

**BSc NURSING  
(Academic year 2015/2016)**

**MEDICINE ADMINISTRATION  
WORKBOOK  
(YEAR 3)**

STUDENT'S NAME:

CLASS: SEP 13

PERSONAL TUTOR'S NAME/SIGNATURE (*Signature required for year 3 portfolio once the student has completed parts 1, 2 and 3 of this workbook by May 2016*):

.....

DATE:

MENTOR(S) NAMES (S) and SIGNATURE(S):

.....

DATE:

*To confirm that Mentor is aware of the student's participation/responses to the activities in part 3 of the workbook.*

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## INTRODUCTION TO WORKBOOK

Medicines are powerful tools in treatment that, if used improperly, are potentially dangerous. The safety and handling of medicines are of great importance to the registered nurse who is required to be able to account for a medicine from the time of ordering through to the administration to a patient. As a senior student nurse you must acknowledge the limits of your developing professional competence and obtain help and supervision from a competent practitioner until you have acquired your registration and the requisite knowledge and skill. The Code: Professional standards of practice and behavior for nurses and midwives (NMC 2015) states *“The Code contains a series of statements that taken together signify what good nursing and midwifery practice looks like. It puts the interests of patients and service users first, is safe and effective, and promotes trust through professionalism.”* The Code is relevant to all aspects of practice, including medicine administration and management. Please familiarise yourself with the Code, and in particular, refer to the specific information in section 18. Additionally, re-read the information from the NMC Standards for Medicines management (2010) which you were introduced to in year 1 along with the NMC circular about PGDs (SEP 2009) (see below).

### **NMC Standards for Medicines Management (2010)**

Before proceeding with the activities within this workbook, please access the ‘NMC Standard for Medicines Management’ (2010). An electronic copy (pdf) of the Standard is available via the NMC website, which you can download and save from the following website: <http://www.nmc-uk.org/Publications/Standards/>

In the Standards section of the NMC website there is other information regarding the supply and/or administration of medicine by student nurses and student midwives in relation to **Patient Group Directions (PGDs)**. Please read the circular (SEP 09) from the NMC that was distributed about Patient Group Directions (PGDs) in relation to the student nurse’s role in the supply/administration of medicines. Student nurses cannot supply and/or administer medicines under a PGD even if under direct supervision (NMC 2009). PGDs are specific written instructions for the supply and/or administration of a licensed named medicine including vaccines to specific groups of patients who may not be individually identified before presenting the treatment (NMC 2009).

## GUIDANCE FOR STUDENTS

This workbook is organised into three sections. **The full workbook should be completed by the end of April 2016.**

### ***IMPORTANT INFORMATION***

- *The administration of intravenous drugs is a skill which is learned by registered nurses (i.e. Post-registration skill); therefore student nurses can only observe this skill in practice.*
- *Although the NMC (2010) states that student nurses can be a second signatory in the administration of controlled drugs, local practices and policies vary. In some areas, 2 registered nurses must participate in the administration of controlled drugs; therefore student nurses would be a third signatory.*
- *The above points are also relevant to the administration of drugs or controlled drugs via syringe drivers and infusion pumps.*

When completing the activities within this workbook you will be cognisant of the professional role and the accountability role of the nurse and the professional guidance provided by the NMC. To gain the maximum from these activities you must reflect beyond the mechanics of administering medicines and other prescribed substances to the act of identifying and minimising the risk to patients, clients, friends and colleagues.

When facing professional dilemmas, a registered nurse's first consideration in all acts must be the interests and safety of patients and clients. The purpose of the theory and practice-based learning activities are to assist you towards safe and competent practice in the administration of medicines, calculations, controlled drugs and other prescribed substances as a registered practitioner. This will be accomplished through your own personal investigation and self-directed learning and with the assistance and support of your mentor during your year 3 placements. Completion of the activities will enable you to further develop your knowledge and skills of calculations, administering medicines, controlled drugs and other prescribed substances. Space has been provided at the end of the Workbook for you to record personal notes to supplement your knowledge and skills.

