



School of Pharmacy,
University of London
& University of Brighton

Postgraduate Diploma
in
General Pharmacy Practice

**CLINICAL SERVICES
CURRICULUM GUIDE
2010/11**

In association with the Joint Programmes Board:

London, Eastern & SE Specialist Pharmacy Services
King's College
Kingston University
Medway School of Pharmacy
School of Pharmacy, University of London
University of Brighton
University of East Anglia
University of Hertfordshire
University of Portsmouth
University of Reading

INTRODUCTION

This curriculum guide is intended to direct the learner towards the relevant skills and knowledge required of a general pharmacy practitioner providing clinical pharmacy services. The learning objectives listed in this document represent the competencies to be met during the first 18 months of the programme i.e. to satisfy the general aim and objectives described for module M1 (Foundations of General Practice).

The programme recognises that access to the variety of patients representing a “general” level of care will not follow a standard approach, being influenced by the various rotations on offer within the Training Centre. Consequently the general learning objectives have been presented in a generic format so that they can be achieved in a range of different patient care settings. The specific learning objectives associated with the different disease states have then been listed and should all be achieved on completion of module M1 (usually within 18 months).

Using the Guide:

This curriculum guide should be brought to the Record of In-service Training Assessment (RITA) meetings that occur at regular intervals throughout the programme. The Guide will be used to review practitioner progress and to assist in planning the focus of learning for the next period of the programme.

In order to facilitate this process, **practitioners** are asked to place a tick against the learning objectives as and when they feel they have been achieved.

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1. GLOBAL LEARNING OBJECTIVES

- Consult effectively with patients, carers and the multidisciplinary healthcare team, respecting diversity and confidentiality.
- Independently develop clinical pharmacy knowledge and skills in order to identify, prioritise and resolve complex pharmaceutical problems in a range of common conditions.
- Critically review the overall management and monitoring of patients with a range of common disease states.
- Recognise the evidence-based approach to management of a range of common conditions and apply to individualised patient care.
- Identify, prioritise and resolve the medicines management needs of patients, carers and other social and health care professionals.
- Demonstrate a systematic approach to medicines management for patients with a range of common conditions.
- Apply pharmacokinetic and pharmacodynamic principles to the design of appropriate drug regimens.
- Advance knowledge and understanding through continuing professional development and life long learning

2. GENERAL PRACTICE LEARNING OBJECTIVES

GENERAL SKILLS	ACHIEVED?
Drug history taking	
<ul style="list-style-type: none"> • Accurately obtain a drug history (from a variety of sources e.g. patient, carer, GP) 	
<ul style="list-style-type: none"> • Accurately document a drug history 	
Medicines reconciliation	
<ul style="list-style-type: none"> • Demonstrate understanding of the following processes: <ul style="list-style-type: none"> ○ drug history taking ○ medicines reconciliation; ○ medication review ○ medicines use review (MUR) 	
<ul style="list-style-type: none"> • Use a structured approach to elicit information 	
<ul style="list-style-type: none"> • Reconcile drugs prescribed on admission with drugs being taken pre-admission. 	
<ul style="list-style-type: none"> • Evaluate and comment appropriately on the quality of information collected during the reconciliation process e.g. accuracy, currency, relevance 	
<ul style="list-style-type: none"> • Identify and document intentional and unintentional discrepancies 	
<ul style="list-style-type: none"> • Demonstrate resolution of issues identified or referral to another healthcare practitioner if appropriate 	
<ul style="list-style-type: none"> • Take appropriate action to ensure clerked prescription is appropriate. 	
<ul style="list-style-type: none"> • Accurately document the medicines reconciliation process and outcome(s) in accordance with local policy 	
Prescription prioritisation	
<ul style="list-style-type: none"> • Identify pharmaceutical problems from patients and drug charts 	
<ul style="list-style-type: none"> • Prioritise these problems according to the potential harm that may be caused. 	
<ul style="list-style-type: none"> • Take appropriate action to resolve problems and ensure interventions are carried out in a timely manner 	
<ul style="list-style-type: none"> • Appropriately follow up on interventions made 	
Transcription and TTO checking	
<ul style="list-style-type: none"> • Accurately transcribe medication from the drug chart to the ward ordering sheet. 	
<ul style="list-style-type: none"> • Accurately check the transcription of others including TTOs 	

NB: The General Practice learning objectives should be met during the first 12 months of the programme

