

Medicines management e-learning module

Self-review workbook for Nurses

This section contains prescription and drug calculations practice tests.

Print and complete the workbook and compare your responses to the answers and comments which are included as you progress through the workbook or at the end of the activity. Alternatively, you can dip in and out on screen to self-review your skills. Reflective logs are included after each section to assist you in assessing your strengths, weaknesses and areas for development.

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Prescription and Drug Calculations Tests

In the **first section** you will find an in-patient prescription containing errors, omissions and administration cautions. Make a note or circle (if you have printed the workbook) where the errors and omissions are. You can use the sheet to write your answers down. If you are not familiar with the medication, look it up in the BNF before you think about your answer.

Turn to the next page to show the same prescription chart with the errors, omissions and administration cautions circled in red. The following page outlines the learning points with comments from a pharmacist. An example of a well written prescription can be found on the next page.

In the **second section** you will find a reflective log. Take a little time to reflect on the prescription test and review your strengths, learning and development needs. Complete the learning log at the end of this section and review your strengths, learning and development needs.

The **third section** contains a drug calculations practice test for you to self-review skills, if you have difficulty calculating the answers, ask your supervisor or ward pharmacist for a tutorial. The formulas can be found alongside this workbook on the web page. The answers are at the back of the booklet. Complete the learning log after this activity.

The **fourth section** contains a medicines administration checklist. Ask another registered nurse or your ward pharmacist to review your skills in practice, or your supervisor can use the form to assess you in the workplace. Alternatively you can use the checklist for self-review. When completed add to your portfolio with a reflective account.



Section 1

Spot the Errors

Spot the errors, omissions and/or administration cautions on the inpatient prescription shown on the following page.

PRESCRIPTION CHART & ADMINISTRATION RECORD

CHART..... of.....

Rewritten on.....Checked by:.....Date:.....

DRUG ALLERGIES AND SENSITIVITIES	
DETAILS OF REACTION:	
NAME:	DESIGNATION:
SIGN:	DATE:

SURNAME Smith	WARD C4	ROOM NUMBER/BAY 2	
FIRST NAME John	AGE/DOB 22/12/56	HEIGHT 175cm	WEIGHT 80Kg
NHS NUMBER 987 654 321	SEX MF M	CONSULTANT Dr. Green	

Allergies/sensitivities must be recorded before prescribing or administering medication except in exceptional circumstances

Medication Needs Assessment prior to admission	
patient self medicating	<input checked="" type="checkbox"/>
assisted by family/carer	<input type="checkbox"/>
administered by Nurse/Home	<input type="checkbox"/>
Number of carer visits	<input type="text"/>

Date of Admission **18.9.13**

Medication needs assessment during admission	
self administration assessment done	<input type="checkbox"/>
patient consent form signed	<input type="checkbox"/>
patient being monitored	<input type="checkbox"/>
patient self administering from:	
original packs	<input type="checkbox"/>
original packs with easy tops	<input type="checkbox"/>
compliance aid (blister pack)	<input type="checkbox"/>
patient unable to self administer	<input type="checkbox"/>

Discharge Needs Assessment	
patient to be discharged with:	
original packs	<input checked="" type="checkbox"/>
original packs with easy caps	<input type="checkbox"/>
compliance aid/blister pack	<input type="checkbox"/>
administration by carer	<input type="checkbox"/>
social services informed of medication administration need	<input type="checkbox"/>

Medicine's reconciliation completed on.....

By:

Community Pharmacy.....

Telephone no.....

RISK ASSESSMENT TOOL FOR VTE (Excluding patients < 18 years)

This is a guide: clinicians should exercise clinical judgement when prescribing enoxaparin. VTE risk scores:

Low Risk	Age >60	1	Obesity BMI>30	1	Varicose veins	1	Dehydration	1		
Medium Risk	Sickle cell	2	Pregnancy & puerperium	2	Medicines e.g. HRT	2	Family history of VTE	2	Immobility inc. plaster cast to leg	2
High Risk	Active cancer	3	Cardiac or respiratory failure	3	Nephrotic syndrome	3	Acute Medical illness	3	Serious infection	3
Highest Risk	Surgery and significantly reduced mobility	4	Significantly reduced mobility of >3 days	4	Major Surgery + anaesthetic time >90 mins	4	Personal history of VTE	4	Critical care admission	4