### YEAR 3 OBJECTIVE STRUCTURED CLINICAL EXAMINATION (OSCE)

In year 3, students will undertake a Medications Management OSCE which involves demonstrating a safe and effective medicine administration procedure. By completing the activities in this workbook, this will assist you in preparing for the OSCE and for future practice.

The Medication management OSCE allows students to demonstrate their ability to carry out this skill in practice by applying the appropriate knowledge and decision-making in a professional manner. This will include:

- **Right patient** – Introducing and checking the identity of the patient and whether this correlates with the written prescription
- **Right medication; right route and form** - checking the prescription, the prescribed medication and the route and form e.g. oral/tablets. Students should check and question whether there are any errors or discrepancies on the prescription. Students should be knowledgeable of the common errors that occur in medication management and how these can be identified and/or prevented. If an error is identified, students should be knowledgeable of the appropriate action to take, e.g. contact and discuss with the prescriber.
- **Right dose** – checking the prescribed dose - is it accurate? Is this a usual dose for a patient, e.g. according to their age, weight, clinical history, renal function, etc.? Students should use relevant resources for this and be able to find specific information in the British National Formulary (BNF) such as side-effects, indications and interactions.
- **Right time** – checking that the medication has not already been administered and ensuring that the time of the prescribed medication is satisfactory e.g. has the medication been prescribed at appropriate time intervals as indicated in the BNF, e.g. 6 hourly?
- **Right documentation** – demonstrating the correct procedure for recording when a medication has been administered, or not administered e.g. if the medication is out of stock.
- **Professionalism** – effectively communicating with the patient throughout the procedure, ensuring patient comfort and safely disposing of used equipment. Effectively communicating with the relevant multidisciplinary team members if advice is sought regarding the prescription, medication, etc., e.g. pharmacist, prescriber.

*If you have any questions about the workbook, please use the Discussion Board on the YEAR 3 Skills and Practice module site.*

### **Suggested timeframes for completing the workbook**

#### **Sections 1 and 2 of the workbook**

To be completed by February 2016.

#### **Section 3 of the workbook**

To be undertaken during your placement in February 2016 and submitted to your LTF/personal tutor by the beginning of May 2016.

In section 3 of the workbook, you are encouraged to record and reflect on any significant events, e.g. personal, ethical, professional, or legal dilemmas, that have occurred during recent or previous practice placements concerning the administration of medicines, controlled drugs and other prescribed substances to patients and clients.

## **GUIDANCE FOR MENTORS AND PERSONAL TUTORS**

The Code (2015) states that a mentor has a duty to facilitate students of nursing to develop their competence. This workbook has been developed for student nurses to complete during their third year of the nursing programme (to be completed by April 2016). The workbook aims to encourage student nurses to develop their knowledge, understanding, experiences and competence in medicine administration. This includes developing essential skills such as numeracy and drug calculations in both the practice setting and completing the enclosed activities. As a mentor, we appreciate your input to the students' learning and we are aware that questions about what students can and can't so often arise. Below are three aspects of practice which the School often receives enquiries about.

**NB. 1. Administration of intravenous drugs is a post-registration skill, and therefore student nurses can only observe this throughout their pre-registration education programme. This includes medicines administered via syringe drivers and other IV infusion devices.**

**NB. 2. Patient Group Directions (PGD) - the NMC (2009) circulated information to state that student nurses cannot supply and/or administer medicines under a PGD, even under direct supervision (see page 2 of this workbook for further information).**

**NB. 3. - Controlled drugs - Depending on local policy, in some areas students can be a second signatory, however this varies in different specialties and areas (see page 3 of this workbook for further information).**

## **LEARNING OUTCOMES**

Following completion of this workbook, the student will be able to:

- 1 Demonstrate competence in drug calculations.
- 2 Critically discuss the role of the nurse in the prevention of medication errors.
- 3 Critically discuss the professional, legal, ethical, and safety issues surrounding drug administration in preparation for becoming a competent registered practitioner.
- 4 Demonstrate how to correctly locate information on medications, such as side-effects, interactions, indications and contra-indications in the British National Formulary (BNF).



# SECTION 1

## DRUG CALCULATIONS

### Instructions

Please complete the following calculations within section 1 of this workbook. Should you have difficulty with these, please review drug calculations by reading some of the books in the library, or accessing some of the resources listed at the end of the workbook.