Information retrieval	
<ul style="list-style-type: none">• Describe the system headings used in medical clerking	
<ul style="list-style-type: none">• Translate common abbreviations	
<ul style="list-style-type: none">• Determine a patient's diagnosis from the medical notes.	
<ul style="list-style-type: none">• Retrieve relevant laboratory data from information sources (includes biochemistry, haematology, microbiology data)	
Information query answering	(covered in MI competencies)

GENERAL SKILLS	ACHIEVED?
Dose conversion	
<ul style="list-style-type: none"> • Apply the appropriate bioavailability calculations to convert between different formulations including tablets, liquids, injections 	
<ul style="list-style-type: none"> • Ensure that appropriate dose conversion occurs between short acting and extended release preparations. 	
Calculation	
<ul style="list-style-type: none"> • Apply the appropriate calculation to convert from imperial weights to metric weights 	
<ul style="list-style-type: none"> • Calculate doses from weights provided 	
<ul style="list-style-type: none"> • Calculate appropriate volume of fluid required and appropriate rate of administration for drugs administered by infusion 	
<ul style="list-style-type: none"> • Demonstrate the ability to convert between rate of administration in mL and drip rates for IV giving sets/infusion pumps 	
<ul style="list-style-type: none"> • Provide advice on the reconstitution of drugs with displacement values 	
<ul style="list-style-type: none"> • Undertake all mathematical calculations accurately 	
Biochemistry	
<ul style="list-style-type: none"> • Know the normal ranges for common biochemistry data including urea and electrolytes (U+Es), thyroid function tests 	
<ul style="list-style-type: none"> • Identify the importance of potassium, sodium, phosphate, magnesium and calcium to physiological function 	
<ul style="list-style-type: none"> • List symptoms of the consequences of too little or too much of these electrolytes. 	
<ul style="list-style-type: none"> • Identify drugs and diseases that cause changes to the normal ranges for electrolytes. 	
<ul style="list-style-type: none"> • List methods of replacing these electrolytes or reducing levels if too high. 	

GENERAL SKILLS	ACHIEVED?
Estimating Renal function	
<ul style="list-style-type: none"> Describe the difference between serum urea, serum creatinine and glomerular filtration rate when used to evaluate renal function. 	
<ul style="list-style-type: none"> Describe the limitations of using urea and creatinine to estimate renal function. 	
<ul style="list-style-type: none"> Describe the method used to perform a 24-hour creatinine clearance test. 	
<ul style="list-style-type: none"> Estimate glomerular filtration rate using the Cockcroft and Gault equation and describe its limitations 	
<ul style="list-style-type: none"> Classify a patient's renal status using the BNF system 	
<ul style="list-style-type: none"> Modify drug dosing regimens in line with renal status 	
<ul style="list-style-type: none"> Describe alternative methods of estimating renal function and their limitations 	
<ul style="list-style-type: none"> Describe alternative renal status classifications e.g. eGFR and their limitations 	
Dose adjustments in liver failure	
<ul style="list-style-type: none"> Describe the function of the liver in drug metabolism. 	
<ul style="list-style-type: none"> List the liver enzymes routinely measured. 	
<ul style="list-style-type: none"> Describe the clinical consequences of elevation of each enzyme. 	
<ul style="list-style-type: none"> Identify patients with impaired hepatic function 	
<ul style="list-style-type: none"> Identify drugs that required dose adjustment in hepatic disorders. 	
<ul style="list-style-type: none"> Suggest appropriate dose adjustments for patients with impaired liver function. 	
Therapeutic drug monitoring	
<ul style="list-style-type: none"> Identify drugs that require TDM 	
<ul style="list-style-type: none"> Describe common pharmacokinetic parameters 	
<ul style="list-style-type: none"> Apply pharmacokinetic parameters to ensure appropriate dosage 	

GENERAL SKILLS	ACHIEVED?
Haematology	
<ul style="list-style-type: none"> • Know the normal ranges for common haematological data including FBC and clotting 	
<ul style="list-style-type: none"> • Identify patients with abnormalities in haematological laboratory tests. 	
<ul style="list-style-type: none"> • Identify drugs and diseases that cause abnormalities in haematological laboratory tests. 	
<ul style="list-style-type: none"> • List methods of treating haematological abnormalities and clotting disorders 	
Microbiology	
<ul style="list-style-type: none"> • Identify patients with infectious disease from clinical signs and laboratory tests. 	
<ul style="list-style-type: none"> • List the criteria for selecting antimicrobial agents and doses. 	
Risk management	
<ul style="list-style-type: none"> • List the pharmaceutical and legal risks associated with medicines management. 	
<ul style="list-style-type: none"> • Demonstrate that you can balance the pharmaceutical and legal risks to ensure safe patient care. 	
<ul style="list-style-type: none"> • Identify areas of high risk or high risk issues with respect to drug storage and administration and implement changes to reduce risk. 	
Patient education (including devices)	
<ul style="list-style-type: none"> • Identify a patients' need for information about medicines 	
<ul style="list-style-type: none"> • Identify barriers to concordance 	
<ul style="list-style-type: none"> • Provide information in a professional manner 	
<ul style="list-style-type: none"> • Demonstrate strategies for overcoming barriers to communication. 	
Health promotion	
<ul style="list-style-type: none"> • Provide non-pharmacological advice on lifestyle management to support priority NHS targets, e.g. smoking cessation, reduction in alcohol intake, exercise. 	

