General Pharmaceutical Council

Standards for the initial education and training of pharmacy technicians

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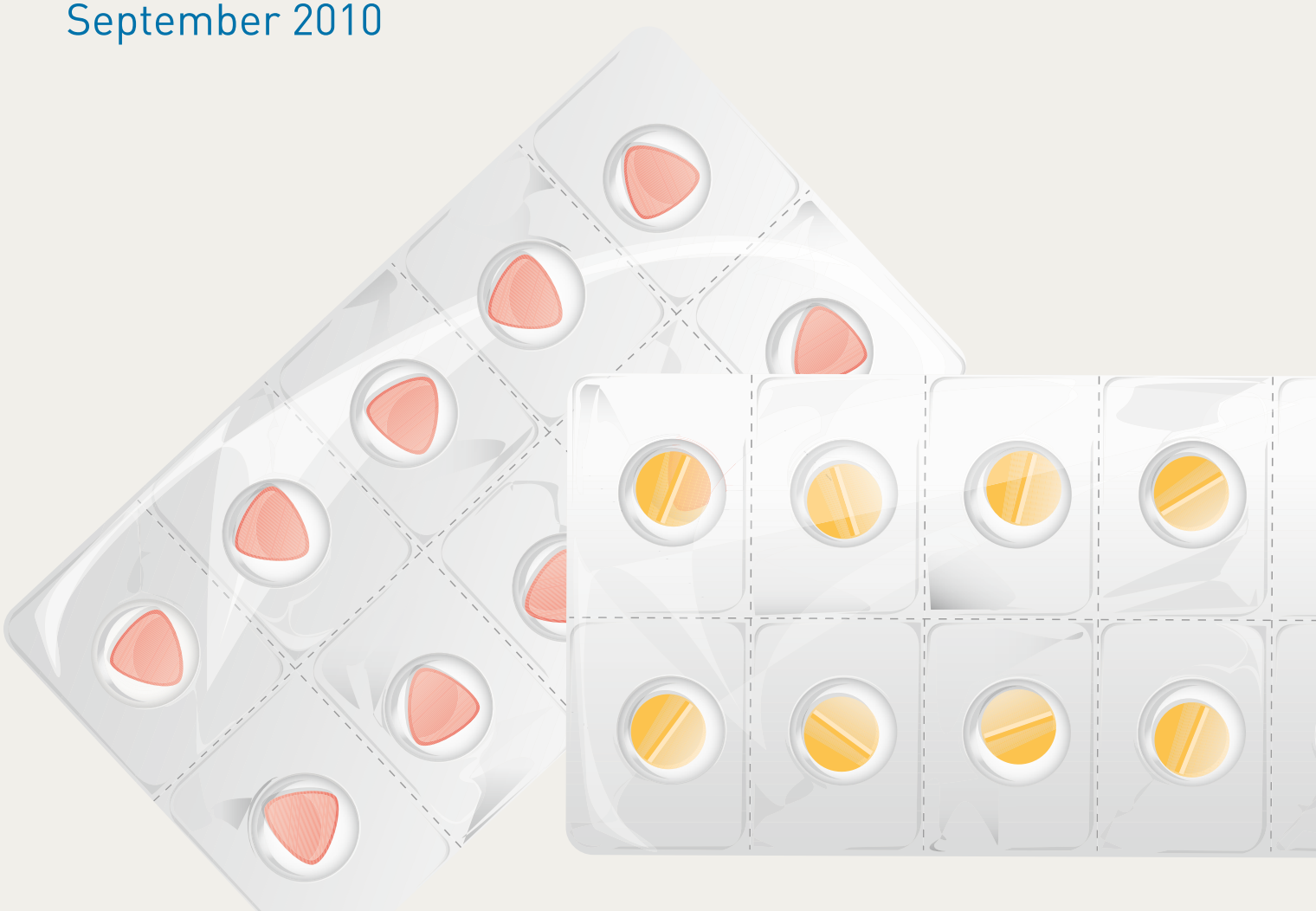

The General Pharmaceutical Council is the regulator for pharmacists, pharmacy technicians and registered pharmacy premises in England, Scotland and Wales.

Introduction

This document sets out the initial education and training standards for pharmacy technicians in Great Britain. These are the standards and criteria against which we approve pharmacy technician qualifications and training programmes.

If you are an awarding body or training provider you will need to meet the standards and criteria set out in this document to have your pharmacy technician competency or knowledge-based qualification approved by us.

