks such assistance in a timely manner.* However, it is important to note that in order for a staff nurse to co-sign the administration of medications , the nurse must directly observe you carrying out the administration.

Learning Outcomes

During your placements you should be able to:

- Summarise NMBI regulations in relation to medication management (NMBI 2020)
- Identify and explain the 10 'Rights' as per NMBI Guidance for Registered Nurses and Midwives on Medication Administration (NMBI 2020)
- Demonstrate an understanding of the local hospital medication policy and other policies, guidelines and procedures for medication management (including controlled drugs)
- Demonstrate competent hand decontamination techniques
- Identify and demonstrate a knowledge of the emergency trolley medications
- Discuss how medications are prescribed (e.g.: on prescription sheet; discharge prescription pad etc)
- Discuss the steps involved in the safe administration of medication
- Distinguish the types of storage for medications in the clinical area
- Observe and participate in the calculation, preparation, third-checker (supernumerary placements) and second-checker (internship placements) and administration of medications, including correct identification of the patient and rationale for this
- Consider the administration of medications and your time management- what is the impact of one on the other?
- Take the appropriate action if you encounter a medication prescription chart that is incorrect or unclear
- Act appropriately and professionally in the instance of a medication error and complete incident forms as required

Instructions for use of Medication Workbook on Practice Placement

Part 1

In addition to meeting the learning outcomes, you will complete the workbook in relation to medication management during each placement. You will be expected to identify a minimum of five different medications common to each of your placements. Include examples of different routes of administration e.g. IV, PO, PR

Part 2 (Self-Assessed)

You will be expected to answer the questions in relation to each of the listed medications for your placements.

Part 3 Student Medication Worksheet

- The 'Core elements of the Medication (Drug) Round' Student and preceptor's guide (below) provides you and the RCN/RGN with a stepby-step approach to completing medication administration.
- You will be required to participate in the administration of medication to a minimum of 10 patients per placement (if appropriate as determined by clinical staff). For each of these you will be required to complete a Student Medication Worksheet. You and the RCN/RGN will sign and date the worksheet.
- The worksheet provides 12 steps that will be assessed by your RCN/RGN before, during and after medication administration.
- It is important you self-assess your performance and receive written/verbal feedback from your supervising RCN/RGN.
- Over the course of the placements, your level of confidence and competence will increase.

The following explains the requirements for each section of the workbook that are to be completed on each placement:

1a/b. Medication Name: this refers to the approved (generic) name of the medication, which is the name that must be used when the medication is prescribed. It is common to hear or see medications referred to by their brand name e.g. Calpol, Paralink or Panadol for paracetamol. It is important to be aware of the brand/trade name and generic name of medications.

2a. Medication Group: What group does the medication belong to? Is it an analgesic, diuretic, anti-pyretic?

2b. Indications: Why is this medication used and for which condition and/or symptoms?

3a/b. Dose and Route: Doses may vary depending on weight, age, route used or the indications for use.

3c. Frequency: How often should this medication be given? Where possible include the maximum dose in a 24 hour period or highlight the differences in frequency depending on route used.

4. Peak Action/Duration of action: For example if analgesia has been given, how long will it take to work and how long will it last in the patients/clients system? If the peak action/duration of action is not readily available please insert N/A in the box.

5a/b/c. Contraindications/Cautions/Nursing considerations: Extremely important to identify to ensure patient safety.

6. Side-effects/adverse reactions: When you know the side-effects you can identify the reason quickly and prevent or manage the side-effect in an effective manner.

7. Observe and participate in medication round: Observe and participate in correct practice for checking doses, preparing medications, third or second-checking of calculations and patient/client identification, administration of medication and documentation. During your placements, you are expected to increase your involvement in medication administration whilst working within your scope of practice.

The information you require can be obtained from a number of sources including: CHI Formulary, the British National Formulary, the hospital/community pharmacist, doctors, nursing/midwifery colleagues, articles, local medication policies/guidelines and NMBI guidelines. It is of the utmost importance that there is evidence of the student's ongoing understanding with regard to the core elements of medication management as outlined in his/her programme.