A SCORE OF 3 OR MORE SHOULD BE CONSIDERED FOR PROPHYLACTIC DOSE OF ENOXAPARIN (LMWH). RE-ASSESS AFTER 24 HOURS, THEN REGULARLY AND IF CLINICAL SITUATION CHANGES.		1st Score on admission	2nd Score after 24 hours	3rd Score	4th Score	5th Score
DO NOT PRESCRIBE IF ONE OR MORE OF THE FOLLOWING ARE TICKED (unless benefit outweighs bleeding risk). CONSIDER MECHANICAL OPTIONS/EARLY MOBILISATION.		Risk Score	5			
		Date	18.9.13			
		Signature	[Signature]			
Uncontrolled hypertension (230/120)	Active/high risk of bleeding	Neuro/spinal/eye surgery				
Procedures with high bleeding risk	Concurrent use of other anticoagulants	Acute stroke				
Untreated bleeding disorders eg: Haemophilia/Von Willebrands	Lumber puncture or epidural/spinal anaesthesia in previous 4 hours or expected within the next 12 hours	Liver failure/acquired bleeding disorder				
Thrombocytopenia (platelets <75x10 ⁹ /L)						

CHECK ALLERGIES ON FRONT OF THE CHART BEFORE PRESCRIBING AND ADMINISTERING

NAME : _____

NHS NUMBER: _____

Other charts in use:
(Tick box)

DIABETIC

SYRINGE DRIVER

OTHER (please specify)

DRUGS STOPPED DURING ADMISSION:

DOCTORS: PLEASE INFORM NURSES AND PATIENT EVERY TIME YOU PRESCRIBE A NEW DRUG

ONCE ONLY & PREMEDICATION DRUGS

DATE	TIME	DRUG (APPROVED NAME)	DOSE	ROUTE	DOCTOR'S SIG.	GIVEN BY	TIME	DATE	PHARMACY
18.9.13	22:00	Prednisolone	30mg	PO		B. Stone	22:30	18.9.13	

OXYGEN THERAPY

DATE STARTED	DOSE (L/MIN OR INSPIRED OXYGEN %)	ROUTE		FREQUENCY CONTINUOUS OR WHEN REQUIRED	SPO ₂ TARGET TO BE MAINTAINED %	DATE STOPPED	SIGNATURE
		NASAL CANNULA	SIMPLE FACE MASK				
		RESERVOIR	VENTURI/HUMIDIFIED				

GUIDANCE ON FLOW RATES AND DELIVERY DEVICES AVAILABLE

NASAL CANNULA					SIMPLE FACE MASK					RESERVOIR	VENTURI/HUMIDIFIED								
1	2	3	4	(L/MIN)	5	6	7	8	9	10	(L/MIN)	15	(L/MIN)	24	28	35	40	60	(%)
SPECIFY INITIAL %, NOT FLOW RATE																			

ORAL ANTICOAGULANT THERAPY - Please review prescription daily

DRUG	Indication	Target INR	Signature	Pharmacy
DATE				
I.N.R.				
DOSE (AT 18.00)				
DOCTOR'S INITIALS				
GIVEN BY				

CAUTION: THERE IS AN INCREASED RISK OF BLEED IN THE EVENT OF A FALL WITH PHENINDIONE, ACENOCOUMAROL, WARFARIN, DABIGATRAN, RIVAROXABAN OR APIXABAN.

ADDITIONAL INFORMATION:

NAME

NHS Number

REGULAR PRESCRIPTION

MONTH/YEAR

Falls Risk H/M/L	Date _/_/	Info Given (tick)	DRUG (APPROVED NAME)	Date Init	START																
					18/9	19/9	20/9	21/9	22/9	23/9	24/9	25/9	26/9	27/9	28/9	29/9					
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	ENOXAPARIN (CLEXANE)	0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: S/C Additional information: Date: 18.9.13	0900																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	40mg																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Prednisolone	0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date: 18.9.13	0900	30mg																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Amoxicillin	0600	500mg																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date:	0900																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300	500mg																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	500mg																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Symbicort	0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: Inh Additional information: Date: 18.9.13	0900	1 puff																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	1 puff																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Co-codamol 8/500	0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date: 18.9.13	0900	ii																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300	ii																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800	ii																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	ii																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Humulin M3 KwikPen	0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: S/C Additional information: Date: 18.9.13	0900	12u																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800	8u																
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0600																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0900																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1300																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800																	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200																	

NON ADMINISTRATION REASON CODES: (1) = SLEEP (2) = FASTING (3) = SEE "ON LEAVE" MEDICATION BOOK (4) = PATIENT UNAVAILABLE (5) = REF

(C) = CHANGED (↓) = DOSE DECREASE (N) = NEW DRUG (↑) = DOSE INCREASE

PRESCRIPTIONS MUST BE REVIEWED REGULARLY AND REWRITTEN EVERY 4 WEEKS OR SOONER

DATE					DATE					DATE				

Completion of VTE Risk Assessment Prescribe Thromboprophylaxis above if no contraindications