In addition to the calculations in this workbook, further 'self-directed study' for drug calculation revisions is available at: <http://www.nursingnumeracy.info/>

If you have specific difficulties in basic numeracy, please refer to 'the University's Academic Skills Unit: <http://www.dundee.ac.uk/asc/programmes/>

### Section 1

**This section is sub divided into four parts. Part A includes** general arithmetic/mathematics, **Part B** involves oral drug administration, **Part C** involves drugs given by injection, and **Part D** involves intravenous infusion calculations.

## **Part A: Calculations**

### ***Good Practice in Calculations***

*Nurses need to achieve competence in numeracy skills to ensure safe nursing practice (Starkings & Krause 2013). When dealing with calculations, especially complex calculations, always write these down first, and then use a calculator to check (Wright, 2011).*

*The following steps will ensure the risk of errors is minimised in drug calculations:*

- *Always write down your calculations*
- *Use a calculator to check calculations*
- *Always get someone else to independently check your calculation*
- *Seek advice, e.g. Pharmacist, for new or difficult problems*
- *Take your time and avoid being disturbed*
- *Read prescriptions carefully, checking factors such as numbers, dose, always question abbreviations or illegible information*
- *Make an approximate estimation as to what the answer should be before performing the calculation in earnest. Compare this with the result*
- *If in any doubt do not administer the drug. Seek assistance*
- *Always question whether the answer makes sense, e.g. will you have to use lots of tablets or vials to administer the dose?*

### **SUGGESTED READING**

STARKINGS, S. & KRAUSE, L. 2013. Passing calculations tests for nursing students, 2<sup>nd</sup> edition. London: Sage/ Learning Matters

WRIGHT, K., 2011. Drug calculations for nurses: context for practice. Basingstoke: Palgrave Macmillan.

### **Multiplication**

1       $560 \times 2.25 =$

### **Division**

2       $68.86 \div 100 =$

### **Fractions: write the following in their simplest form**

3      a)  $25/75 =$       b)  $7/56 =$       c)  $375/1000 =$

### **Conversions**

- 4      a) 1 kilogram =                  grams  
       b) 1 gram      =                  milligrams  
       c) 1 milligram =                micrograms  
       d) 1 litre      =                  millilitres

- 5      a) Change 0.78 grams to milligrams =  
       b) Change 294 micrograms to milligrams =

- 6      a) Change 2.4 litres to millilitres =  
       b) Change 965 millilitres to litres =

## Convert

- 7 a) 0.055 g to mg =  
b) 0.45 g to mg =

## Decimals and percentages

Write the following as fractions in their simplest form

- 8 a) 0.125 =  
b) 15% =  
c)  $37\frac{1}{2}\%$  =  
d) 0.02 =

Divide. Calculate the value of each fraction to the nearest whole number.

9 a)  $\frac{95}{3}$  =

b)  $\frac{225}{4}$  =

Multiply. Simplify where possible.

10 a)  $\frac{2}{3} \times \frac{5}{6}$  =

b)  $\frac{5}{8} \times \frac{12}{7}$  =

c)  $\frac{9}{10} \times \frac{4}{9}$  =

## Part B: Oral medication

**Formula for tablets, capsules:** what you want divided by what you have got (tablets, capsules) e.g. if you want 10mg and the stock strength of the tablets is 10mg, then 1 tablet would be given.

$$\text{Volume (amount to give)} = \frac{\text{Strength required}}{\text{Stock strength}}$$

**Formula for liquid medication:** what you want divided by what you have got, times the volume of fluid that the drug stock strength is in, e.g. if you want 40mg and the stock strength of the liquid medication is 20mg/ml, then 2ml would be given.

$$\text{Volume (amount to give)} = \frac{\text{Strength required}}{\text{Stock strength}} \times \text{Volume of fluid}$$

- 1 A patient is ordered Ranitidine 150mg orally. You have 75mg tablets in stock. How many tablets should you give?
- 2 Oral Digoxin 125micrograms is ordered. You have 0.125mg in stock. How many tablets should you give?
- 3 Bearing in mind that the number of tablets given at any one time should be as few as possible. Which tablets would you give in the following situations?
  - a. Oral Warfarin 9mg is prescribed. You have 0.5mg, 1mg, 2mg and 5mg, strengths in stock.
  - b. Oral Verapamil 320mg is prescribed. You have 40mg, 80mg, 120mg, and 160mg strengths in stock.
  - c. Oral Sulpiride 400mg is prescribed. You have 100mg, 200mg, and 400mg strengths in stock.
- 4 An oral medication solution contains Furosemide 10mg/ml. How many milligrams of Furosemide are in 3ml of the solution?