Core Elements of Medication Round: Student and Preceptor's Guide

Communication and Preparation

- 1. Communicate effectively with the patient/parent/guardian.
- 2. Decontaminate hands in accordance with local policy/ guidelines
- 3. Ensure that all necessary equipment is available and clean.
- 4. Use correct technique in dispensing medication.
- 5. Demonstrate the ability to assess and interpret patient information and identify appropriate action (e.g. temperature, heart rate, respiratory rate, blood pressure, bowels, pain, blood results)
- 6. Check patients identity: verbally, identification band and prescription chart.
- 7. Before administering the medication, consult the patient's prescription chart and check the following:
 - a) Any known allergies
 - b) Medication
 - c) Dose

- d) Date and duration of prescription
- e) Signature of doctor
- f) Route and method of administration
- g) Frequency of administration/last administered
- h) Expiry date
- i) Consultation with CHI Formulary, BNF and Medication Policy as required
- 8. Administer the medication according to the 10 **Rights** (see page 7)

Right patient	Right reason	Right drug	Right route	Right time
Right dose	Right form	Right action	Right documentation	Right response

9. Ensure that the medicine trolley is not left unattended/unlocked at any stage during or after the medication round.

10. Ensure that the patient has taken medication prior to leaving the patient (offer the patient a drink, if appropriate).

11. Make a clear, accurate and immediate record of medication administered or withheld and rationale for withholding medication.



The Ten Rights of Medication Management



Source: https://www.nmbi.ie/Standards-Guidance/Medicines-Management (March 2018)

Medication Knowledge for the Student

- 1 Awareness of the appropriate dose and frequency of medication(s)
- 2 Can discuss the nursing considerations regarding medications relevant to the clinical area (e.g. side effects, contraindications).
- 3 Can explain the rationale for their patients' prescribed medications.
- 4 Can identify what they would do if:
 - the patient refused medication
 - the medication was unavailable
 - a medication error occurs

Always refer to the local Medication Policy for Medication Management

Medication competency assessment for BSc. Children's & General Nursing students

Aim: The undergraduate student will be a competent third checker appropriate to their level of training for medication administration as per the reference guide below.

The Process: The undergraduate student must complete 10 medication (drug) rounds during each placement in stage 4 & 4.5. The students' Medication Worksheet is used to assess the student's practice and knowledge following the medication round, feedback can be documented on the feedback sheet by both student and assessor. A medication (drug) round will be **based on one patient per round** i.e. one patient receiving medication at a certain time regardless of the amount of medication.

Role of the Assessor (preceptor/staff nurse): to ensure the student is assessed on separate occasions to be deemed competent to be a third checker appropriate to their level of training.

Role of the undergraduate student: to enhance their professional development to enable them to be assessed as a third checker and include this in their scope of practice.

General Practice Placements 4A/4B or 4C (Supernumerary): Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	4. Peak action /duration of action (if available)	6. Side effects/ adverse reactions	Participates as 3rd checker in:	Signature and Date of Student and Staff
					preparation	
					□ calculation	
					□ administration	
					□ documentation	
					preparation	
					\Box calculation	
					□ administration	
					□ documentation	

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	/duration of action	6. Side effects/ adverse reactions	Participates as 3rd checker in:	Signature and Date of Student and Staff
					preparation	
					calculation	
					□ administration	
					□ documentation	
					 preparation calculation 	
					□ administration	
					□ documentation	
					preparation	
					calculation	
					administration	
					□ documentation	

Adapted from Sub Committee CASC Medication Working Group UCD, OLCHC, St Vincent's Healthcare Group, MMUH, SJOG, Chluain Mhuire Services, NMH. May 2020. Revised May 2021

General Practice Placements 4A, 4B or 4C (Supernumerary): Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3b. Route	/duration of action	6. Side effects/ adverse reactions	Participates as 3rd checker in:	Signature and Date of Student and Staff
					 preparation calculation administration documentation 	
					 preparation calculation administration documentation 	

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	4. Peak action /duration of action (if available)	6. Side effects/ adverse reactions		Signature and Date of Student and Staff
					preparation	
					□ calculation	
					administration	
					□ documentation	
					 preparation calculation administration 	
					□ documentation	
					 preparation calculation administration 	
					□ documentation	

Adapted from Sub Committee CASC Medication Working Group UCD, OLCHC, St Vincent's Healthcare Group, MMUH, SJOG, Chluain Mhuire Services, NMH. May 2020. Revised May 2021

General Internship Practice Placement 4C: Student Medication Worksheet

1a. Generic name 1b. Trade name	3b. Route	/duration of action (if available)	6. Side effects/ adverse reactions	2nd checker in:	Signature and Date of Student and Staff
				□ preparation	
				□ calculation	
				□ administration	
				□ documentation	
				□ preparation	
				calculation	
				administration	
				□ documentation	
				□ preparation	
				calculation	
				administration	
				□ documentation	

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	/duration of action (if available)	5a. Contraindications 5b. Cautions 5c. Nursing considerations	6. Side effects/ adverse reactions	Participates as 2nd checker in:	Signature and Date of Student and Staff
						□ preparation	
						calculation	
						administration	
						□ documentation	
						preparation	
						calculation	
						administration	
						□ documentation	

