



PHARMACY TECHNICIAN MEDICINE ADMINISTRATION TRAINING PROGRAMME

Pharmacy Technician Name _____

Date _____

Nurse Mentor _____

Author:	Diane Taylor, Pharmacy Technical Services Manager
Issued By:	Pharmacy Department
Ratified by:	Pharmacy Governance Committee
Date issued:	March 2019
Review Date:	March 2021

1. INTRODUCTION

1.1 Instructions for Completion of this Self-Directed Package:

This learning package is designed to assist you in learning the theoretical knowledge you need to administer medication.

To complete your administration of medicines training you will need a nurse mentor to assess your competency throughout the programme. Your nurse mentor/assessor will be a registered nurse who has completed preceptorship, has a Learning and Assessing qualification and is up to date with current medicines administration competencies

You will need to complete all the sections of the package and be fully sign off by Nurse Mentor and Pharmacy Mentor, to include:

- Nurse Mentor Checklist for Medicines Administration Pharmacy Technicians (Appendix 1)
- Medicines Administration Training Programme
- 200 item pre- assessment administration log (Appendix 2)
- Shadowing medication rounds with the nurse administering medication and specialist nurse with the completion of 10 reflective statements (Appendix 3)
- ONE month continuous item assessment administration log PLUS ADMINISTRATION OBSERVATION AND ASSESSMENT (Appendix 4)
- 200 item post assessment administration log (Appendix 5)
- Final review (Appendix 6)

Each section begins by stating a set of intended learning outcomes, these will help you to assess your level of understanding and identify any deficits in your knowledge.

1.2 Reading List

LTHTR General Medicines Policy
LTHTR Controlled Drugs Policy and Procedure
LTHTR Medicine Administration by Oral and Enteral Routes Clinical Guideline
LTHTR Self-Administration of Medicines Procedure
Medicines Management Power Point Presentation



Medicines
management Introdu

1.3 Scope of Practice

Pharmacy Technicians **ARE PERMITTED TO ADMINISTER** the following medication types

- Oral Medication
- Eye Medication
- Nasal Medication
- Inhaled Medication
- Nebulised Medications
- Topical Medications
- Transdermal Medications

Pharmacy Technicians are **NOT PERMITTED** to administer any of the following patient or medication types

- Patients with swallowing difficulties
- Patients requiring medicines administered via enteral tube
- All injection types
- Rectal medication
- Vaginal Medication

2. LEGAL FRAMEWORK AND ACCOUNTABILITY

2.1 Legal and Accountability Issues

On completion of this section you will be able to:

- Define negligence and understand what components must be proven before a claim of negligence can be upheld
- Understand the contractual accountability of an employer and define vicarious liability
- Define accountability and how it applies to the pharmacy technician role
- Understand the professional responsibilities of the Pharmacy Technician in relation to administration of medicines

2.2 Negligence

Pharmacy Technicians have a professional obligation to act in the best interest of their patients.

Where individuals deviate from this duty of care and cause actual harm, a patient or relative can sue for negligence.

For this action to be successful there is a requirement for three conditions to be satisfied:

- The professional was under a duty of care to the individual
- That a breach in the duty of care has occurred
- That as a result of this breach, harm has been caused to the patient be it physical, financial or psychological.
(Scales 2009)

The Pharmacy Technician, when accepting a patient allocation, has a legal obligation to provide adequate care of an acceptable standard. If the care to be provided falls outside the Pharmacy Technicians knowledge and skills he/she should therefore decline the allocation.

If this duty of care is breached then the next step will be to prove liability.

A breach is measured by what is known as the Bolam test 'The standard that an ordinary skilled man exercising and professing to have that special skill' (BFHMC 1957). This means that a Pharmacy Technician will have to provide a standard of care as demonstrated by another Pharmacy Technician with the same experience and qualifications.