(6) = SELF-ADMINISTRATION (7) = DRUG UNAVAILABLE (8) = VOMITING (9) = OTHER (SEE REVERSE) (X) = PRESCRIBER AUTHORISED OMISSION
 () = PATIENT CAME IN ON THIS (H) = HIGH RISK (M) = MODERATE RISK (L) = LOW RISK

DRUG ADVERSE REACTIONS/ ALLERGIES/
SPECIAL PRECAUTIONS

DETAILS OF REACTION:

NAME:

DESIGNATION:

SIGN:

DATE:

INTRAVENOUS/SUBCUTANEOUS INFUSION CHART

NAME <i>John Smith</i>	NHS NUMBER <i>987 654 321</i>	CONSULTANT <i>Dr. Green</i>	WARD <i>C4</i>	ROOM NO./ BAY <i>2</i>
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DATE	INTRAVENOUS FLUID	DRUG TO BE ADDED/DOSE	VOLUME	RATE	ROUTE <small>IV = intravenous S/C = subcutaneous</small>	PRESCRIBER'S SIGNATURE	ADMINISTRATION				PHARMACY USE		
							DATE STARTED	TIME STARTED	TIME STOPPED	NURSE'S SIGNATURE		VOLUME GIVEN	BATCH NUMBER
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

1. Every bottle/bag given to the patient must be recorded on this chart. 2. CHECK for incompatibilities.



Prescription with errors circled

Turn the page to find the same inpatient prescription with the errors, omissions and/or administration cautions circled.

If you did not manage to find them all, try again and compare the two prescriptions.

Explanations and learning points can be found on page 18.

PRESCRIPTION CHART & ADMINISTRATION RECORD

CHART 1 of 2

Rewritten on.....Checked by:.....Date:.....

DRUG ALLERGIES AND SENSITIVITIES	
	
DETAILS OF REACTION:	
NAME:	DESIGNATION:
SIGN:	DATE:

SURNAME Smith	WARD C4	ROOM NUMBER/BAY 2
FIRST NAME John	AGE/DOB 22/12/56	HEIGHT 175cm
WEIGHT 80kg	NHS NUMBER 987 654 321	SEX M
CONSULTANT Dr. Green		

Allergies/sensitivities must be recorded before prescribing or administering medication except in exceptional circumstances

Medication Needs Assessment prior to admission	
patient self medicating	<input checked="" type="checkbox"/>
assisted by family/carer	<input type="checkbox"/>
administered by Nurse/Home	<input type="checkbox"/>
Number of carer visits	<input type="text"/>

Medication needs assessment during admission	
self administration assessment done	<input type="checkbox"/>
patient consent form signed	<input type="checkbox"/>
patient being monitored	<input type="checkbox"/>
patient self administering from:	
original packs	<input type="checkbox"/>
original packs with easy tops	<input type="checkbox"/>
compliance aid (blister pack)	<input type="checkbox"/>
patient unable to self administer	<input type="checkbox"/>

Date of Admission 18.9.13

Discharge Needs Assessment patient to be discharged with:	
original packs	<input checked="" type="checkbox"/>
original packs with easy caps	<input type="checkbox"/>
compliance aid/blister pack	<input type="checkbox"/>
administration by carer	<input type="checkbox"/>
social services informed of medication administration need	<input type="checkbox"/>

Medicine's reconciliation completed on.....

By:

Community Pharmacy

Telephone no.....

RISK ASSESSMENT TOOL FOR VTE (Excluding patients < 18 years)

This is a guide: clinicians should exercise clinical judgement when prescribing enoxaparin. VTE risk scores:

Low Risk	Age >60	1	Obesity BMI>30	1	Varicose veins	1	Dehydration	1		
Medium Risk	Sickle cell	2	Pregnancy & puerperium	2	Medicines e.g. HRT	2	Family history of VTE	2	Immobility inc. plaster cast to leg	2
High Risk	Active cancer	3	Cardiac or respiratory failure	3	Nephrotic syndrome	3	Acute Medical illness	3	Serious infection	3
Highest Risk	Surgery and significantly reduced mobility	4	Significantly reduced mobility of >3 days	4	Major Surgery + anaesthetic time >90 mins	4	Personal history of VTE	4	Critical care admission	4