General Internship Practice Placement 4C: Student Medication Round

Stu	lent Name			Assessor	Date	ASSESSOF	<u>e</u> l	Assessor	<u>oj</u>	Assessor	ei ei	Assessor
NOT	E: One drug round relate	es to administering medication(s) to one patient.	Dat	<u>Date</u> <u>Asse</u>		ASS	Date	ASS	Date	Ass	Date	Ass
Wai	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	a and decontaminates hands.										
2.		is correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	pratory values, where appropriate										
4.		Irug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child appropriation of a construction of a construct	priately prior to administration for possible side effects, dverse effects										
6.	Knowledgeable about exe who to consult	rcising professional judgment in withholding medication and										
7.	Applies the 10 R ights: Ri Right time, Right dose, response	ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.	Uses oral/enteral syringes tube, mic-key button, PE	s appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents ad	ministration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	ordering from pharmacy, collecting medication and scriptions and medication										
11.	Is knowledgeable about r pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/	guardians in relation to administering medication										

Stuc	lent Name											
ΝΟΤ	E: One drug round relate	es to administering medication(s) to one patient.	<u>Date</u>	Assessor	Date	Assessor	Date	ASSESSOF	<u>Date</u>	Assessor	<u>Date</u>	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	and decontaminates hands.										
2.		s correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	ratory values, where appropriate										
4.		rug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child approp signs and symptoms of ac	priately prior to administration for possible side effects, lverse effects										
6.	Knowledgeable about exe who to consult	rcising professional judgment in withholding medication and										
7.		ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents adr	ninistration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about re pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	juardians in relation to administering medication										

General Internship Practice Placement 4C: Student Feedback Sheet Medication Round

Drug Administration	Date	Student's Comments	Student's Signature	Feedback From RCN/RGN	RCN/RGN Signature
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					

1a. Generic name		4. Peak action /duration of action	6. Side effects/	Participates as	Signature and Date of Student and Staff
				 preparation calculation administration documentation 	
				 preparation calculation administration documentation 	
				 preparation calculation administration documentation 	

General Internship Practice Placement 4D: Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	4. Peak action /duration of action (if available)	5a. Contraindications 5b. Cautions 5c. Nursing considerations	6. Side effects/ adverse reactions	Participates as 2nd checker in:	Signature and Date of Student and Staff
						preparation	
						calculation	
						administration	
						□ documentation	
						preparation	
						□ preparation □ calculation	
						□ administration	
						□ documentation	

General Internship Practice Placement 4D: Student Medication Round

Stu	lent Name											
NOT	E. One drug round velat	es to administering medication(s) to one nationt	Date	Assessor	Date	ASSESSOF	<u>Date</u>	Assessor	Date	Assessor	<u>Date</u>	Assessor
NO	E: One drug round relate	es to administering medication(s) to one patient.	Da	As	Da	AS	- <u>D</u>	AS	Da	As	Da	As
Wai	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	a and decontaminates hands.										
2.		is correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	pratory values, where appropriate										
4.		Irug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child appropriation of a constraint of a constra	priately prior to administration for possible side effects, dverse effects										
6.	Knowledgeable about exe who to consult	ercising professional judgment in withholding medication and										
7.	Applies the 10 R ights: Ri Right time, Right dose, response	ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		s appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents ad	ministration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	ordering from pharmacy, collecting medication and scriptions and medication										
11.	Is knowledgeable about r pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/	guardians in relation to administering medication										

Stud	lent Name											
ΝΟΤ	E: One drug round relate	s to administering medication(s) to one patient.	Date	Assessor	Date	Assessor	Date	Assessor	<u>Date</u>	Assessor	Date	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	and decontaminates hands.										
2.		s correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	ratory values, where appropriate										
4.		rug name, expected mechanism of the medication. nation i.e. CHI Formulary, BNF										
5.	Assess infant/child approp signs and symptoms of ad	riately prior to administration for possible side effects, verse effects										
6.	Knowledgeable about exer who to consult	cising professional judgment in withholding medication and										
7.		ht patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents adr	ninistration of the medication and infant/child response										
10.	Is knowledgeable about or organising discharge press	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about re pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	uardians in relation to administering medication										

General Internship Practice Placement 4D: Student Feedback Sheet Medication Round

Drug Administration	Date	Student's Comments	Student's Signature	Feedback From RCN/RGN	RCN/RGN Signature
11.					
12.					
13.					
14.					
15.					
16.					
17.					
18.					
19.					
20.					

Adapted from Sub Committee CASC Medication Working Group UCD, OLCHC, St Vincent's Healthcare Group, MMUH, SJOG, Chluain Mhuire Services, NMH. May 2020. Revised October 2021.