- 5 A solution contains Morphine Hydrochloride 2mg/ml. How many milligrams of Morphine Hydrochloride are in 7ml of the solution?
- 6 A suspension contains Erythromycin 250mg/5ml. How many milligrams of Erythromycin are in 20ml of the suspension?
- 7 35mg Chlorpromazine Syrup has been prescribed. You have 25mg/5ml of Chlorpromazine Syrup in stock. What volume would you give?
- 8 30mg of Fluoxetine has been prescribed. You have 20mg/5ml solution in stock. What volume would you give?
- 9 8mg of Diazepam has been prescribed. You have 5mg/ml solution in stock. What volume would you give?
- 10 A patient is receiving Ciprofloxacin suspension 100mg. The concentration of the suspension is 250mg/5ml. How many ml will the patient receive?
- 11 Stock diazepam is 5mg tablets. How many would you administer if patient is prescribed 12.5mg?
- 12 Morphine 2.5mg is prescribed. The stock solution contains 10mg/ml. What volume would be required?
- 13 Suspension contains phenytoin 125mg/5ml. How many milligrams of phenytoin are in the following?  
a) 20ml      b) 30ml      c) 40ml
- 14 Stock Benperidol is 250 micrograms. 1mg is prescribed. How many tablets would be required?
- 15 Zuclopenthixol is supplied in the following strengths - 2mg, 10mg & 25mg  
What combination of tablets would be required for the following prescriptions?  
a) 6mg      b) 18mg      c) 37mg

- 16 Chlorpromazine syrup contains 25mg/5ml. How many milligrams are in the following?  
a) 10ml      b) 30ml      c) 50ml
- 17 Chlorpromazine syrup contains 100mg/5ml. What volume is required for 120mg?
- 18 Haloperidol tablets are supplied in the following strengths – 1.5mg, 5mg, 10mg & 20mg. What combination of tablets would be required for the following prescriptions?  
a) 3mg      b) 8mg      c) 11.5mg      d) 16.5mg      e) 25mg
- 19 Clozapine tablets are supplied in the following strengths – 25mg & 100mg. What combination of tablets would be required for the following prescriptions?  
a) 12.5mg      b) 37.5mg      c) 150mg      d) 225mg      e) 450mg
- 20 The stock solution contains Fluoxetine 20mg/5ml. How many milligrams of fluoxetine are in the following?  
a) 10ml      b) 40ml      c) 25ml
- 21 The stock tablets available are Lofepamine 70mg. How many tablets would you dispense to a patient prescribed 210 mg?
- 22 Quetiapine is supplied in the following strengths - 25mg, 100mg, 150mg & 200mg. What combination of tablets would be required for the following prescriptions?  
a) 75mg      b) 450mg      c) 375mg      d) 175mg
- 23 Stock Thyroxine contains 25 micrograms and 50 micrograms. The patient is prescribed 125 micrograms. What would you dispense?
- 24 Stock Procyclidine is 5mg tablets. What would you dispense to patient prescribed?  
a) 2.5mg      b) 12.5 mg      c) 15mg