2.3 Liability

With regard to negligence employers have two forms of liability:

Direct liability: this is where they are at fault for example when a drug error has been made because the hospital has not withdrawn faulty infusion pumps.

Vicarious liability: this is where they are responsible for the actions of their employees during the course of their employment. For example, an employer will accept responsibility if you have acted within your code of professional conduct and within employers policies and procedures, to a level of expertise that reflects experience and training.

The important thing to note about liability is that if the pharmacy technicians practice falls outside of hospital policy, he/she then loses the protection of vicarious liability. Should a pharmacy technician experience conflict between policies and practice, there is clearly a professional responsibility to resolve the conflict.

2.4 Accountability

Accountability is defined as "Expected to explain ones actions or decisions" (Oxford English Dictionary 2002).

As a Pharmacy Technician you have three main areas of accountability:

1. Accountable to the Public via Criminal Law:

This law would come in to force when an individual was deemed to have committed a crime against the state, for example, the theft and subsequent sale of controlled drugs.

Manslaughter prosecutions will also be tried under criminal law.

Accountable to the Individual via Civil Law:

This law would come in to force when a private individual or his/her relative takes legal action against a pharmacy technician if negligence is implicated in the injury or death. Civil law would seek to establish accountability and award damages.

Accountable to the Employer via a Contract of Employment:

Disciplinary procedures will come into force when an employer proves that an employment contract has been broken. An employment contract assumes that employees will comply with terms and conditions both implicit and explicit. Failure to comply could result in disciplinary action against an employee.

Set task:

Look at your contract of employment and write down what it says about your responsibilities to provide quality care.

2.5 Responsibility and Accountability in Relation to the Administration of Medicine by a Pharmacy Technician

For pharmacy technicians administration of medication are **personally accountable** for their practice and are answerable for any acts and omissions and have a legal duty of care to the individual to only engage in practice he/she has been trained and deemed competent to undertake, and is accountable for any actions or errors he/she makes.

3. DRUG CALCULATIONS

On completion of this section the pharmacy technician will be able to:

- Understand their responsibility in calculating drug dosage.
- Perform simple arithmetical tasks.
- Accurately calculate drug dosages using an accepted formula.

Although medical practitioners and non-medical prescribers are legally responsible for the correct prescription of a medication, the person administering the dose is accountable for checking that the dose of the medication is correct for the patient's weight according to accepted prescription guidelines, and also for ensuring the correct calculated dose is given.

The RPS RCN Professional Guidance on the Administration of Medicines in Healthcare Settings (January 2019) states:

'any calculations needed are double checked where practicable by a second person and uncertainties raised with the prescriber or a pharmacy professional'

3.1 mg/kg calculations

Some doses of medication are calculated on a mg/kg basis. The prescriber will calculate the dose and prescribe accordingly. Pharmacy technicians must check the prescribed dose as part of the administration process.

e.g. The dose required is 4mg/kg. The patient weighs 50kg.

i.e. the patient needs 4mg of medicine for every kg body weight.

So the dose needed is $4\text{mg} \times 50 = 200\text{mg}$.

The British National Formulary (BNF) should be consulted to check doses.

N.B. Sometimes a maximum dose is stated as well as mg/kg.

e.g. prednisolone is recommended as 2mg/kg BUT maximum daily dose of 40mg.

Therefore for 46kg - the dose recommended at 2mg/kg = 92mg however 40mg is given as the recommended maximum daily dose.

Remember!

1 gram (g)	=	1000 milligrams (mg)
1 milligram (mg)	=	1000 micrograms
1 microgram =		1000 nanograms

Complete the following table: -

Recommended Dose	Patients Body Weight	Dose required
20mg/kg	52.5kg	
3mg/kg	60.2kg	
12mg/kg	49.6kg	
7.5mg/kg	42.1kg	

3.2 Further Calculations

A patient is prescribed 8mg of Furosemide. Calculate how many millilitres you would administer for each dose using the 40mg in 5ml oral solution.