3. SPECIFIC, DISEASE BASED LEARNING OBJECTIVES NB: The learning objectives in section 3 should be met during the first 18 months of the programme

Learning Objectives		1. Disease	2. Drug	3. Patient Factors	4. Monitoring
	Therapeutic Area	1.1 Cause 1.2 Signs & Symptoms 1.3 Prevention 1.4 Risk factors/ exacerbating factors	2.1 List the commonly used drugs , usual doses and routes of administration 2.2 Describe place in therapy of each drug wrt guidelines/ evidence 2.3 Describe the mechanism of action and pharmacokinetics of drugs used 2.4 Adverse effects: identify & advise appropriate action to manage/ prevent	3.1 Drug- drug, drug- patient e.g. drug handling in the elderly, drug- disease interactions: identify, prioritise and manage 3.2 Treatment targets: identify, prioritise, manage 3.3 Optimise patient concordance	4.1 Identify monitoring parameters 4.2 Prioritise monitoring parameters 4.3 Advise suitable actions to ensure appropriate monitoring
		LO's Achieved?	LO's Achieved?	LO's Achieved?	LO's Achieved?
A	CARDIOLOGY				
1	Acute Coronary Syndromes				
2	Atrial Fibrillation				
3	Heart Failure				
4	Hypertension				
B	RESPIRATORY				
1	Asthma				
2	COPD				
C	SURGERY				
1	Surgical Antibiotic Prophylaxis				
2	Peri- operative anticoagulation				
3	Post- operative nausea and vomiting				
4	Fluid Balance				
5	Management of NBM patient				
D	ENDOCRINOLOGY				

Practitioner can tick or sign appropriate box to indicate Learning Outcome achieved
 Clinical Services Curriculum Guide 2009
 JPB DipGPP Module 1

1	Diabetes				
	Learning Objectives	1. Disease	2. Drug	3. Patient Factors	4. Monitoring
	Therapeutic Area	1.1 Cause 1.2 Signs & Symptoms 1.3 Prevention 1.4 Risk factors/ exacerbating factors	2.1 List the commonly used drugs, usual doses and routes of administration 2.2 Describe place in therapy of each drug wrt guidelines/ evidence 2.3 Describe the mechanism of action and pharmacokinetics of drugs used 2.4 Adverse effects: identify & advise appropriate action to manage/ prevent	3.1 Drug- drug, drug- patient e.g. drug handling in the elderly, drug- disease interactions: identify, prioritise and manage 3.2 Treatment targets: identify, prioritise, manage 3.3 Optimise patient concordance	4.1 Identify monitoring parameters 4.2 Prioritise monitoring parameters 4.3 Advise suitable actions to ensure appropriate monitoring
		LO's Achieved?	LO's Achieved?	LO's Achieved?	LO's Achieved?
E	CNS				
1	Pain management				
2	Parkinson's Disease				
3	Epilepsy (Status)				
F	SUBSTANCE MISUSE				
1	Management of Alcohol withdrawal				
2	Opioid dependence				
G	GASTROENTEROLOGY				
1	Duodenal/ Gastric Ulcer				
2	GORD				
3	Acute GI Bleed				
H	THROMBOEMBOLIC DISEASE				
I	CVA				
J	INFECTION CONTROL				
1	Community acquired pneumonia				
2	Cellulitis				

Practitioner can tick or sign appropriate box to indicate Learning Outcome achieved
Clinical Services Curriculum Guide 2009
JPB DipGPP Module 1

3	UTI				
4	Healthcare associated infection				

Practitioner can tick or sign appropriate box to indicate Learning Outcome achieved
Clinical Services Curriculum Guide 2009
JPB DipGPP Module 1

4. GENERAL LEVEL FRAMEWORK (GLF)

The General Level Framework was developed by CoDEG to aid development of General Practice Pharmacists and is a tool used by JPB and the NHS to assess competence of General Level Pharmacists. It has not been developed by JPB and has been used by the NHS in a number of different ways. JPB describes how the GLF is used to assess practitioners undertaking PG DipGPP but this is not the only way that the GLF can be used. Your local Trust may choose a different way of assessing you against the GLF and as long as this meets the minimum requirements for DipGPP then that is acceptable to JPB. Practitioners and Tutors should refer to the DipGPP Assessment Handbook for guidance on the minimum requirements for GLF assessment.