### Part C: Injections

- 1 Digoxin ampoules in the stock cupboard contain 500 micrograms in 2ml. What volume is needed to give 350 micrograms?
- 2 A patient is prescribed Flucloxacillin 250mg. Stock vials contain 1gram in 10ml after dilution. Calculate the volume required.
- 3 A patient is prescribed 6,500units of Heparin subcutaneously. Stock vials contain 5,000units per ml Heparin. Calculate the volume required.
- 4 Naloxone 0.6mg is to be given to a patient during an emergency. Stock vials contain 0.4mg/2ml. What volume should be drawn up for injection?
- 5 Vancomycin 500mg is prescribed. Stock vials contain 1g in 10ml once diluted. What volume is required?
- 6 Benzylpenicillin 800mg is prescribed. Stock vials contain 1.2g in 6ml. What volume is required?
- 7 Atropine 0.5mg is prescribed. Stock vials contain 0.6mg/ml. What volume is required?
- 8 Clindamycin 1.2g is prescribed. Stock vials contain 150mg/1ml. What volume is required?
- 9 Heparin 1,750units is prescribed. Stock vials contain 1,000units per ml. What volume is required?
- 10 Pethidine 60mg is prescribed. Stock vials contain 100mg in 2ml. What volume is required?
- 11 Haloperidol 10mg is prescribed. Stock vials contain 5mg/ml. What volume is required?
- 12 Zuclopenthixol acetate 50mg is prescribed. Stock vials contain 50mg/2ml. what volume is required?



- 13 Intramuscular Procyclidine hydrochloride is supplied in 2ml ampoules. Each 2ml ampoule contains a concentration of 5mg in 1ml. The patient is prescribed 5mg. How many ml would you draw up?
- 14 How many ml would you draw up for the following antipsychotic depot injections?
- Depixol contains 20mg/ml  
a) 10mg      b) 24mg      c) 30mg      d) 36mg
- Depixol Conc. contains 100mg/ml  
a) 130mg      b) 60mg      c) 220mg
- Depixol Low Volume contains 200mg/ml  
a) 160mg      b) 240mg      c) 120mg
- Clopixol Conc. contains 500mg/ml  
a) 600mg      b) 200mg      c) 550mg      d) 450mg
- Fluphenazine decanoate contains 25mg/ml  
a) 12.5mg      b) 6.25mg      c) 75mg

### Part D: Intravenous Infusion

This formula can be used for calculating intravenous infusions drip rates (drops per minute) when an infusion pump is not available. You will need to find out from the infusion giving set package how many drops are equivalent to 1ml. Most infusion giving sets are designed for 20 drops per ml in adult areas. Paediatric areas may have more drops per ml as the drops will be much smaller, e.g. 60 drops per ml.

**Formula:** drops per ml times volume divided by time in minutes.

$$\frac{\text{Drops/ml} \times \text{Volume}}{\text{Time in minutes}} = \text{Drops per minute}$$

Example, Volume = 100mls x Drops per ml = 20 = 2000. Divide 2000 by the time in minutes that the infusion has been prescribed. Time = 1 hour (60 minutes). Therefore  $2000/60 = 33.3$ , therefore the drops per minute will be 33 drops.

- 1 150ml of Hartmann's solution is prescribed to run over 6 hours. The Microdrop administration set delivers 60 drops per millilitre (ml). Calculate the drip rate in drops per minute.
- 2 500ml of dextrose 5% is prescribed to run over 8 hours. The administration drip set delivers 20 drops per ml. Calculate the rate in drops per minute.
- 3 750ml of sodium chloride 0.9% is prescribed to run over 9 hours. The administration set delivers 20 drops per ml. Calculate the rate in drops per minute.
- 4 1.5L of fluid is prescribed to run over 10 hours. The giving set delivers 20 drops / ml. Calculate the rate in drops per minute.
- 5 A patient is to have the remaining 300ml of dextrose 5% run through in 50 minute. The giving set delivers 20 drops/ml. Calculate the rate in drops per minute.

- 6 A patient has two intravenous lines inserted. One line is running at 45ml/hr, the other at 30ml/hr. What volume of fluid would this patient receive in a 24 hour period?
- 7 At 21.00hrs on a Monday, one litre of dextrose 5% is set up to run at 50ml/hr. When will the bag be finished?
- 8 A patient is to receive half a litre of dextrose 5% by intravenous infusion. A bag is set up at 08.00hrs running at 60ml/hr. After 5 hours the rate is increased to 80 ml/hr. At what time will the intravenous infusion be completed?