To help you to understand these standards, we have published a glossary of terms. We will also publish guidance to advise you on what you will need to do to meet these standards.

Standards

1 There must be clear procedures to address immediately any concerns about patient safety arising from pharmacy technician education and training involving patients and the public

Criteria to meet this standard

1.1 Supervision is in place to ensure that the practice of pre-registration trainee pharmacy technicians does not jeopardise patient safety

1.2 Pre-registration trainee pharmacy technicians only undertake tasks in which they are competent, or are learning to be competent, under adequate supervision

1.3 Assessment and monitoring systems are in place to ensure that pre-registration trainee pharmacy technicians are able to practise safely and effectively at a level that is consistent with their stage of education and training. Causes for concern should be addressed promptly

1.4 Provision of appropriate support relating to health, conduct and professional progression is available to pre-registration trainee pharmacy technicians

1.5 Trainees are not allowed to complete an accredited or approved programme if they are a risk to patients and the public

1.6 Training providers delivering an accredited or approved programme use the Code of Conduct for Pre-registration Trainee Pharmacy Technicians to ensure that professionalism is embedded in trainees and to act as a guide to what constitutes acceptable and unacceptable practice, attitudes and behaviours in relation to fitness to practise

2 All selection procedures must be open, fair and designed to identify those applicants who will practise safely and effectively and uphold the standards of the profession

Criteria to meet this standard

2.1 Selection policies and procedures must provide those submitting the application and those making the selection decisions with the information they need to make informed choices

2.2 Those responsible for selection must be trained to apply selection guidelines consistently and fairly. They must be trained to be able to promote equality and diversity and follow current equal opportunities legislation and good practice

3 All aspects of pharmacy technician education and training must be based on principles of equality, diversity and fairness and meet the requirements of all relevant legislation

Criteria to meet this standard

3.1 Information about equality and diversity issues must be collected routinely, analysed, recommendations developed, implemented and monitored

3.2 Equality and diversity training records must be collected routinely and fed into quality management and enhancement mechanisms where appropriate

3.3 Information about how issues are identified and addressed as part of the quality management and enhancement systems and how outcomes are disseminated should be collected and reported

4 The quality of pharmacy technician education and training must be monitored, reviewed and evaluated in a systematic way

Criteria to meet this standard

4.1 The standard will be demonstrated by systems and policies that encompass the following information about roles and responsibilities, lines of accountability and authority to act of those involved in education and training together with the timing of monitoring reports and reviews.

All aspects of education and training must be covered, including:

- entry to education and training
- quality of teaching and learning (including the curriculum)
- appraisal of and feedback to trainees
- assessment of trainees
- supervision, including training
- educational resources and capacity
- appeals
- malpractice and plagiarism

4.2 There must be procedures in place to check the quality of teaching, learning and assessment and to ensure that standards are being maintained. These must be monitored using a variety of methods and approaches such as staff appraisal, student feedback, patient feedback and peer review

4.3 Any problems identified through the gathering and analysis of quality data should be addressed promptly and the actions taken clearly documented. It must be clear who is responsible for this

5 Trainees must be supported to acquire the necessary skills and experience through induction, effective supervision, an appropriate and realistic workload, personal support and time to learn

Criteria to meet this standard

5.1 Trainees must have access to pharmacists and/or pharmacy technicians who are able to act as role models and provide professional support and guidance

6 Those involved in providing the teaching and learning must be supported to acquire the necessary skills and experience through induction, effective mentoring, continuing professional development and personal support

Criteria to meet this standard

6.1 Supervising pharmacists and pharmacy technicians must have an identified source of support from the training provider

6.2 Staff involved with the delivery and/or assessment of the programme must undergo a designated period of training and development in teaching, learning, assessment and trainee support

7 Education and training must be planned and maintained through transparent processes which show who is responsible at each stage

Criteria to meet this standard

7.1 All education and training will be supported by a defined management plan with a schedule of responsibilities as well as defined structures and processes to ensure the maintenance of standards in the arrangement and content of education and training to ensure effective delivery

8 The education and training facilities, infrastructure, leadership and other staffing must be sufficient to deliver outcomes

Criteria to meet this standard

8.1 All training providers must have a pharmacist or pharmacy technician who has professional responsibility and sufficient authority to deliver outcomes

8.2 There must be:

- sufficient staff to deliver the education and training and support trainees' learning
- appropriately qualified and experienced staff
- access to appropriate learning resources
- facilities that are fit for purpose

9 The programme must develop the required skills, knowledge and understanding

Criteria to meet this standard

9.1 For competency based qualifications, the programme covers the knowledge, skills and understanding set out in appendix 1