A patient is prescribed 6mg of Furosemide. Calculate how many millilitres you would administer for each dose using the 40mg in 5ml oral solution.

A patient is prescribed 150mg of Paracetamol. Calculate how many millilitres you would administer for each dose using the 120mg in 5ml oral solution.

A patient is prescribed 125mcg of Digoxin originally as tablet form; however this has been amended to liquid. What dose of liquid medication would you administer?

A patient is prescribed 10mg of Citalopram. Calculate how much liquid you would need for each dose.

A patient is prescribed 200mg of Phenytoin. Calculate how much liquid you would administer for each dose.

You have Morphine oral solution 10mg in 5ml. The patient requires a dose of 2.5mg. What volume of solution would you give?

Alfacalcidol drops are presented as 100 nanograms per drop. A dose of 0.5 micrograms is prescribed. How many drops would you administer?

A patient requires a 2.4g dose of Co-trimoxazole (Septrin) in an oral liquid form. The adult suspension presentation is 480mg in 5ml. What volume should be administered?

Sodium Valproate is available as a 200mg in 5ml oral liquid. How many millilitres would be required to give a dose of:

500mg

800mg

You have Erythromycin suspension which contains 250mg in 5ml. How many milligrams of Erythromycin are there in:

2.5ml

8ml

3.3 HEE Introduction to Medicines Calculations Workbook

Complete the workbook.



MedicinesCalculations
s_Workbook_April 20

4. PRINCIPLES OF MEDICINE ADMINISTRATION

These principles apply to all practitioners who administer medication.

On completion of this section the pharmacy technician will be able to:

- Understand how to manage the risks associated with medicine administration.
- Be familiar with the format of in-patient prescription charts.
- Understand how to administer medications via different routes.

Pharmacy technicians who administer medication must have completed appropriate training and have been deemed competent by a registered nurse.

Good medicines management is essential to assure high standards in the clinical area of patients. When delivered effectively, it can reduce the risk of medication errors and serious adverse drug reactions and prevent unnecessary delays for the patient at discharge. Administration is not just about complying with the written directions of the prescriber; it is a process that requires the exercise of professional judgement. All directions to administer a medication should be checked by the professional applying their knowledge of the medicine to be administered.

4.1 The 5R's of Medicines Administration

The medicines administration process has a 5R's systemic approach which ensures essential safety checks are in place to protect against medication errors.

Write below the 5 rights of medication administration and explain how adherence to each process protects the patient.

RIGHT
RIGHT
RIGHT
RIGHT
RIGHT
Are there any other steps in medication administration that could be expanded upon to ensure patient safety is maintained?

4.2 Prescription Chart Workshop/EPMA training

Complete the following prescription chart workshop with your pharmacy mentor



Prescription chart
workshop 10.17.pptx

Complete the EPMA medicines administration training pack

4.3 Complete the following Trust e-learning packages:

- Safe Use of Insulin
- Antibiotic Stewardship
- VTE
- Advice for Alcohol and Smoking

4.4 Allergies

At what stage/s should allergy status be confirmed?

If you are made aware of an undocumented allergy what actions would you take?

What is anaphylaxis?

Write down the signs and symptoms of anaphylaxis

What action would you take if you suspected a patient was experiencing an anaphylactic reaction?

4.5 Medication Errors/Omissions

The pharmacy technician must make a clear, accurate and immediate record of all medicine administered, intentionally withheld or refused by the patient.

Give examples below of any omitted medications when observing medication rounds and details of the reason and potential effect on the patient in missing their dose.

Medication omitted	Reason	Potential effect on patient care

What would you do if you administered a medication incorrectly?

What action would you take if you purposefully omitted a medication e.g. paracetamol as patient was not in pain.

What action should you take if a patient refuses their medication?