University College Dublin An Coláiste Ollscoile Baile Átha Cliath School of Nursing, Midwifery & Health Systems Scoil na hAltrachta, an Cnáimhseachais agus na gCoras Slainte

in partnership with

Children's Health Ireland

Sláinte Leanaí Éireann CHII Children's Health Ireland

Medication Workbook: Stage 4 and 4.5 Children's Supernumerary and Internship Placements BSc (Nursing) Integrated Children's & General Programme

Student Name:

Student Number:

Children's Placements Signature Bank

Each registered nurse who acts as a preceptor/co-preceptor for this student must sign this bank

Preceptor/Co-Preceptor Name (Print)	Preceptor/Co-Preceptor Signature	Preceptor/Co-Preceptor Initials	Clinical Area

Children's Placements Signature Bank (continued)

Preceptor/Co-Preceptor Name (Print)	Preceptor/Co-Preceptor Signature	Preceptor/Co-Preceptor Initials	Clinical Area

Completed in the following Children's Placements:

Practice Placements	Placement Area	Duration of Placement
4A Supernumerary		
4B Supernumerary		
4C Supernumerary		
4A Internship		
4B Internship		

Introduction to Children's section of workbook

This workbook has been developed as a tool to assist you in gaining knowledge of commonly used medications for patients. The relevant worksheet must be completed during each practice placement in stage 4 & 4.5. Lectures on medication management delivered in the partner HEIs and the use of this workbook will assist you to link theory to practice and to become a competent nurse in relation to medication management.

Medication management is an important aspect of your clinical assessment. An example of the Domains and Performance Indicators specific to practice placements for the BSc. Children's & General Nursing are detailed in the tables below

 Table 1: Examples Domains and Performance Indicators that pertain to Medication Administration on Children's Supernumerary placements

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1.2 (a,b)	2.2 a	3.2 (a)	4.2 (b,c,e)	5.2 (a,b,c,d,e)	6.2. (a,b)
1.3 (a,b,c,d)	2.3.(b,c,d,f)				
	2.4. (a,b,c)				
	2.5 (a,b,c)				

 Table 2: Examples Domains and Performance Indicators that pertain to Medication Administration on Children's Internship

 placements

Domain 1	Domain 2	Domain 3	Domain 4	Domain 5	Domain 6
1.1.(a,b,d,e)	2.1. (a,c,d)	3.1.(c,d,h)	4.1.(a,d,e)	5.1. (a,b,c)	6.1. (a,b,c)
1.2 (a,b)	2.2 a	3.2 (a)	4.2 (b,c,e)	5.2 (a,b,c)	6.2. (a,b)
1.3 (a,b,c,d)	2.3.(b,c,d,f)				
	2.4. (a,b,c)				
	2.5 (a,b,c)				

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During your placements you should be able to:

- Summarise NMBI regulations in relation to medication management (NMBI 2020)
- Identify and explain the 10 'Rights' as per NMBI Guidance for Registered Nurses and Midwives on Medication Administration (NMBI 2020)
- Demonstrate an understanding of the local CHI Medication Policy and other policies, guidelines and procedures for medication management (including controlled drugs)
- Demonstrate competent hand decontamination techniques

- Identify and demonstrate a knowledge of the emergency trolley medications
- Discuss how medications are prescribed (e.g.: on prescription sheet; discharge prescription pad etc)
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- Distinguish the types of storage for medications in the clinical area
- Observe and participate in the calculation, preparation, third-checker (supernumerary placements) and second-checker (internship placements) and administration of medications, including correct identification of the patient and rationale for this
- Consider the administration of medications and your time management- what is the impact of one on the other?
- Take the appropriate action if you encounter a medication prescription chart that is incorrect or unclear
- Act appropriately and professionally in the instance of a medication error and complete incident forms as required

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Part 1

In addition to meeting the learning outcomes, you will complete the workbook in relation to medication management during each placement. You will be expected to identify a minimum of five different medications common to each of your placements. Include examples of different routes of administration e.g. IV, PO, PR

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You will be expected to answer the questions in relation to each of the listed medications for your placements.

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- The 'Core elements of the Medication (Drug) Round' Student and preceptor's guide (below) provides you and the RCN/RGN with a stepby-step approach to completing medication administration.
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- It is important you self-assess your performance and receive written/verbal feedback from your supervising RCN/RGN.
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2b. Indications: Why is this medication used and for which condition and/or symptoms?

3a/b. Dose and Route: Doses may vary depending on weight, age, route used or the indications for use.

3c. Frequency: How often should this medication be given? Where possible include the maximum dose in a 24 hour period or highlight the differences in frequency depending on route used.

4. Peak Action/Duration of action: For example if analgesia has been given, how long will it take to work and how long will it last in the patients/clients system? If the peak action/duration of action is not readily available please insert N/A in the box.