9.2 For knowledge based qualifications, the programme covers the knowledge and understanding set out in appendix 2

10 The programme must be delivered at Qualifications and Credit Framework level 3, Scottish Credit and Qualifications Framework level 6 or equivalent

Criteria to meet this standard

10.1 The programme is delivered at the appropriate level

10.2 Systems must be in place to ensure that any changes to the frameworks are implemented

11 The curriculum must remain relevant to current practice and national standards

Criteria to meet this standard

11.1 In the processes of programme review and development, advances in pharmacy practice and developments potentially impacting on pharmacy are taken into account

12 The assessment strategy must assure appropriate standards of assessment

Criteria to meet this standard

12.1 For competency based qualifications, the assessment strategy must follow the agreed QCF/SVQ Assessment Strategy for Pharmacy Services Qualifications

12.2 For knowledge based qualifications, the assessment strategy must assure appropriate standards in assessment and include:

- verification of assessment decisions
- requirements for tutors, trainers and assessors
- marking criteria, including the minimum to achieve a pass
- policies for resits and resubmissions
- procedures for suspected plagiarism and/or malpractice
- appeals procedures

12.3 For knowledge based qualifications, question papers, including the independent assessment, must be developed by subject experts from the pharmacy sector and directly relate to and include all the subject areas

12.4 For knowledge based qualifications, assessment must be through a number of assessment methods and involve the candidate using knowledge in a way that demonstrates their understanding of the links between various subjects and their relevance to practice

13 The assessment strategy must ensure that trainees can demonstrate the required outcomes and practise safely and effectively according to the standards of proficiency and other relevant standards and guidance when they register

Criteria to meet this standard

13.1 The assessment strategy ensures that trainees can demonstrate the required outcomes

13.2 For competency based qualifications, the assessment strategy ensures that, on completion of the programme, trainees can practise safely and effectively

14 There must be effective monitoring and evaluation mechanisms in place to ensure appropriate standards in the assessment

Criteria to meet this standard

14.1 There are effective monitoring and evaluation mechanisms in place to ensure appropriate standards in the assessment.

Appendix 1 – Curriculum requirements for competency-based qualifications for pharmacy technicians

Recognition within national frameworks

A1 Competency based qualifications must be recognised within national qualifications frameworks (Qualifications and Credit Framework or Scottish Credit and Qualifications Framework) by the national education regulatory bodies (Office of Qualifications and Examinations Regulation or Scottish Qualifications Authority).

Learning outcomes

A2 To achieve an approved competency based qualification, trainees must be able to meet the outcomes of the following National Occupational Standards (NOS)

- Pharm 02: Provide an effective and responsive pharmacy service
- Pharm 03: Process pharmaceutical queries
- ENTO HSS1: Make sure your own actions reduce risks to health and safety
- HSC33: Reflect on and develop their practice
- Pharm 07: Receive prescriptions from individuals
- Pharm 08: Confirm prescription validity
- Pharm 09: Assemble prescribed items
- Pharm 10: Issue prescribed items
- Pharm 11: Prepare extemporaneous medicines for individual use
- Pharm 12: Order pharmaceutical stock
- Pharm 13: Receive pharmaceutical stock
- Pharm 14: Maintain pharmaceutical stock
- Pharm 15: Issue pharmaceutical stock
- Pharm 27: Undertake an in-process accuracy check of assembled prescribed items, prior to a final check

To achieve the Scottish Vocational Qualification, trainees must also be able to meet the outcomes of at least one of the following NOS. To achieve the competency based Qualifications and Credit Framework qualification, trainees must also be able to meet the outcomes of at least three of the following NOS

- Pharm 04: Provide advice on symptoms and the actions and uses of medicines
- Pharm 05: Assist in the sale of medicines and products
- Pharm 17: Manufacture and assembly of medicinal products
- Pharm 19: Prepare aseptic products and carry out in-process checking
- Pharm 20: Prepare documentation, materials and other items for manufacture and assembly of medicinal products
- Pharm 21: Prepare documentation, materials, components and other items for the preparation of aseptic products
- Pharm 23: Check documentation, starting materials, components and other consumables for the production of aseptic products
- Pharm 24: Provide an effective service in a setting outside the pharmacy
- Pharm 25: Assist in the supply of pharmaceutical appliances
- Pharm 26: Process prescriptions for payment
- Pharm 30: Prepare to conduct a review of an individual's medicines
- LLUK11: Facilitate learning through demonstration and instruction
- HSC 241: Contribute to the effectiveness of teams.