4.6 Self-Administration of Medicines

Read and discuss the Self Administration of Medicines Policy SAM's with your mentor

Which medicine can a patient self-administer without the need to complete a Self-Administration consent form?
Which staff members are authorised to complete a consent form with a patient?
When and by whom should the self-administration consent form agreement be reviewed?
Describe the process for a patient who self-administers their medication
Complete a self-administration consent form with a patient under observation of your mentor
Date Completed: _____ Mentor Signature: _____

4.7 Administering Medication

When administering medication the pharmacy technician must:

- know the therapeutic use of the medicine to be administered,
- be efficient at calculating the recommended dose,
- check the prescribed dose against the recommended dose
- have an awareness of the contra-indications and side effects (information that can be accessed using the BNF – latest version)

The Pharmacy Technician must be aware of how the particular medication contributes to managing the patient's signs and symptoms.

In the table below collect evidence from your observed practice that you have sought information in relation to the factors discussed. Your observed practice log book will show your involvement in administering a greater range of medications.

Drug Name	Reason for Rx	Prescribed dose	Recommended Dose	Side Effects	Desired Effect	Contra-indications

The pharmacy technician must be certain of the identity of the person for whom the medicine is prescribed.

In the table below state different ways you can confirm the identity of a patient:

The pharmacy technician must check that the prescription and label on the medication are clearly written according to agreed guidelines. In the event of any discrepancies note if you brought this to the attention of medical staff/ prescriber.

Record any events regarding poor prescribing procedure:

Black Ink?	Legible?	Signed?	Correct dose units?	Duration of course	Medical staff informed?	Outcome

The Pharmacy Technician must check the expiry date of the medication.

N.B. Some medicines have a long expiry but must be discarded at a determined period after opening. Other drugs will be re-constituted from dry powder in the ward area. Those drugs will have a manufacturer's expiry and an expiry from the date of re-constitution.

How would you dispose of any medication that had either passed its expiry date or was no longer required?

State the drug, the method of disposal and why this method was chosen.

Drug Name	Method of disposal	Rationale

The Pharmacy Technician must report any adverse events to a member of the medical team and to the manager.

State below the types of adverse events that may justify a clinical incident report

4.8 High Risk and Critical Medicines

Locate and print a copy of the Critical medication list for the Trust
What is a critical medicine and what are the standards expected for critical medicine administration?

State the different categories of Critical Medicines at LTHTR

What information should be checked before administering Warfarin?

Name any other oral anticoagulant you are aware of used in this Trust

What types of observations should be carried out if a patient is taking an anticoagulant?
What advice would you give them upon discharge regarding their medication?

Methotrexate is a high risk medication which must have a consultant signature documented on the prescription chart. It is a ONCE A WEEK medication.
What is the potential harm of administering this medication incorrectly?

4.9 When to Omit a Medication?

Before beginning to administer patient medication the pharmacy technician must confirm on the QMED system under the VITAL SIGNS tab that all of their patient's blood pressure, respiration and pulse are in normal range.

This is a second check to enable the pharmacy technician to identify any out of range parameters which would affect the administration of a certain type of medication

e.g. Anti-hypertensives, cardiac medication, opiates, benzodiazepines and diabetic medication

Equally it is important to confirm blood results on the QMED system to ensure no electrolytes are above critical range this includes potassium, magnesium, phosphate and calcium

What medication would you confirm with the nurse when electrolyte parameters are critical before omitting the medication?

Potassium
Magnesium
Phosphate
Calcium

It is the responsibility of the individual nurse in charge of each patient to endorse the prescription chart with a 6 for any medication which is to be omitted. The above process is a second check by the Pharmacy Technician to ensure correct medication administration protocol is followed. Should the Pharmacy Technician identify any anomalies with vital signs and blood results were the nurse has failed to endorse the prescription chart with a 6 this should be documented on the Pharmacy Technician Hand over document (Appendix 7) and referred back to the nurse for clarification.