A SCORE OF 3 OR MORE SHOULD BE CONSIDERED FOR PROPHYLACTIC DOSE OF ENOXAPARIN (LMWH). RE-ASSESS AFTER 24 HOURS, THEN REGULARLY AND IF CLINICAL SITUATION CHANGES. DO NOT PRESCRIBE IF ONE OR MORE OF THE FOLLOWING ARE TICKED (unless benefit outweighs bleeding risk). CONSIDER MECHANICAL OPTIONS/EARLY MOBILISATION.	Risk Score	5	1st Score on admission		2nd Score after 24 hours		3rd Score		4th Score		5th Score	
	Date	18.9.13	Signature	[Signature]								
	Uncontrolled hypertension (230/120)	Active/high risk of bleeding	Neuro/spinal/eye surgery									
Procedures with high bleeding risk	Concurrent use of other anticoagulants	Acute stroke										
Untreated bleeding disorders eg: Haemophilia/Von Willebrands	Lumber puncture or epidural/spinal anaesthesia in previous 4 hours or expected within the next 12 hours	Liver failure/acquired bleeding disorder										
Thrombocytopenia (platelets <75x10 ⁹ /L)												

CHECK ALLERGIES ON FRONT OF THE CHART BEFORE PRESCRIBING AND ADMINISTERING

NAME : _____ NHS NUMBER: _____

Other charts in use:
(Tick box)

DIABETIC

SYRINGE DRIVER

OTHER (please specify)

DRUGS STOPPED DURING ADMISSION:

DOCTORS: PLEASE INFORM NURSES AND PATIENT EVERY TIME YOU PRESCRIBE A NEW DRUG

ONCE ONLY & PREMEDICATION DRUGS

DATE	TIME	DRUG (APPROVED NAME)	DOSE	ROUTE	DOCTOR'S SIG.	GIVEN BY	TIME	DATE	PHARMACY
18.9.13	22:00	Prednisolone	30mg	PO		B. Stone	22:30	18.9.13	

OXYGEN THERAPY

DATE STARTED	DOSE (L/MIN OR INSPIRED OXYGEN %)	ROUTE		FREQUENCY CONTINUOUS OR WHEN REQUIRED	SPO ₂ TARGET TO BE MAINTAINED %	DATE STOPPED	SIGNATURE
		NASAL CANNULA RESERVOIR	SIMPLE FACE MASK VENTURI/HUMIDIFIED				

GUIDANCE ON FLOW RATES AND DELIVERY DEVICES AVAILABLE

NASAL CANNULA 1 2 3 4 (L/MIN)	SIMPLE FACE MASK 5 6 7 8 9 10 (L/MIN)	RESERVOIR 15 (L/MIN)	VENTURI/HUMIDIFIED 24 28 35 40 60 (%) SPECIFY INITIAL %, NOT FLOW RATE
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ORAL ANTICOAGULANT THERAPY - Please review prescription daily

DRUG	Indication	Target INR	Signature	Pharmacy
DATE				
I.N.R.				
DOSE (AT 18.00)				
DOCTOR'S INITIALS				
GIVEN BY				

CAUTION: THERE IS AN INCREASED RISK OF BLEED IN THE EVENT OF A FALL WITH PHENINDIONE, ACENOCOUMAROL, WARFARIN, DABIGATRAN, RIVAROXABAN OR APIXABAN.

ADDITIONAL INFORMATION:

NAME

NHS Number

REGULAR PRESCRIPTION

MONTH/YEAR

Falls Risk H/M/L	Date _/_/	Info Given (tick)	DRUG (APPROVED NAME)	Date Init	START	DATE								
						18/9	19/9	20/9	21/9	22/9	23/9	24/9	25/9	
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	ENOXAPARIN (CLEXANE)	0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: Additional information: Date: 18.9.13	0900										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800	40mg									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Prednisolone	0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date: 18.9.13	0900	30mg									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Amoxicillin	0600	500mg									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date: 18.9.13	0900										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300	500mg									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	500mg									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Symbicort	0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: Inh Additional information: Date: 18.9.13	0900	1 puff									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	1 puff									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Co-codamol 8/500	0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: PO Additional information: Date: 18.9.13	0900	ii									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300	ii									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800	ii									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200	ii									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Humulin M3 Kwikpen	0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Route: S/C Additional information: Date: 18.9.13	0900	12u									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>	Dr's signature: <i>S Jones</i> N H ↑ ↓ C	1300	8u									
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0900										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0900										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0600										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		0900										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1300										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		1800										
<input type="checkbox"/>	_/_/	<input type="checkbox"/>		2200										

NON ADMINISTRATION REASON CODES: (1) = SLEEP (2) = FASTING (3) = SEE 'ON LEAVE' MEDICATION BOOK (4) = PATIENT UNAVAILABLE (5) = REF

(C) = CHANGED (↓) = DOSE DECREASE (N) = NEW DRUG (↑) = DOSE INCREASE

DRUG ADVERSE REACTIONS/ ALLERGIES/
SPECIAL PRECAUTIONS

DETAILS OF REACTION:

NAME:

DESIGNATION:

SIGN:

DATE:

INTRAVENOUS/SUBCUTANEOUS INFUSION CHART

NAME <i>John Smith</i>	NHS NUMBER <i>987 654 321</i>	CONSULTANT <i>Dr. Green</i>	WARD <i>C4</i>	ROOM NO./ BAY <i>2</i>
---------------------------	----------------------------------	--------------------------------	-------------------	------------------------------

DATE	INTRAVENOUS FLUID	DRUG TO BE ADDED/DOSE	VOLUME	RATE	ROUTE <small>IV = intravenous SC = subcutaneous</small>	PRESCRIBER'S SIGNATURE	ADMINISTRATION					PHARMACY USE	
							DATE STARTED	TIME STARTED	TIME STOPPED	NURSE'S SIGNATURE	VOLUME GIVEN		BATCH NUMBER
							Given by (Checked by)						
1													
2													
3													
4													
5													
6													
7													
8													
9													
10													

1. Every bottle/bag given to the patient must be recorded on this chart. 2. CHECK for incompatibilities.

Explanations and Learning Points

The learning points on the chart are explained below.

1. The allergy status has not been completed. Improper documentation of allergy status can result in a patient experiencing a fatal drug reaction or optimal therapy being withheld.
2. The name and NHS number must be completed on every page of the chart so the person's identity is clear whichever section is being used. This is particularly important if the charts are faxed as pages can be mixed up.
3. Only one chart is shown in the exercise. The chart box on the prescription shows that the patient has 2 prescriptions and the risk of administration error is greatly increased. For safety sake the prescribing doctor should be contacted to re-write the prescription on one chart if at all possible or clearly state 1 of 2, 2 of 2 etc.
4. The doctor has not signed the once only Prednisolone and this prescribing error has resulted in an administration error.
5. The nurse has given but not signed for the Enoxaparin which may result in inappropriate clinical decisions being made about the patient which may put their safety at risk.
- 5a Medical staff will assume the patient has not received the drug 'not written/signed for = not given'
- 5b A different nurse on duty may administer another dose of the same medication resulting in administration error. Always sign or indicate non-administration on the prescription chart immediately to prevent further un-prescribed administration
6. The doctor has not stated the length of the Amoxicillin course
7. The strength of Symbicort inhaler has not been specified and may lead to dosage error. Ensure strength and frequently is written by the prescriber and you have the correct inhaler for the patient.
8. For the Co-codamol, because of the risk of Paracetamol, the prescribing doctor should write 'contains Paracetamol' in the additional information section to prevent the risk of administration errors. In the PRN section Paracetamol has been prescribed, if both the regular Co-codamol and PRN Paracetamol are given the patient will receive an overdose and the consequences could be fatal.
9. Salbutamol inhaler, again the dose has not been written by the prescriber which may lead to administration error.
10. Humulin (insulin) has been prescribed using 'u' rather than correctly writing units in full. Never accept a prescription where 'u' for units is used – this may result in administration error if the u is misinterpreted.
11. As timely medication is often extremely important for the patients recovery, always ensure you can account for administration omissions.



Section 1

Prescribing Errors Revealed

Turn over to see the well written prescription. When you have finished this exercise turn to section 2 to find a reflective log.

PRESCRIPTION CHART & ADMINISTRATION RECORD

CHART 1 of 2

Rewritten on.....Checked by:.....Date:.....

DRUG ALLERGIES AND SENSITIVITIES	
Ramipril	
DETAILS OF REACTION: Angioedema	
NAME: S. Jones	DESIGNATION: CTI
SIGN: Done	DATE: 18.9.13

SURNAME Smith	WARD C4	ROOM NUMBER/BAY 2	
FIRST NAME John	AGE/DOB 22/12/56	HEIGHT 175cm	WEIGHT 80kg
NHS NUMBER 987 654 321	SEX M	CONSULTANT Dr. Green	

Allergies/sensitivities must be recorded before prescribing or administering medication except in exceptional circumstances

Medication Needs Assessment prior to admission	
patient self medicating	<input checked="" type="checkbox"/>
assisted by family/carer	<input type="checkbox"/>
administered by Nurse/Home	<input type="checkbox"/>
Number of carer visits	<input type="text"/>

Date of Admission 18.9.13

Medication needs assessment during admission	
self administration assessment done	<input type="checkbox"/>
patient consent form signed	<input type="checkbox"/>
patient being monitored	<input type="checkbox"/>
patient self administering from:	
original packs	<input type="checkbox"/>
original packs with easy tops	<input type="checkbox"/>
compliance aid (blister pack)	<input type="checkbox"/>
patient unable to self administer	<input type="checkbox"/>

Discharge Needs Assessment	
patient to be discharged with:	
original packs	<input checked="" type="checkbox"/>
original packs with easy caps	<input type="checkbox"/>
compliance aid/blister pack	<input type="checkbox"/>
administration by carer	<input type="checkbox"/>
social services informed of medication administration need	<input type="checkbox"/>

Medicine's reconciliation completed on.....