Appendix 2 – Curriculum requirements for knowledge-based qualifications for pharmacy technicians

Learning hours

B1 The duration of the underpinning knowledge programme must provide a minimum of 720 learning hours comprising

Science of pharmacy (a minimum of 400 learning hours)

- 30 learning hours of chemistry
- 30 learning hours of microbiology and
- 340 learning hours of biology, human physiology and actions and uses of medicines

Pharmacy practice and law (a minimum of 230 learning hours)

- 100 learning hours on dispensing procedures and practices
- 60 learning hours of interpersonal skills
- 50 learning hours on pharmacy law, ethics and regulation and
- 20 learning hours on pharmaceutical production and aseptic procedures

To allow for flexibility in the delivery of training programmes, the remaining 90 learning hours required to meet the overall programme minimum requirement of 720 learning hours can be comprised of either science of pharmacy or pharmacy practice and law.

Learning outcomes

B2 To achieve a knowledge based qualification, trainees must be able to meet the following learning outcomes

- Summarise the structure and classification of organic and inorganic chemicals
- Describe the basic structure of biological chemicals
- Outline the principles of chemical reaction
- Discuss the structure, function and classification of micro-organisms
- Define pathogens
- Explain how infections are transmitted
- Illustrate how micro-organisms are controlled in the environment
- Apply the basic principles of hygiene

- Compare the structures and functions of cells and tissues
- Define the structure and understand the functions of major organs and body systems
- Summarise how body systems are regulated
- Describe the defence mechanisms in the human body
- Describe the general action and use of medicines in relation to disease processes
- Describe the action and uses of drugs in the treatment of identified clinical conditions
- Describe adverse drug reactions, the interactions of drugs with other drugs and foods and evaluate the impact on their use
- Describe the different modes of delivery of medicines and to draw conclusions as to how they should be used
- Describe the use of wound management products, elastic hosiery and other pharmaceutical appliances and devices
- Identify their customers and others with whom they regularly interact
- Communicate appropriately with colleagues and clients
- Understand the principles that underpin effective team working, including multi-disciplinary team working
- Support the learning of others
- Evaluate the principles underpinning personal and professional development and reflective practice and implement them
- Provide accurate and relevant advice and information on medicines, pharmaceutical appliances and sundry items
- Apply the correct procedures when recommending non-prescribed medicines or referring to pharmacist
- Summarise the components of a healthy lifestyle
- Explain the role of pharmacy in health promotion
- Describe the knowledge and skills required to undertake initial discussions with patients in preparation for a review of their medicines
- Apply dispensing procedures and practices in the workplace
- Interpret prescriptions
- Explain the causes and consequences of near misses and dispensing errors and how these can be minimised
- Correctly perform pharmaceutical calculations
- Apply weighing and measuring techniques

- Critically compare the properties of the major pharmaceutical dosage forms
- Dispense pharmaceutical products
- Discuss the process of stock management in the pharmacy
- Analyse some of the common pharmaceutical services provided outside of the pharmacy such as the supply of medicines to patients in care
- Correctly apply legislation relating to the supply of medicines
- Use and interpret the Drug Tariff
- Identify and interpret the laws regulating the pharmacy profession and other laws that may affect pharmacy practice
- Outline the structure and function of organisations affecting pharmacy
- Summarise the regulatory requirements for pharmacy technicians
- Define the roles undertaken by pharmacy staff and other health professionals
- Discuss the factors affecting standards within pharmacy and pharmacies
- Describe the legislation and guidelines controlling small scale pharmaceutical production and summarise how they impact on practice
- Describe the environment and equipment required for small scale pharmaceutical production
- Outline the manufacturing processes for non-sterile and sterile pharmaceutical products
- Describe the principles of quality control and assurance
- Describe the principles of aseptic preparation of pharmaceutical products including cytotoxic products
- Summarise the principles of clinical trials

Syllabus

B3 A knowledge based qualification must have the following content

B3.1 Chemistry

The structure and classification of inorganic chemicals

- Nuclear and electronic structure of atoms
- The periodic table
- Chemical bonding

The principles of chemical reaction

- Basic principles including the various units used in science, solution properties, pH
- Principles and processes by which chemicals react
- Chemical and molar quantities
- Balanced equations for chemical reactions