Practitioners should familiarise themselves with the GLF at the beginning of the diploma as their competency will be assessed against the Framework at regular intervals. In particular practitioners are directed to the introductory notes of the GLF Handbook for guidance on achieving the Delivery of Patient Care, Personal, Problem Solving and Management and Organisation competencies expected of a General Level Pharmacist.

For ease of reference a grid has been developed that lists all GLF competencies.

GRID OF GLF COMPETENCIES

General Level Framework (GLF)		
GLFDPC	DELIVERY OF PATIENT CARE COMPETENCIES (DPC)	
GLFDPC1 GLFDPC1.1 GLFDPC1.2 GLFDPC1.3 GLFDPC1.4	Patient Consultation	Patient Consultation : Patient Assessment Patient Consultation : Consultation or referral Patient Consultation : Recording consultations Patient Consultation : Patient consent
GLFDPC2 GLFDPC2.1 GLFDPC2.2	Need for the drug	Need for the drug: Relevant Patient Background Need for the drug: Drug History
GLFDPC3 GLFDPC3.1 GLFDPC3.2 GLFDPC3.3 GLFDPC3.4 GLFDPC3.5 GLFDPC3.6 GLFDPC3.7 GLFDPC3.8 GLFDPC3.9	Selection of drug	Selection of drug: Drug – drug interactions identified Selection of drug: Drug – drug interactions prioritised Selection of drug: Drug – drug interactions actioned Selection of drug: Drug – patient interactions identified Selection of drug: Drug – patient interactions prioritised Selection of drug: Drug – patient interactions actioned Selection of drug: Drug – disease interactions identified Selection of drug: Drug – disease interactions prioritised Selection of drug: Drug – disease interactions actioned
GLFDPC4 GLFDPC4.1 GLFDPC4.2 GLFDPC4.3 GLFDPC4.4 GLFDPC4.5	Drug Specific Issues	Drug Specific Issues: Ensures appropriate dose Drug Specific Issues: Selection of dosing regimen: route Drug Specific Issues: Selection of dosing regimen: timing Drug Specific Issues: Selection of formulation Drug Specific Issues: Selection of concentration
GLFDPC5 GLFDPC5.1 GLFDPC5.2 GLFDPC5.3 GLFDPC5.4	Provision of drug product	Provision of drug product: The prescription is clear Provision of drug product: The prescription is legal Provision of drug product: Labelling of the medicine: required information Provision of drug product: Labelling of the medicine: appropriate
GLFDPC6 GLFDPC6.1 GLFDPC6.2 GLFDPC6.3 GLFDPC6.4 GLFDPC6.5	Medicines Information and patient education	Medicines Information and patient education : Public Health Medicines Information and patient education : Health Needs Medicines Information and patient education : Need for information is identified Medicines Information and patient education : Medicines Information Medicines Information and patient education : Provision of written information
GLFDPC7 GLFDPC7.1 GLFDPC7.2 GLFDPC7.3 GLFDPC7.4 GLFDPC7.5	Monitoring drug therapy	Monitoring drug therapy: Identification of medicines management problems Monitoring drug therapy: Prioritisation of medicines management problems Monitoring drug therapy: Use of Guidelines Monitoring drug therapy: Resolution of medicines management problems Monitoring drug therapy: Record of contributions
GLFDPC8 GLFDPC8.1	Evaluation of outcomes	Evaluation of outcomes: Assessing outcomes of contributions