5a/b/c. Contraindications/Cautions/Nursing considerations: Extremely important to identify to ensure patient safety.

6. Side-effects/adverse reactions: When you know the side-effects you can identify the reason quickly and prevent or manage the side-effect in an effective manner.

7. Observe and participate in medication round: Observe and participate in correct practice for checking doses, preparing medications, third or second-checking of calculations and patient/client identification, administration of medication and documentation. During your placements, you are expected to increase your involvement in medication administration whilst working within your scope of practice.

The information you require can be obtained from a number of sources including: CHI Formulary, the British National Formulary, the hospital/community pharmacist, doctors, nursing/midwifery colleagues, articles, local medication policies/guidelines and NMBI guidelines. It is of the utmost importance that there is evidence of the student's ongoing understanding with regard to the core elements of medication management as outlined in his/her programme.

Core Elements of Medication Round: Student and Preceptor's Guide

Communication and Preparation

- **1.** Communicate effectively with the patient/parent/guardian.
- 2. Decontaminate hands in accordance with local policy/ guidelines
- **3.** Ensure that all necessary equipment is available and clean.
- 4. Use correct technique in dispensing medication.
- **5.** Demonstrate the ability to assess and interpret patient information and identify appropriate action (e.g. temperature, heart rate, respiratory rate, blood pressure, bowels, pain, blood results)
- **6.** Check patients identity: verbally, identification band and prescription chart.
- 7. Before administering the medication, consult the patient's prescription chart and check the following:
 - Any known allergies
 - Medication
 - Dose
 - Date and duration of prescription
 - Signature of doctor
 - Route and method of administration
 - Frequency of administration/last administered
 - Expiry date
 - Consultation with CHI Formulary, BNF and Medication Policy as required

Administer the medication according to the 10 **Rights** (see page 31)

Right patient	Right reason	Right drug	Right route	Right time
Right dose	Right form	Right action	Right documentation	Right response

8. Ensure that the medicine trolley is not left unattended/unlocked at any stage during or after the medication round.

9. Ensure that the patient has taken medication prior to leaving the patient (offer the patient a drink, if appropriate).

10. Make a clear, accurate and immediate record of medication administered or withheld and rationale for withholding medication.



The Ten Rights of Medication Management



Source: https://www.nmbi.ie/Standards-Guidance/Medicines-Management (March 2018)

Medication Knowledge for the Student

- 1. Awareness of the appropriate dose and frequency of medication(s)
- 2. Can discuss the nursing considerations regarding medications relevant to the clinical area (e.g. side effects, contraindications).
- 3. Can explain the rationale for their patients' prescribed medications.
- 4. Can identify what they would do if:
 - the patient refused medication
 - the medication was unavailable
 - a medication error occurs

Always refer to the local Medication Policy for Medication Management

Medication competency assessment for BSc. Children's & General Nursing students

Aim: The undergraduate student will be a competent third checker appropriate to their level of training for medication administration as per the reference guide below.

The Process: The undergraduate student must complete 10 medication (drug) rounds during each placement in stage 4 & 4.5. The students' Medication Worksheet is used to assess the student's practice and knowledge following the medication round, feedback can be documented on the feedback sheet by both student and assessor. A medication (drug) round will be **based on one patient per round** i.e. one patient receiving medication at a certain time regardless of the amount of medication.

Role of the Assessor (preceptor/staff nurse): to ensure the student is assessed on separate occasions to be deemed competent to be a third checker appropriate to their level of training.

Role of the undergraduate student: to enhance their professional development to enable them to be assessed as a third checker and include this in their scope of practice.

Part 4 (self-assessed)

Answer the following questions in relation to the listed medications (Please refer to Part 5 for the answers to these questions)

Metric Conversions:

Kilogram (kg) to gram (g) x 1000	Gram (g) to kilogram (kg) ÷ 1000
Gram (g) to milligram (mg) x 1000	Milligram (mg) to gram (g) ÷ 1000
Milligram (mg) to micrograms x 1000	Microgram to milligrams (mg)÷1000
Microgram to nanogram x 1000	Nanogram to microgram ÷1000
Litre (L) to millilitre (mL) x 1000	Millilitre (ml) to litre (L) ÷ 1000

A)

Please calculate the following doses:				Show how you achieved your answer:
1.	0.6g	=	mg	
2.	300 micrograms	=	mg	
3.	0.85mg	=	micrograms	
4.	0.125mg	=	micrograms	
5.	175 micrograms	=	mg	
6.	356mg	=	g	

B)

1	What is your reference source for dosing and administration?	
2.	Explain reconstitution:	
3.	Explain displacement value:	
4.	Explain independent double check:	
5.	Can an undergraduate student hold the medication keys?	
6.	Can an undergraduate student hold the MDA keys?	
7.	Can two undergraduate students check medication together?	
8.	What is hospital procedure in relation to the checking of controlled medications at the beginning and end of each shift?	
9.	Regarding #8 (above), can an undergraduate student carry out this check?	