The basic structure and function of biological chemicals

- Water
- Carbohydrates, fats and proteins
- Nucleic acids
- Enzymes

B3.2 Microbiology

Structure, function and classification of micro-organisms

- Classification and identification of micro-organisms
- Structure of bacteria, fungi, viruses and protozoa
- Prokaryotic and eucaryotic cells
- Growth and reproduction of micro-organisms

Pathogens and the transmission of infections

- Infectious diseases
- Pathogenic micro-organisms
- Routes of transmission
- Modes of transmission

Control of micro-organisms in the daily working environment

- Basic principles of hygiene
- Contamination, cross contamination and spoilage of medicines
- Control of hospital acquired infections
- Sterilisation
- Disinfection
- Antimicrobial agents

B3.3 Biology, human physiology and action and uses of medicines and other pharmaceutical products

Structure and function of cells and tissues

- Cells in the body
- Epithelial tissue
- Connective tissue
- Muscle tissue
- Nerve tissue
- Blood

Structure and function of major organs and body systems

- Digestive
- Circulatory
- Lymphatic
- Respiratory
- Nervous
- Endocrine
- Reproduction and foetal development
- Musculoskeletal
- Urinary
- Skin
- Ear, eye, oropharynx

Regulation of body systems

- Nutrition
- Metabolism and excretion
- Homeostasis and homeostatic disorders, including hormone-related disorders
- The defence mechanisms in the human body

General action and use of medicines

- Nature and causes of diseases
- Medical terms relevant to medical treatments
- Drug administration, absorption, delivery metabolism and excretion
- Pharmacodynamics

- Interactions and adverse drug reactions

Action and uses of drugs in the treatment of various body systems and clinical conditions

- Gastro-intestinal system
- Cardiovascular system
- Respiratory system
- Central nervous system
- Infections
- Endocrine drugs
- Obstetrics, gynaecology and urinary tract infections
- Malignant disease and immunosuppression
- Nutrition and blood
- Musculoskeletal and joint disorders
- Eye
- Ear, nose and oropharynx
- Skin
- Immunological products and vaccines
- Anaesthesia

Appliances, dressings and other products

- Wound dressings
- Bandages and adhesives
- Elastic hosiery
- Ostomy products
- Inhalers and other devices

B3.4 Interpersonal skills

Customers in pharmacy

- Range of customers including all service users
- Colleagues as customers

Communication

- Principles of good communication
- Identification of customer needs

- Appropriate responses to different types of customer and different needs
- Handling complaints
- Dealing with conflict
- Confidentiality issues

Team working

- The principles of effective team working
- Styles of interaction between team members
- Handling problem relationships within teams

Supporting learning

- Different learning styles
- Learning environment
- Instructional techniques
- Structuring demonstrations

Reflective practice

- Identifying development opportunities to improve practice
- Learning from successful interventions
- Learning from errors, critical incidents and enquiries into serious failings
- Recording CPD

Provision of information and advice on medicines

- Medicines usage and adverse effects
- Medicines storage
- Patient information leaflets
- Devices and sundry items
- Sources of information on medicines and their use
- Supporting concordance

Correct procedures for the sale of supply of OTC medicines

- Pharmacy protocol
- Classes of medicines
- Questions to be asked before recommending or referring
- Provision of information

Public health

- Healthy eating
- Healthy lifestyles
- Health promotion in the pharmacy
- Health protection
- Disease prevention

Preparation for review of medicines taken by an individual

- Purposes of reviewing an individual's medicines
- National and local guidelines and policies
- Issues that affect how people take medicines
- Creating and maintaining accurate records

B3.5 Dispensing procedures and practices

Prescription handling and assembly

- Principles and practices for dispensing, including organisational policies
- The importance and use of standard operating procedures (SOPs)
- Prescription receipt and collection
- Reading and interpretation of prescriptions
- Types of check on a prescription
- Causes and consequences of near misses and dispensing errors
- In-process accuracy checking
- Error recording
- Record keeping

Calculation and weighing and measuring techniques

- Percentages, dilutions, displacement values, weight per ml, etc.
- Dosage calculations based on age, weight, surface area and blood volume
- Weighing and measuring equipment
- Procedures for weighing and measuring
- Metric system and the SI units
- Calculating ingredient quantities required for medicines preparation
- Quantity of medicines to be supplied on prescription based on the number of prescribed doses and time intervals

Medicines formulation

- Types of water used in pharmaceutical products
- Forms of pharmaceutical products and their properties
- Pharmaceutical techniques including mixing, comminution, filtration, clarification, sieving
- Microbial aspects of medicines formulation
- Physical and chemical properties of medicines
- Vehicles and excipients
- Routes of administration of medicines
- Packing materials and containers
- Stability of medicines and the factors that affect stability