PERSONAL COMPETENCIES (PC)			
GLFPC1	Organisation		
GLFPC1.1		Organisation:	Prioritisation
GLFPC1.2		Organisation:	Punctuality
GLFPC1.3		Organisation:	Initiative
GLFPC1.4		Organisation:	Efficiency
GLFPC2	Effective Communication Skills		
GLFPC2.1		Effective Communication Skills:	Patient and Carer
GLFPC2.2		Effective Communication Skills:	Medical Staff
GLFPC2.3		Effective Communication Skills:	Nurses
GLFPC2.4		Effective Communication Skills:	Other Healthcare Professionals
GLFPC2.5		Effective Communication Skills:	Other Health Staff
GLFPC2.6		Effective Communication Skills:	Immediate Pharmacy Team
GLFPC2.7		Effective Communication Skills:	Mentor/tutor
GLFPC2.8		Effective Communication Skills:	Employing Organisation
GLFPC2.9		Effective Communication Skills:	Linked Organisations
GLFPC3	Team work		
GLFPC3.1		Team work:	Pharmacy Team: Recognises value
GLFPC3.2		Team work:	Pharmacy Team: Works as part of the team
GLFPC3.3		Team work:	Multi-disciplinary team: Recognises value
GLFPC3.4		Team work:	Multi-disciplinary team: Uses appropriate referral
GLFPC3.5		Team work:	Organisational Team
GLFPC4	Professionalism		
GLFPC4.1		Professionalism:	Confidentiality
GLFPC4.2		Professionalism:	Recognition of limitation
GLFPC4.3		Professionalism:	Quality and accuracy of documentation
GLFPC4.4		Professionalism:	Legislation
GLFPC4.5		Professionalism:	Responsibility for own action
GLFPC4.6		Professionalism:	Confidence
GLFPC4.7		Professionalism:	Responsibility for patient care
GLFPC4.8		Professionalism:	CPD: Maintain a CPD record
GLFPC4.9		Professionalism:	CPD: Reflect on performance
GLFPC4.10		Professionalism:	CPD: Identify learning needs
GLFPC4.11		Professionalism:	CPD: Evaluates learning
PROBLEM SOLVING COMPETENCIES (PS)			
GLFPS1	Gathering Information		
GLFPS1.1		Gathering Information:	Accesses information
GLFPS1.2		Gathering Information:	Summarises information
GLFPS1.3		Gathering Information:	Up to date information
GLFPS2	Knowledge		
GLFPS2.1		Knowledge:	Pathophysiology
GLFPS2.2		Knowledge:	Pharmacology
GLFPS2.3		Knowledge:	Side effects
GLFPS2.4		Knowledge:	Interactions
GLFPS3	Analysing information		
GLFPS3.1		Analysing information:	Evaluates information
GLFPS3.2		Analysing information:	Problem identification
GLFPS3.3		Analysing information:	Appraises options
GLFPS3.4		Analysing information:	Decision making
GLFPS3.5		Analysing information:	Logical Approach
GLFPS4	Providing information		
GLFPS4.1		Providing information:	Provides accurate information
GLFPS4.2		Providing information:	Provides relevant information
GLFPS4.3		Providing information:	Provides timely information
GLFPS5	Follow up		
GLFPS5.1		Follow up:	Ensures resolution of problem

MANAGEMENT AND ORGANISATION COMPETENCIES (MO)

GLFMO1	Clinical Governance		
GLFMO1.1		Clinical Governance:	Clinical Governance issues
GLFMO1.2		Clinical Governance:	Standard Operating Procedures
GLFMO1.3		Clinical Governance:	Working Environment
GLFMO1.4		Clinical Governance:	Risk Management: Documents critical incidents
GLFMO1.5		Clinical Governance:	Risk Management: Forwards critical incidents
GLFMO2	Service Provision		
GLFMO2.1		Service Provision:	Quality of Service
GLFMO2.2		Service Provision:	Service Development: Describe key drivers
GLFMO2.3		Service Provision:	Service Development: Need for new services
GLFMO3	Budget setting and reimbursement		
GLFMO3.1		Budget setting and reimbursement:	Service Reimbursement: Reference sources
GLFMO3.2		Budget setting and reimbursement:	Service Reimbursement: Claims appropriately
GLFMO3.3		Budget setting and reimbursement:	Prescribing budgets
GLFMO4	Organisations		
GLFMO4.1		Organisations:	Organisational structure
GLFMO4.2		Organisations:	Linked Organisation
GLFMO4.3		Organisations:	Pharmaceutical Industry
GLFMO5	Training		
GLFMO5.1		Training:	Pharmacy Staff
GLFMO5.2		Training:	Other healthcare professionals
GLFMO6	Staff Management		
GLFMO6.1		Staff Management:	Performance management
GLFMO6.2		Staff Management:	Staff development
GLFMO6.3		Staff Management:	Employment issues
GLFMO7	Procurement		
GLFMO7.1		Procurement:	Pharmaceutical: Describe sourcing
GLFMO7.2		Procurement:	Pharmaceutical: Timely sourcing
GLFMO7.3		Procurement:	Supply problems
GLFMO7.4		Procurement:	Stock management
GLFMO7.5		Procurement:	Cost effectiveness