By:.....

Community Pharmacy.....

Telephone no.....

RISK ASSESSMENT TOOL FOR VTE (Excluding patients < 18 years)

This is a guide: clinicians should exercise clinical judgement when prescribing enoxaparin. VTE risk scores:

Low Risk	Age >60	1	Obesity BMI>30	1	Varicose veins	1	Dehydration	1		
Medium Risk	Sickle cell	2	Pregnancy & puerperium	2	Medicines e.g. HRT	2	Family history of VTE	2	Immobility inc. plaster cast to leg	2
High Risk	Active cancer	3	Cardiac or respiratory failure	3	Nephrotic syndrome	3	Acute Medical illness	3	Serious infection	3
Highest Risk	Surgery and significantly reduced motility	4	Significantly reduced mobility of >3-days	4	Major Surgery + anaesthetic time >90 mins	4	Personal history of VTE	4	Critical care admission	4

A SCORE OF 3 OR MORE SHOULD BE CONSIDERED FOR PROPHYLACTIC DOSE OF ENOXAPARIN (LMWH). RE-ASSESS AFTER 24 HOURS, THEN REGULARLY AND IF CLINICAL SITUATION CHANGES.		1st Score on admission	2nd Score after 24 hours	3rd Score	4th Score	5th Score
DO NOT PRESCRIBE IF ONE OR MORE OF THE FOLLOWING ARE TICKED (unless benefit outweighs bleeding risk). CONSIDER MECHANICAL OPTIONS/EARLY MOBILISATION.		Risk Score	5			
		Date	18.9.13			
		Signature	<i>Done</i>			
Uncontrolled hypertension (230/120)	Active/high risk of bleeding	Neuro/spinal/eye surgery				
Procedures with high bleeding risk	Concurrent use of other anticoagulants	Acute stroke				
Untreated bleeding disorders eg: Haemophilia/Von Willebrands	Lumber puncture or epidural/spinal anaesthesia in previous 4 hours or expected within the next 12 hours	Liver failure/acquired bleeding disorder				
Thrombocytopenia (platelets <75x10 ⁹ /L)						

CHECK ALLERGIES ON FRONT OF THE CHART BEFORE PRESCRIBING AND ADMINISTERING

NAME: John Smith

NHS NUMBER: 987 654 321

Other charts in use:
(Tick box)

DIABETIC

SYRINGE DRIVER

OTHER (please specify)

DRUGS STOPPED DURING ADMISSION:

DOCTORS: PLEASE INFORM NURSES AND PATIENT EVERY TIME YOU PRESCRIBE A NEW DRUG

ONCE ONLY & PREMEDICATION DRUGS

DATE	TIME	DRUG (APPROVED NAME)	DOSE	ROUTE	DOCTOR'S SIG.	GIVEN BY	TIME	DATE	PHARMACY
18-9-13	22:00	Prednisolone	30mg	PO	<i>[Signature]</i>	<i>[Signature]</i>	22:30	18-9-13	

OXYGEN THERAPY

DATE STARTED	DOSE (L/MIN OR INSPIRED OXYGEN %)	ROUTE		FREQUENCY CONTINUOUS OR WHEN REQUIRED	SPO ₂ TARGET TO BE MAINTAINED %	DATE STOPPED	SIGNATURE
		NASAL CANNULA RESERVOIR	SIMPLE FACE MASK VENTURI/HUMIDIFIED				

GUIDANCE ON FLOW RATES AND DELIVERY DEVICES AVAILABLE

<u>NASAL CANNULA</u> 1 2 3 4 (L/MIN)	<u>SIMPLE FACE MASK</u> 5 6 7 8 9 10 (L/MIN)	<u>RESERVOIR</u> 15 (L/MIN)	<u>VENTURI/HUMIDIFIED</u> 24 28 35 40 60 (%) SPECIFY INITIAL %, NOT FLOW RATE
---	---	--------------------------------	---

ORAL ANTICOAGULANT THERAPY - Please review prescription daily

DRUG	Indication	Target INR	Signature	Pharmacy
DATE				
I.N.R.				
DOSE (AT 18.00)				
DOCTOR'S INITIALS				
GIVEN BY				

CAUTION: THERE IS AN INCREASED RISK OF BLEED IN THE EVENT OF A FALL WITH PHENINDIONE, ACENOCOUMAROL, WARFARIN, DABIGATRAN, RIVAROXABAN OR APIXABAN.