# SECTION 2

## PREVENTING MEDICATION ERRORS

*More than 2.5 million medications are prescribed per day to patients in hospital and the community. Most medications are used safely and effectively, however errors can occur, which can compromise patients' safety (National Patient Safety Agency 2007).*

*"Because nurses predominantly administer drugs, they are often the last potential barrier between a medication error and serious harm to a patient, with drug errors frequently featuring in professional misconduct cases" (Boyd 2013, p7).*

**Activity 1:** The medication process generally involves four stages, i.e. **prescribing, dispensing, administration and monitoring**. Medication errors can occur at any of these stages. Using the headings below and overleaf, consider the role of the nurse in preventing medication errors and list the key reasons why such errors may occur and how the nurse can prevent these. You may find it useful to access and read one or more of the references listed at the end of section 2.

- **Prescribing errors:**

- **Dispensing errors:**

- **Administration errors:**

- **Monitoring errors:**

### **Activity 2**

Using the British National formulary (BNF), identify from the list of extracts below whether there are any errors in the prescriptions. If an error is identified, what would you do?

- a) John, aged 50 years is prescribed oral Cefuroxime 125mg tablets twice daily.
- b) Mary, aged 4 years is prescribed Nitrofurantoin oral suspension (concentration is 25mg/5ml). Mary's weight is recorded as 20kg. The prescription indicates that she should be given 60mg every six hours.
- c) Larry, aged 60 years is prescribed Nystatin oral suspension 100 000 units once daily.
- d) Jane, aged 15 months is prescribed a Salbutamol nebulizer. The prescription states '2.5mg to be given as required up to 8 times daily.'
- e) Anne, aged 68 years is prescribed Simvastatin 20mg via intramuscular injection twice daily.
- f) Tom, aged 56 years is prescribed Gabapentin capsules (oral) 300mg once daily on day one, then 300mg twice daily on day 2, then 300mg 3 times a day on day three.

**Activity 3:** A possible reason why a medication error may occur is because some drug names are similar, e.g. Oxycontin and Oxybutynin. Using the BNF, look up both these medications and list the following for each:

**Oxycontin**

Indications

Cautions

Contra-indications

Side-effects

Doses (adult and children)

Routes/preparation

**Oxybutynin**

Indications

Cautions

Contra-indications

Side-effects

Doses (adult and children)

Routes/preparation

If the patient should have been prescribed Oxybutynin, but was mistakenly prescribed Oxycontin, what might the consequences be for the patient?

**Activity 4:** Abbreviations on prescriptions may lead to medication errors (Boyd 2013). Below is a list of abbreviations that relate to routes of administration.

ITH; SC; IV; IM; O; INH; NEB; TOP; INTERDERM.

What does each of these abbreviations mean?

Why might these abbreviations lead to medication errors?

**Activity 5: Accessing information in the BNF**

While it may seem straightforward to access information in the BNF, some students have had difficulty finding specific information in the paper-based copies. Although an electronic version is available online, in general, the paper-based version is used in clinical areas. Part of the year 3 OSCE involves looking up specific information for patients on aspects such as side effects, indications and interactions between different medicines, therefore it is important to practice this skill. Please watch this short video clip <https://www.youtube.com/watch?v=cW60Em0AKiA> and then answer the questions below.

1. What are the drugs listed in section 5 used to treat?
2. What does a black triangle symbol mean when it is next to a drug name?
3. Name 3 common drugs that Warfarin interacts with?
4. What does the black dot mean when it is next to a drug in the interactions section?
5. Look up Co-Amoxiclav – what type of medication is this and what is used for?
6. Name 3 main side effects of Co-Amoxiclav.



7. Look up the cautions, contraindications and side effects of Amitriptyline Hydrochloride. What does the statement “see notes above” mean ?
8. Look up Salbutamol – what different ways (forms) are available to give this medication? Are the doses the same regardless of the form?
9. What does the ‘Cautions’ section mean in the BNF?
10. What counselling instructions are given about Acarbose?

**References:**

Boyd, C., 2013. Medicine management skills for nurses: student survival skills. West Sussex: Wiley-Blackwell.

National Patient Safety Agency. 2007. Safety in doses: improving the use of medications in the NHS.