C)

A child requires a 500mL IV infusion of 0.9% sodium chloride to be infused over 10 hours.

1. Calculate the rate (mL/hr) to set the infusion pump at:

2. Is this available to be programmed on the smart-pump drug library?

D)

Sally has been prescribed 30 mg Furosemide PO. 20mg/5mL oral solution is available. What volume will you administer?

E)

20 mg of Phenergan PO is prescribed; available solution contains 25mg/mL. What volume will you administer?

F)

12mmols of potassium needs to be added to an infusion. The potassium ampoules contain 20mmol/10mL. What volume should you withdraw from the vial?

G)

A 2 da	y old girl of 36 weeks gestation is admitted and prescribed IV vancomycin via peripheral IV cannula. She is 2.2kgs.			
1.	What dose should she receive?			
2.	How often should the dose be administered?			
3.	. Over how long should the dose be administered?			
4.	What volume is required for reconstitution?			
5.	What volume of Vancomycin should be withdrawn from the vial?			
6.	What is the final concentration of this infusion?			
7.	What is the final volume of this infusion?			
8.	Describe how therapeutic levels should be taken based on this patient's dosing frequency:			

H)

Thomas, 13 years old, is receiving a continuous infusion of IV Morphine following an appendectomy. He is 45kgs.

1. What dose range is safe for Thomas to receive?

- 2. Would Patient-Controlled Analgesia be appropriate for Thomas?
- 3. What specific nursing care must be carried out when looking after a patient receiving a continuous intravenous opioid infusion?

I)

1)				
	Eva is 20kg and 4 years old. She is prescribed Co-Amoxiclav IV.			
	1. What dose should she receive?			
	2. How often should the dose be administered?			
	3. What volume is required for reconstitution?			
	4. What volume of Co-Amoxiclav should be withdrawn from the vial?			
	5. Can Eva receive this medication if she has a Penicillin allergy?			

J)

Calculate appropriate fluid intake for the following patients:				
Weight	% Fluid Maintenance required	Total Fluid Intake		
1. 58kg	100%			
2. 18kg	80%			
3. 5kg	120%			

К)

Sam, a 2.5kg preterm neonate, has been prescribed 37.5mg of Paracetamol IV.			
1. Is this dose correct?			
2. What action should be taken prior to administering this dose?			
3. How often can Sam receive Paracetamol?			
4. Which pump would you administer this dose via?			

Children's Practice Placement 4A,4B or 4C (Supernumerary): Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	4. Peak action /duration of action (if available)	6. Side effects/ adverse reactions	Participates as 3rd checker in:	Signature and Date of Student and Staff
					preparation	
					□ calculation	
					□ administration	
					□ documentation	
					preparation	
					calculation	
					□ administration	
					□ documentation	

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	4. Peak action /duration of action (if available)	6. Side effects/ adverse reactions	Participates as 3rd checker in:	Signature and Date of Student and Staff
					preparation	
					calculation	
					□ administration	
					□ documentation	
					□ preparation	
					calculation	
					□ administration	
					□ documentation	
					preparation	
					calculation	
					□ administration	
					□ documentation	

Children's Internship Practice Placement 4A: Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3b. Route	/duration of action (if available)	6. Side effects/ adverse reactions		Signature and Date of Student and Staff
					□ preparation	
					calculation	
					□ administration	
					□ documentation	
					□ preparation	
					calculation	
					□ administration	
					□ documentation	
					preparation	
					calculation	
					administration	
					□ documentation	

1a. Generic name 1b. Trade name	3b. Route	/duration of action (if available)	6. Side effects/ adverse reactions	2nd checker in:	Signature and Date of Student and Staff
				preparation	
				calculation	
				administration	
				□ documentation	
				 preparation calculation administration documentation 	

Children's Internship Practice Placement 4A: Student Medication Round

Stud	lent Name											
ΝΟΤ	E: One drug round relate	es to administering medication(s) to one patient.	Date	Assessor	Date	Assessor	<u>Date</u>	Assessor	Date	Assessor	<u>Date</u>	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	a and decontaminates hands.										
2.		s correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	pratory values, where appropriate										
4.		rug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child approp signs and symptoms of ac	priately prior to administration for possible side effects, dverse effects										
6.	Knowledgeable about exe who to consult	rcising professional judgment in withholding medication and										
7.		ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		s appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents adr	ninistration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about re pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	guardians in relation to administering medication										