5. MEDICINES ADMINISTRATION COMPETENCY

The Safe Administration of Medications Competency must be completed for the following medication types:

- Oral Medication
- Eye Medication
- Nasal Medication
- Inhaled Medication
- Nebulised Medications
- Topical Medications
- Transdermal Medications

This Trust document stipulates the standards which must be achieved for each type of medication to ensure correct medicine administration protocol is followed.

The Trust core competencies must also be completed prior to each administration these include:

- Washes hands with bactericidal soap and water or bactericidal alcohol hand rub.
- Checks and prepares trolley with standard equipment – e.g. Keys, medicine pots, BNF available sharps box, stock etc.
- (EMPA) - Ensures trolley has been on charge and has battery life once unplugged.
- Verifies that the prescription chart/screen is the correct one for the patient both visually and verbally, (EMPA) Scan name band
 - a. Name
 - b. Date of Birth
 - c. Unique identification number
- If using more than one paper chart - checks details are correct on every chart/record sheet.
- Checks the patient's allergy status is record and makes every effort to verify it is correct.
- Documents any changes in allergy status immediately.
- Verifies the validity of the prescriptions and reviews for any potential previously unrecognised allergens.
- Paper – Reviews the whole of the chart.
- EMAR Open the 7 day summary:
 - a. Drug
 - b. Dose
 - c. Date and time of administration
 - d. Route and method of administration
 - e. Specific Instructions
 - f. Signature of prescriber (Paper)
 - g. The prescription is legible (Paper)
- Takes action to address any concerns or issues with the prescription before preparing to administer the medication.
- Utilises the BNF as necessary to gain information about the medication, including normal dose range, side effects and contraindications.
- Notes any medications deemed as Critical Medicines.

Before beginning a medicines administration round it is important to identify from the handover meeting any patients who require any CRITICAL medication to be administered as priority before beginning the routine administration round.

6. REFERENCES

RPS RCN Professional Guidance on the Administration of Medicines in Healthcare Settings (Jan 2019)

LTHTR The Medicines Management (General) Policy 3.1

LTHTR Medication Administration Workbook

7. ACKNOWLEDGEMENTS

Vickie Rose, Chief Pharmacy Technician, University Hospitals Morecambe Bay.

Appendix 1

NURSE MENTORS CHECKLIST FOR MEDICINES ADMINISTRATION PHARMACY TECHNICIANS

Areas to cover	Date completed	Comments
Introductions to team and explanation of roles:		
Ward Manager		
Clinical Leaders		
Staff Nurses		
Clinical Support Workers		
Ward Clerk		
Admin Assistant		
Housekeeper		
Discharge Co-ordinator		
Medical Team – Team Based		
Physiotherapists		
Occupational Therapists		
Extended MDT who visit the ward		
Handover Terminology Explanation		
Observations Rationale i.e. BP, respiration, pulse		
BM recordings prior to administration of Gliclazide/Metformin		
Theatre Patients – starving regimes – Nil by mouth		

Prep. For investigations i.e. endoscopy, radiology		
List of commonly used abbreviations		
Information re IV drug users		
Barrier room procedures – PPE use		
Nutritional Drinks		
Feeding Regimes		
Enteral syringe use		
Fluid balance Charts		
Palliative Care Team		
Medication		
Stock top up day –		
Transfer of Medication between wards		
Maintaining adequate stock levels		
Scenarios		
How to deal with Administering medication to patients with Dementia		
When patients ask staff to leave the medication for them to take on their own		
Useful Tips		
Alendronic acid – give on empty stomach 30 minutes before breakfast		

Nurse Mentor Signature _____ Date _____

Medicines Administration Pharmacy Technician Name _____ Date _____

Medicine Administration Pre Log (200 items)

Name: _____

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Record of Any Issues or Errors

Date	Details of Errors/Issues	Trainee Comments	Checker Comments

Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
26					
27					
28					
29					
30					
31					
32					
33					
34					
35					
36					
37					
38					
39					
40					
41					
42					
43					
44					
45					
46					
47					
48					
49					
50					



Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
51					
52					
53					
54					
55					
56					
57					
58					
59					
60					
61					
62					
63					
64					
65					
66					
67					
68					
69					
70					
71					
72					
73					
74					
75					

Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
76					
77					
78					
79					
80					
81					
82					
83					
84					
85					
86					
87					
88					
89					
90					
91					
92					
93					
94					
95					
96					
97					
98					
99					
100					

Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
101					
102					
103					
104					
105					
106					
107					
108					
109					
110					
111					
112					
113					
114					
115					
116					
117					
118					
119					
120					
121					
122					
123					
124					
125					



Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
126					
127					
128					
129					
130					
131					
132					
133					
134					
135					
136					
137					
138					
139					
140					
141					
142					
143					
144					
145					
146					
147					
148					
149					
150					



Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
151					
152					
153					
154					
155					
156					
157					
158					
159					
160					
161					
162					
163					
164					
165					
166					
167					
168					
169					
170					
171					
172					
173					
174					
175					



Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
176					
177					
178					
179					
180					
181					
182					
183					
184					
185					
186					
187					
188					
189					
190					
191					
192					
193					
194					
195					
196					
197					
198					
199					
200					



REFLECTIONS ON LEARNING AND PRACTICE

Date	

Appendix 4

Medicine Administration Log (1 Month Continuous Observation Assessment)

(Approx. 1000 items)



Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Record of Any Issues or Errors

Date	Details of Errors/Issues	Trainee Comments	Checker Comments

Appendix 5

Medicine Administration Pre Log (200 items)

Name:

No:	Date	Drug/Dose/Form	Errors/Issues found	Trainees Signature	Checkers Signature
1					
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20					
21					
22					
23					
24					
25					

Record of Any Issues or Errors

Date	Details of Errors/Issues	Trainee Comments	Checker Comments

PHARMACY TECHNICIAN MEDICINES ADMINISTRATION - FINAL ASSESSMENT DISCUSSION

To be completed by a Senior Nursing Representative and the Trust Pharmacy Deputy Technical Service Manager for pharmacy technicians completing medicines administration training.

We (Senior Nursing Representative)

and Diane Taylor (Pharmacy Technical Service Manager)

declare that.....(Medicines Administration Pharmacy Technician) has completed the Medicines Administration Training Programme and can confirm that they are competent in the administration of medication.

The following action has been taken to ensure their competence

ACTIVITY	COMPLETED
Completion of Medication Administration Training Programme workbook	
Nurse Mentor checklist information	
Ward round training with mentor(s)	
Shadowing of Respiratory Nurse Specialists	
Completion of 200 item pre log	
Completion of 1 months continuous observed competency assessment log	
Completion of 200 item post log	
Completion of The Safe Administration of Medications Competency to include Oral Medication Eye Medication Nasal Medication Inhaled Medication Nebulised Medications Topical Medications Transdermal Medications	

We agree that all appropriate measures are in place to demonstrate competence in this role and ensure best practice within the work place.

Trust/Organisation Name Lancashire Teaching Hospitals NHS Foundation Trust	
Senior Nursing Representative Signature	Print Name:
Deputy Technical Service Manager Signature	Print Name:
Trainee Signature	Print Name:
Date:	

Appendix 7

PHARMACY TECHNICIAN MEDICATION ADMINISTRATION HANDOVER DOCUMENT

Bed number Patient Name Vital Signs/Blood result anomalies	NURSE HANDOVER TO PTMA Eg nil by mouth/necessary medication omissions/self-medicating patients/critical meds/referral/capacity/blood results/abnormal NEWS/BP	PTMA HANDOVER TO NURSE E.g. Medication refused by patient, Omission not documented for confirmation	PTMA HANDOVER TO DOCTOR Eg Medication requiring prescribing, Chart re-write required, antibiotics for review
1			
2			
3			
4			
5			
6			
7			
8			
9			