<http://www.nrls.npsa.nhs.uk/EasySiteWeb/getresource.axd?AssetID=60117&..>

(accessed 091013).

## **SECTION 3**

Read the following scenarios and answer the accompanying questions.

### **SCENARIO 1**

Wilfred is an 85 year old resident of a nursing home. He has dementia. He has developed a chest infection and has become toxic and confused, refusing his antibiotics. The nurses fear that without the antibiotics he will not survive the night. He has no family and there is no access to immediate medical or psychiatric assessment. They are pretty sure that he will drink a cup of tea.

**Should the nurses put the antibiotics into Wilfred's tea?**

**Please discuss this fully taking into consideration the professional, legal, ethical and safety issues pertinent to this situation.**

### **SCENARIO 2**

John and Mary have been married for 20 years. Mary has a psychiatric illness but does not like taking her medication, so John disguises it by putting it into her pudding each day. As a result her mood and behaviour have stabilised. She now believes that she is better and when the community psychiatric nurse visits, she refuses treatment.

**Should the nurse consider having Mary sectioned – or collude with John so she can stay at home?**

**Please discuss this fully taking into consideration the professional, legal, ethical and safety issues pertinent to this situation.**

### **SCENARIO 3**

Ethel aged 64 has been discharged from hospital following a pulmonary embolus. Her only drug on discharge was Warfarin – she was given a 7 days supply of 1mg, 3mg, 5mg tablets. Daily bloods in the ward dictated the dose for the day.

**What information does Ethel need to know before she is discharged to ensure she can take her medication safely?**

You visit Ethel the day following discharge to assess how she is managing. She tells you she had a bit of a stomach upset and a headache and has been taking “Alka – Seltzar” four times a day for her stomach upset and “Anadin” four times a day for her headache. She bought both these prescriptions from Tesco.

**What are the significant ingredients in these preparations?**

**Alka – Seltzar –**

**Anadin –**

**Are these medications safe to take with her Warfarin?**

#### **SCENARIO 4**

Robert is an 83 year old who lives alone at home. He has recently been discharged from the local hospital with the following medication for atrial fibrillation, heart failure and a hiatus hernia:

Digoxin 250micrograms, once daily

Furosemide 40mg, once daily

Omeprazole 20mg, once daily

He was fit and well when first discharged but over the past 3 weeks he has lost weight, feels nauseated and is not keen to drink. His home-care worker has ensured

that he has had his medication but is now worried because he is looking terrible today.

When you visit you find him in bed. He is frail, has poor skin turgor and is very drowsy. His family have gathered round as they think he is about to die.

**What are the side effects of the medication Robert is taking?**

**Digoxin -**

**Omeprazole -**

**Furosemide -**

**Should home - care workers be given the responsibility of ensuring patients take their medication?**

**How do nurses monitor patients for digoxin toxicity?**

## **SCENARIO 5**

Mrs Daley has been in hospital for 5 days and is looking forward to a visit from her two grandchildren aged 5 and 7 years. After their visit Mrs Daley urgently summons the nurses to report that the 2 “painkillers” in the pot on her locker have gone missing and that she is extremely worried that one of her grandchildren has swallowed them.

**1. What are your views on this situation?**

**2. Explain the implications for:**

**i. patients**

**ii. registered nurses**

**iii. student nurses**

**iv. doctors**

**v. pharmacists**

**vi. relatives/visitors**

## **SCENARIO 6**

Staff Nurse Care arrives on duty late to discover that she is the only 1<sup>st</sup> level registered nurse on duty with 2<sup>nd</sup> level registered nurses, student nurses and health care assistants. To catch up with the outstanding patient care she decides to complete the 08.00 and 10.00 o'clock medicine rounds together. She asks a 3<sup>rd</sup> year student to assist her and a 1<sup>st</sup> year student to act as a "runner" between them and the patient.

The medicine round is completed by 09.45 hr and, after discussion with the students, Staff Nurse Care decides this should become standard practice for these two daily medicine rounds as they always occur at a busy time and are never completed on time.