Stuc	lent Name											
ΝΟΤ	E: One drug round relate	es to administering medication(s) to one patient.	Date	Assessor	Date	Assessol	Date	Assessul	Date	Assessor	<u>Date</u>	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	and decontaminates hands.										
2.		s correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	ratory values, where appropriate										
4.		rug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child approp signs and symptoms of ac	priately prior to administration for possible side effects, lverse effects										
6.	Knowledgeable about exer who to consult	rcising professional judgment in withholding medication and										
7.		ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents adr	ninistration of the medication and infant/child response										
10.	Is knowledgeable about of organising discharge pres	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about re pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	uardians in relation to administering medication										

Children's Internship Practice Placement 4A: Student Feedback Sheet Medication Round

Date	Student's Comments	Student's Signature	Feedback From RCN/RGN	RCN/RGN Signature
	Date	Date Student's Comments Image: Ima		

Children's Internship Practice Placement 4B: Student Medication Worksheet

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3a. Dose 3b. Route 3c. Frequency	/duration of action (if available)	6. Side effects/ adverse reactions		Signature and Date of Student and Staff
					□ preparation	
					calculation	
					administration	
					□ documentation	
					preparation	
					□ calculation	
					administration	
					□ documentation	
					preparation	
					□ calculation	
					□ administration	
					□ documentation	

1a. Generic name 1b. Trade name	2a. Group 2b. Indication	3b. Route	/duration of action (if available)	5a. Contraindications 5b. Cautions 5c. Nursing considerations	6. Side effects/ adverse reactions	Participates as 2nd checker in:	Signature and Date of Student and Staff
						preparation	
						calculation	
						administration	
						□ documentation	
						\Box preparation	
						calculation	
						administration	
						□ documentation	

Children's Internship Practice Placement 4B: Student Medication Round

Stud	lent Name											
ΝΟΤ	E: One drug round relate	es to administering medication(s) to one patient.	Date	Assessor	Date	ASSESSOL	<u>Date</u>	Assessor	Date	Assessor	Date	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	a and decontaminates hands.										
2.		is correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	pratory values, where appropriate										
4.		rug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child appropriations and symptoms of a	priately prior to administration for possible side effects, dverse effects										
6.	Knowledgeable about exe who to consult	rcising professional judgment in withholding medication and										
7.		ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		s appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents add	ministration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about n pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	guardians in relation to administering medication										

Stuc	lent Name											
ΝΟΤ	E: One drug round relate	es to administering medication(s) to one patient.	<u>Date</u>	Assessor	Date	ASSESSOF	Date	ASSESSOF	<u>Date</u>	Assessor	<u>Date</u>	Assessor
War	d Area		YES	NO	YES	NO	YES	NO	YES	NO	YES	NO
1.	Prepares preparation area	and decontaminates hands.										
2.		s correct; correct dose for infant/child's age and weight; ed and signed by doctor. Check expiration of medication										
3.	Check vital signs and labo	ratory values, where appropriate										
4.		rug name, expected mechanism of the medication. mation i.e. CHI Formulary, BNF										
5.	Assess infant/child approp signs and symptoms of ac	priately prior to administration for possible side effects, lverse effects										
6.	Knowledgeable about exe who to consult	rcising professional judgment in withholding medication and										
7.		ght patient, Right reason, Right drug, Right route, Right form, Right action, Right documentation, Right										
8.		appropriately and administers oral/enteral (e.g. via NG G, GJ tube) medication according to hospitalguidelines										
9.	Accurately documents adr	ninistration of the medication and infant/child response										
10.	Is knowledgeable about o organising discharge pres	rdering from pharmacy, collecting medication and criptions and medication										
11.	Is knowledgeable about re pharmacy	eporting drug errors and medication information services in										
12.	Educates child/ parents/ g	guardians in relation to administering medication										

Children's Internship Practice Placement 4B: Student Feedback Sheet Medication Round

Date	Student's Comments	Student's Signature	Feedback From RCN/RGN	RCN/RGN Signature
	Date	Date Student's Comments Image: Ima		

Part 5

(Answers to Part 2)

A)

1. 600 mg	0.6 x 1000
2. 0.3 mg	$0.3 \div 1000$
3. 850 micrograms	0.85×1000
125 micrograms	0.125 x 1000
5. 0.175mg	$175 \div 1000$
6. 0.356grams	356 ÷ 1000

B)

- 1. CHI Formulary (also: CHI Pharmacy Department; BNF)
- 2. Mixing a powder form medication with a suitable diluent. This allows it to be administered as a liquid.
- 3. The volume occupied by the powder following reconstitution.
- 4. An independent process in which a second nurse verifies the medication order and preparation in the presence of the first nurse
- 5. No
- 6. No
- 7. No
- 8. Balance checks at every shift change. Report and action discrepancies immediately. Must be recorded and signed by two registered nurses on the record of balance checks book.