Preparation of pharmaceutical products

- Equipment used in the dispensing of medicines
- Preparation of a range of dispensed medicines in common use
- Processes for dilutions and reconstitutions
- Labelling of dispensed medicines, including additional labelling
- Storage of medicines including stock rotation
- Robotics
- Record keeping and documentation

Ordering, receiving, disposal and return of stock

- Ordering and receipt of stock
- Storage requirements for stock
- Branded and generic medicines
- Stock control
- Procedures for dealing with breakages/spillages of materials
- Stock rotation and dealing with expiry of stock items
- Returns and disposal of stock

Services provided outside of the pharmacy

- Supply of medicines to residential and nursing homes
- Provision of monitored dosage systems (MDS)

- National and local regulations and policies regarding supply of medicines to patients in care
- Storage of medicines in residential and nursing homes

B3.6 Pharmacy law and ethics

Legislation relating to medicines

- Sale and supply of medicines (Medicines Act)
- Classes of medicines
- Patient Group Directions
- Prescribing conventions and abbreviations
- Prescriptions, prescription charges and exemptions
- Electronic prescribing
- Misuse of drugs
- Poisons
- Denatured alcohol
- Supply of veterinary medicines
- NHS regulations
- Licensing of medicines
- Supply of unlicensed medicines
- Disposal of waste and unused medicines

The Drug Tariff

- Payment for supply of medicines
- Allowable products
- Endorsing of prescriptions

Legislation affecting pharmacy

- Responsible pharmacist
- Supervision
- Provision of service in the absence of a pharmacist
- Provision of service in a pandemic or other national emergency
- Legal and ethical requirements for confidentiality
- Trade descriptions

- Consumer protection
- Weights and measures
- Data protection
- Hazardous substances
- Health and safety
- Equality and diversity
- Adult and child protection
- Freedom of information

Structure and function of organisations affecting pharmacy

- Pharmacy regulatory and professional bodies
- Other organisations within pharmacy
- The National Health Service

Regulation of pharmacy technicians

- Working as a professional
- Codes of conduct and ethics
- Continuing professional development
- Fitness to practise
- Registration

Roles in pharmacy and health

- Roles undertaken by pharmacists, pharmacy technicians and other pharmacy support staff groups
- Roles of other healthcare professionals
- Types of prescribers

Factors affecting standards within pharmacy and pharmacies

- Clinical governance
- Audit and quality improvement
- Risk assessment and management
- Standard operating procedures

B3.7 Pharmaceutical production and aseptic procedures

Legislation and guidelines controlling small scale pharmaceutical production

- Health and safety
- Hazardous substances
- Good manufacturing practice
- Licensed and unlicensed units
- Recognised guidelines relating to manufacture
- Recognised guidelines for aseptic preparation
- Various quality assurance (QA) documentation
- Standard operating procedures (SOPs)
- Error reduction policies and strategies

Environment and equipment for small scale pharmaceutical production

- Hygienic considerations for the manufacturing unit, equipment and personnel
- Sources of contamination
- Environmental monitoring
- Design of production units including aseptic units
- Maintenance of the production unit including the building, fixtures and fittings
- Maintenance of equipment
- Protective clothing and equipment

Manufacturing processes

- Methods used in manufacture of non sterile products
- Methods used in manufacture of sterile products
- Methods used in the manufacture of biopharmaceuticals
- Relevant documentation including worksheets
- SOPs including labelling and packaging
- Methods of disinfection and sterilisation
- Storage of the product
- Distribution procedures
- Transportation procedures
- Safe disposal of waste materials

Quality control and assurance

- Quality Control
  Pharmaceutical materials
  Formulated products
  Testing procedures including microbiological testing, e.g. sterility testing, pyrogens
- Quality Assurance
  Standards associated with the manufacturing process
  Validation and records
  Audit of the manufacturing process
  Total quality management (TQM)
  Quarantine of the product

Clinical trials

- Types of trial
- Design of trial
- Phases

Aseptic preparation of pharmaceutical products including cytotoxic preparation

- CIVAS and a range of products
- Cytotoxic products
- Intrathecal products
- Radiopharmaceuticals
- Total parenteral nutrition
- Monoclonal antibodies
- Methods used for the aseptic preparation and dispensing of pharmaceutical products
- Disposal of waste materials
- Packaging, labelling and transportation of cytotoxic materials

Information technology

B4 Information technology must be reflected throughout the qualification

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