ADDITIONAL INFORMATION:

DRUG ADVERSE REACTIONS/ ALLERGIES/
SPECIAL PRECAUTIONS

Ramipril

DETAILS OF REACTION:

Angioedema

NAME: S. Jones

SIGN: S Jones

DESIGNATION: CT1

DATE: 18.9.13

INTRAVENOUS/SUBCUTANEOUS INFUSION CHART

NAME John Smith	NHS NUMBER 987 654 321	CONSULTANT Dr. Green	WARD C4	ROOM NO./ BAY 2
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DATE	INTRAVENOUS FLUID	DRUG TO BE ADDED/DOSE	VOLUME	RATE	ROUTE <small>IV = intravenous S/C = subcutaneous</small>	PRESCRIBER'S SIGNATURE	ADMINISTRATION					PHARMACY USE		
							DATE STARTED	TIME STARTED	TIME STOPPED	NURSE'S SIGNATURE	VOLUME GIVEN		BATCH NUMBER	EXPIRY
1														
2														
3														
4														
5														
6														
7														
8														
9														
10														

1. Every bottle/bag given to the patient must be recorded on this chart. 2. CHECK for incompatibilities.

Reflective Log for Educational Events

Medicines management module

Date and Time

.....
.....

What I learned from this activity:

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.....

Am I going to change anything as a result of this activity? / How will I apply learning into my clinical practice?

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Section 3

Drug calculations practice tests. The answers can be found on page 30

	Paper 1	Answers
1)	Calculating basic measures Convert the following:- (a) 0.05g = how many mg (b) 0.025 litre = how many mls? (c) 1575 micrograms = how many mg? (d) 750 mg = how many grams?	
2)	Calculating drug dosage How many tablets would you give? Give 0.25 mg of digoxin orally (stock = 250 microgram tablets)	
3)	Calculate the volume of drug to be given Give S/C insulin injection of 22 units (stock 10 ml ampoule of 100 units in 1ml)	
4)	If you drew up 10ml of 2% lidocaine in a syringe, how many mg would there be in 10 ml?	
5)	You have a stock vial of Diclofenac (75mg in 3ml) and you wish to draw up a dose of 50mg for your patient. how many millilitres would you draw in to your syringe to give this dose.	
6)	Calculate the hourly infusion rate. Administer Dopamine 4 micrograms/kg/minute to a 60 kg patient using hourly rate on pump (Dopamine 200 mg in 50 ml dextrose)	
7)	What would be the daily dose? Prescribe drug B to a 75 kg adult – 40 micro- grams/kg/day	
8)	Now divide the above (Q7) into 3 daily doses	
9)	Calculate the correct dose. Dopamine 2 micrograms/kg/min to a 50 kg patient using hourly rate on pump (Dopamine 200 mg in 50 ml dextrose)	

		Answers
10)	Calculate the correct dose. Give 500 micrograms Adrenaline I/V (Stock is 10 ml solution 1:10,000)	
11)	Calculate the correct volume of syrup to be given. Give 400 micrograms of Granisetron syrup orally (Stock solution 1 mg in 5 mls)	
12)	If you wanted to administer 3mg/kg of 1% lidocaine to a 72kg man, how many mls would you give?	
13)	Calculate how many mls you would give. Using an ampoule of 1% lidocaine, administer 3 mg/kg to a 70 kg patient	
14)	How many mls should you give? Prepare 62.5 micrograms of digoxin for I/V administration (Stock ampoule of 500 mcg in 2 ml)	
15)	Calculate the drug volume to be given. Give 135 mg hydrocortisone for I/V use (Stock 100 mg in 2 ml)	
16)	How many mls would you give (diluted)? Give heparin 3500 units (dilute) (Stock is 5000 units in 1 ml)	
17)	Prescribe drug B to a 50 kg adult – 30 micrograms/kg/day	
18)	A child weighing 19kg requires 400micrograms/kg of adrenaline 1 in 1000 for nebulisation. Maximum dose is 5mg What dose would you give? How many ml of adrenaline would this be?	

Adapted from calculations questions clinical skills lab whipps cross hospital 2003 by J hewitt and Dr E Tsarfati 2013. Additional questions and review by H Walker and S Lau.

Answers**Paper 1**

1)	a) 50mg, b) 25 ml, c) 1.575mg, d) 0.75g
2)	One
3)	0.22ml
4)	200mg in 10ml
5)	2ml
6)	3.6ml per hour
7)	3mg
8)	1mg tds
9)	1.5mls/hr
10)	5ml
11)	2ml
12)	21.6mls
13)	21ml
14)	0.25ml
15)	2.7ml
16)	0.7ml
17)	1.5mg
18)	5mg; 5ml

Reflective Log for Educational Events

Medicines management module

Date and Time

.....
.....