**1. What are your views on this situation?**

**2. Explain the implications for:**

- i. patients**
- ii. registered nurses**
- iii. student nurses**
- iv. doctors**
- v. pharmacists**
- vi. relatives/visitors**



### **SCENARIO 7**

The doctor has prescribed Amoxicillin capsules 500milligrams, per oral route, three times daily at 0800 hrs 1200 hrs and 1800 hrs.

The following day he changes the prescription times to 0800 hrs 1400 hours and 2000 hours, however he only puts a cross through the 1200 hrs and 1800 hrs times and ticks off the new times of 1400 hrs and 2000 hrs. The doctor initials these changes.

**Why is this not an acceptable prescription and what needs to be done before the nurse administers the patient's next dose?**

### **SCENARIO 8**

You are the Staff Nurse in charge of the ward. The nurse who is administering the medicines reports to you that she has given the wrong medication to a client who has a similar name as the client who should have received the medication.

**Discuss what you would do.**

## **SCENARIO 9**

A client informs you that whilst in the toilet he witnessed another client spitting out their medication down the sink.

**As the Staff Nurse in charge of the ward discuss what you would do.**

## **SCENARIO 10**

Dillon is a 3 year old boy who is requiring treatment for an infected insect bite (cellulitis) on his right forearm. He is being treated as an inpatient. 3 days into his treatment there is no change in the distribution of the cellulitis. The nurses are having great difficulty in administering the drugs orally and consider that he is not receiving all of the medication. Dillon weighs 17kg.

Dillon is receiving the following medication:

Flucloxacillin	125mg	liquid oral	4 times per day
Phenoxymethylpenicillin	125mg	liquid oral	4 times per day

**How important is documentation in this case?**

**Are the doses correct for Dillon's weight?**

**What volume of liquid of each drug will Dillon receive?**

**When and how should oral Phenoxymethylpenicillin and Flucloxacillin be administered to gain maximum benefit from the drug?**

## **SCENARIO 11**

Emma is a 4 year old girl who has Cystic Fibrosis. Emma lives with both parents and her mother is 6 weeks pregnant. She has no other siblings. Emma has been admitted into hospital for the treatment of her first chest infection. This has required starting many new treatments some of which her parents are unfamiliar with including intravenous and inhaled antibiotics.

**Please consider the following prescription and apply the principles of accountability to prescribing practice.**

**Inhaled Colistin 1 million units (MU) to be administered at 0800 and 2000 hrs.**

**Is this the correct dosage of the drug for the age of Emma?**

**Is this the correct dosage of the drug for the age of Emma?**

**Is this medication licensed for use in children? Can you discuss the implications if a drug is not licensed for use in children?**

**Identify the precautions, information and equipment required for the correct administration of inhaled Colistin at home and does this differ from administration in hospital?**

## **SCENARIO 12**

You are the nurse holding the drug cupboard keys, one of your colleagues approaches you and asks for the drug keys as she has a “splitting headache” and is going to take some paracetamol from the cupboard.

**Is this acceptable?**

**If you think this is not acceptable, consider the reasons why.**

**What would you do in this situation?**

## **REFLECTIVE STUDY**

To enable you to reflect critically on your involvement in medicine administration it is necessary for you to record an incident in which you have been involved. Use a model of reflection to help structure your reflection, e.g. Marks-Maran and Rose.

### **Instructions**

- 1 Select a recent experience in which you were involved in the administration of a new medication or a medication that you are not familiar with. This can be an oral medication or an injection.
- 2 Describe the selected experience including the checking of the prescription, route of administration used, the name of the medication, the dose of the medication, the time of administration, and your role in the sequence of events from identifying the medication to completion of the administration.
- 3 What were your thoughts and feelings regarding the administration of this medication?
- 4 How do you think the patient felt taking/receiving this medication?
- 5 Was a calculation required before the medication was administered? If so, was this straightforward or complex?
- 6 Was the medication administration procedure straightforward, e.g. were all the steps carried out according to the NMC Standards for Medicines Management?
- 7 Were there any possible issues, e.g. professional or ethical?
- 8 Describe the learning that has taken place from this activity which you will be able to use in future medicine administration.

Please enter this reflective summary into your year 3 Portfolio.

## INFORMATION SOURCES

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## **PERSONAL NOTES**