9. No

C)

- 1. 50mL/hr
- 2. Yes
- D) 7.5mL
- E) 0.8mL

F) 6mL

G)

- 1. 33mg
- 2. 12 hourly
- 3. At least 60 minutes
- 4. 9.7mL (Flynn & Mylan brands as of 23/04/2021; please check CHI Formulary to confirm as available preparation(s) may change)
- 5. 0.66mL
- 6. 5mg/mL
- 7. 6.6mL
- 8. Take level immediately before or up to one hour before 3rd or 4th dose. Repeat every 2 days when level is therapeutic. Record time of sampling and time of previous dose.

H)

- 1. 10micrograms-40micrograms/kg/hr: For Thomas is 400 micrograms -1800 micrograms
- 2. Yes (he is over 7 years and moderate to severe pain is anticipated for 24 hours or more. He must have the cognitive ability to understand it, be given instruction of how to use it prior to his surgery and be closely supervised)
- 3. Hourly observations to include heart rate, respiratory rate, pain score & sedation score (AVPU). 4 hourly blood pressure and temperature. Pulse oximetry as indicated. Record infusion syringe level hourly. Monitor for side effects.

I)

- 1. 600mg
- 2. 8 hourly
- 3. 10mL (Teva brand 600mg vial as of 23/04/2021; please check CHI Formulary to confirm as available preparation(s) may change)
- 4. 10mL
- 5. No

J)

- 1. 2260mL
- 2. 1120mL
- 3. 600mL

K)

- 1. No (7.5mg/kg for <10kg)
- 2. Get prescription changed to 18.75mg
- 3. 8 hourly
- 4. Perfusor® Space/syringe driver/syringe pump

Additional Resources

Useful reading: Blair, K. (2015) *Medicines Management in Children's Nursing.* 2nd edn., London: SAGE Publication Ltd.

British Medical Association (September 2018 - 2019) British national formulary for children (BNFC) London: BMJ Publishing Group Ltd.

Available at: <u>www.bnfc.org</u> (Accessed 10 November 2019).

CHI, at Crumlin. (2017) *Nursing Policy on Medication Management*. Dublin: OLCHC. Available at: <u>https://www.olchc.ie/Healthcare-Professionals/Nursing-</u> <u>Practice-Guidelines/Medication-Policy-2017.pdf</u> (Accessed 30 July 2021)

CHI, at Crumlin (2017) *Medication Administration. Double Checking Process.* Dublin: OLCHC. Available at: <u>https://www.olchc.ie/Healthcare-Professionals/Nursing-</u> <u>Practice-Guidelines/Medication-Administration-Double-</u> <u>Checking-Process-Algorithm-.pdf</u> (Accessed 30 July 2021)

Crawford, D. (2012) 'Maintaining good practice in the administration of medicines to children'. *Nursing Children and Young People*, 24 (4) pp 29-35.

CHI, at Crumlin (2018) *Ten rights of safe medication administration*. Available at: <u>https://www.olchc.ie/Healthcare-</u><u>Professionals/Nursing-Practice-Guidelines/Medication-Safety-</u><u>10-Rights-of-Medication-Safety-2018.pdf</u> (Accessed 30 July 2021)

CHI, at Crumlin (2021) Hospital Formulary. Dublin: OLCHC.

Gatford, D.J. and Philips, N. (2016) *Nursing Calculations*. London: Elsevier.

Useful websites:

Basic drug calculations. Available at: http://nursing.flinders.edu.au/students/studyaids/drugcalculations/ (Accessed 30 July 2021)

Dosagehelp.com. Available at: <u>http://www.dosagehelp.com/</u> (Accessed 30 July 2021)

Drug calculations quiz page. Available at: <u>http://www.testandcalc.com/quiz/index.asp</u> (Accessed 30 July 2021)

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Health Information and Quality Authority (2015) *Medicines Management Guidance*. Dublin: Health Information and Quality Authority

Jones and Bartlett Learning (2019) *2019 Nurse's Drug Handbook*. Available at: <u>http://www.jblearning.com/catalog/97812841448</u> <u>95/</u> (Accessed 10 November 2019).

NMBI (2021) Scope of Nursing & Midwifery Practice Framework. Available at: <u>https://www.nmbi.ie/Standards-Guidance/Scope-of-Practice</u> (Accessed 30 July 2021).

Nurse Practice Development Unit (NPDU, 2017) *Medication Reference Guide for Nursing students*. Dublin: CHI, at Crumlin.

Starkings, S & Krause, L. (2018) *Passing Calculations Tests in Nursing*. 3rd edn., London: SAGE Publication Ltd.