What I learned from this activity:

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.....
.....

Am I going to change anything as a result of this activity? / How will I apply learning into my clinical practice?

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Section 4

Self/Peer/Assessor Skills Review Checklist

(Can be used to demonstrate continued procedural competence/review standard of skill)

Skill – Drug Administration (oral medication)

Self Review / Peer Review / Assessor Review (Circle one)

1. General	
Familiar with use of BNF, special precautions, side effects & interactions	Yes <input type="checkbox"/> No <input type="checkbox"/>
Aware of patients' diagnosis, past medical history and treatment regime	Yes <input type="checkbox"/> No <input type="checkbox"/>
Demonstrates good knowledge of medicine(s) to be administered	Yes <input type="checkbox"/> No <input type="checkbox"/>
Familiar with process for obtaining/restocking medications	Yes <input type="checkbox"/> No <input type="checkbox"/>
Can discuss common drug reactions & premonitory signs of anaphylaxis	Yes <input type="checkbox"/> No <input type="checkbox"/>
Aware of standard infection control & sharps management procedures	Yes <input type="checkbox"/> No <input type="checkbox"/>
He/she washed his/her hands (social hand wash)	Yes <input type="checkbox"/> No <input type="checkbox"/>

2. Prescription	
Checks drug prescribed by generic name is legible, signed and dated	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checks correct strength, dose, route, frequency and time	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checks whether drug has already been administered	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checks for adverse medication reactions (allergy box completed)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Medication dose check – prescription within therapeutic range	Yes <input type="checkbox"/> No <input type="checkbox"/>
The prescription is valid i.e. in date	Yes <input type="checkbox"/> No <input type="checkbox"/>

3. The Drug	
The correct drug was selected	Yes <input type="checkbox"/> No <input type="checkbox"/>
Expiry date checked	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checked that the drug is suitable for oral/enteral use	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checked how drug should be given (eg with food)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Checked that the drug is compatible with other prescribed medications	Yes <input type="checkbox"/> No <input type="checkbox"/>
Prepares fresh drink (records on fluid chart if appropriate)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Correctly prepares/constitutes drug	Yes <input type="checkbox"/> No <input type="checkbox"/>
Correctly calculates drug dosage (if appropriate)	Yes <input type="checkbox"/> No <input type="checkbox"/>
Aware of cautions/side effects	Yes <input type="checkbox"/> No <input type="checkbox"/>
The correct syringe was used for enteral drug administration	Yes <input type="checkbox"/> No <input type="checkbox"/>

4. The Patient	
He/she completes the following mandatory safety checks (with the patient where possible). As well as checking the ID band details against the prescription	
Confirms name	Yes <input type="checkbox"/> No <input type="checkbox"/>
Date of birth	Yes <input type="checkbox"/> No <input type="checkbox"/>
Hospital number	Yes <input type="checkbox"/> No <input type="checkbox"/>
Allergic reaction (red band)	Yes <input type="checkbox"/> No <input type="checkbox"/>
ID confirmed	Yes <input type="checkbox"/> No <input type="checkbox"/>
No history of dysphagia/swallowing difficulties	Yes <input type="checkbox"/> No <input type="checkbox"/>

5. Administration	
The procedure was explained to the patient	Yes <input type="checkbox"/> No <input type="checkbox"/>
Agreement to administer the drug established and opportunity to ask questions provided	Yes <input type="checkbox"/> No <input type="checkbox"/>
Non-touch technique used to select drug and transfer to clean container	Yes <input type="checkbox"/> No <input type="checkbox"/>
Administers the medication correctly to the patient –checks swallowed	Yes <input type="checkbox"/> No <input type="checkbox"/>
Ensures medicine not left on side to be taken later	Yes <input type="checkbox"/> No <input type="checkbox"/>
Assesses the patient for complications	Yes <input type="checkbox"/> No <input type="checkbox"/>

6. Documentation	
Prescription chart dated, timed and signed	Yes <input type="checkbox"/> No <input type="checkbox"/>

7. Communication Skills and Attitude	
Demonstrates a good standard of communication and professionalism with assessor and patient	Yes <input type="checkbox"/> No <input type="checkbox"/>

Name

Designation

Peer/Assessor review by

Skill Achieved? Yes No

Date

Adapted from Skills Review Checklist Whipps Cross Hospital 2003 by Jocelyn Hewitt and Ms Tejay Patel, Senior Pharmacist NMUH.

Reviewed by Ms Sushma Lau and Jocelyn Hewitt December 2013.

Developing people for health and healthcare