CHAPTER 1

Introduction to Pharmacology

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AIM

The aim of this chapter is to provide readers with an introduction to therapeutic pharmacology as well as the key issues that surround medicines management.

LEARNING OUTCOMES

After reading this chapter, the reader will be able to:

1. Discuss how important patient assessment is in relation to medicines management.
2. Understand how the Code and other professional duties impact care provision.
3. Apply the proficiencies of pre-registration nurse education related to medicines management.
4. Acknowledge and respect patient choice.

Test Your Knowledge

1. What is the nursing process?
2. Describe the key skills associated with patient assessment.
3. What are the responsibilities and the purpose of the Nursing and Midwifery Council?
4. What do you understand by the term medicines optimisation?
5. What are the various approaches to mitigating risks within medicines management?

Introduction

The use of therapeutic agents in medical treatment has grown significantly in recent years and will continue to grow. Administering medicines while seen by some as a routine activity is an important clinical responsibility undertaken in various care settings. How a drug is administered can determine whether the patient receives the intended therapeutic benefit or instead experiences adverse effects. The sheer volume and complexity of medication administration have the potential to increase the likelihood of errors, which can negatively affect a person's health and overall well-being.

A central principle of healthcare practice is 'to do no harm' and this is especially relevant when nurses and other healthcare workers are responsible for administering prescribed medicines. While medicine administration is only one aspect of the nursing role, a sound knowledge of pharmacology is essential to ensure safe and effective care. Beyond pharmacological knowledge, those offering care and support to people also have a responsibility to work with patients and their families, explaining how medications should be taken, what effects are expected, how the drug works, and what potential side effects or adverse reactions may occur.

Patient Assessment

When a patient is admitted to a healthcare facility, regardless of the setting, an initial assessment must include a comprehensive medication history. This information should be gathered directly from the patient and, where appropriate, from their family or carers. With the patient's consent, additional details that can inform a holistic assessment may also be obtained from their community pharmacy and/or general practitioner. Any medicines the patient brings with them must be recorded and stored securely. Throughout this process, it is essential to follow local policies and procedures.

Assessment is the first stage of care planning; this stage is associated with the process of gathering information so that decisions can be made about suitable interventions (Lappin 2022). During the assessment stage, the patient's story is heard, the patient is listened to, and the nurse–patient relationship is strengthened, ensuring that the patient is truly at the centre of all that is done. The nursing process is a structured, systematic, and dynamic framework that guides the delivery of patient care. It is fundamentally cyclical as opposed to linear, meaning that each stage informs and connects to the next. Within this process, assessment should never be regarded as a single, one-time activity. Instead, it is a continuous and evolving practice that must be revisited and updated as the patient's condition, circumstances, and their response to treatment change. Ongoing assessment allows for the identification of new or emerging health needs, evaluates the effectiveness of interventions, and adapts the plan of care accordingly. In this way, assessment serves as both the foundation and the ongoing thread of the nursing process, ensuring that care remains patient-centred, responsive, and safe.

When assessing patient needs, including those related to medication use, information is collected, analysed, and organised in a systematic way. This data is then acted upon through the application of critical thinking and the effective mobilisation of available resources, with the aim of achieving identified goals and outcomes. Wherever possible, these goals should be established collaboratively with the patient, ensuring their involvement in decision-making and promoting shared responsibility for care (National Institute for Health and Care Excellence [NICE] 2021).

Following patient assessment, a nursing diagnosis is developed and a plan of care is created to address the needs identified. Care is then delivered using a holistic approach that considers the physical, psychological, social, and spiritual aspects of health. Finally, the interventions provided are evaluated to determine their effectiveness and to inform any necessary adjustments to the plan of care. See Figure 1.1.

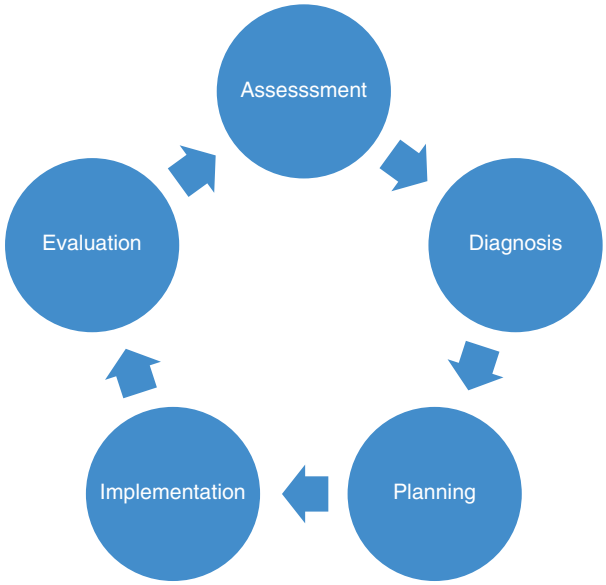


FIGURE 1.1 A systematic approach to care provision.

The safety and success of medicines administration is based on ongoing nursing assessment. All healthcare providers have a professional duty to ensure that they offer care that is safe and effective (Nursing and Midwifery Council [NMC] 2018a). As well as professional obligations, there are also requirements that must be given due diligence in order to ensure that patient safety is paramount. There is much legislation regarding medicines (see Chapter 3), and the nurse must also adhere to the laws of the country in which they are working.

Effective assessment skills require the nurse to consider both the physical and psychological aspects of a person's health needs. This will involve obtaining a detailed patient history and, where appropriate, performing a physical examination to identify current and potential care requirements. There are a number of components associated with assessment. Assessment requires the nurse to:

- Observe the patient to identify signs, symptoms, and non-verbal cues.
- Carry out a clinical examination where appropriate.
- Collect and document relevant data from multiple sources.
- Communicate effectively with the patient, their family, and the healthcare team.
- Perform and record essential clinical measurements.

Clinical judgement is used to determine the type of assessment required. It is important during the assessment phase to ensure the use of a framework to guide the process, as this will help to provide structure and order.

The NMC has indicated that newly registered nurses may be able to undertake a prescribing course soon after completing their initial pre-registration education. To support this, undergraduate nursing programmes are incorporating more prescribing theory, enabling nurses to prescribe from a restricted formulary. It is important to emphasise, however, that nurses will not have prescribing authority immediately upon entry to the register. Instead, they must first complete a post-registration qualification in order to gain prescribing rights (NMC 2018b).

All nursing professionals must practise in line with the requirements of The Code (NMC 2018a), the professional standards of practice and behaviour that nurses, midwives, and nursing associates are required to uphold.

The Code of Conduct

The NMC is the nursing and midwifery regulator for England, Wales, Scotland, Northern Ireland, and the Islands. It exists to protect the public, and it does this in a number of ways. The NMC sets the standards of education, training, and conduct that nurses and midwives are required to adhere to so as to deliver high-quality healthcare. The NMC ensures that nurses and midwives keep their skills and knowledge up to date (through revalidation; NMC 2017) and uphold the standards of the Code (NMC 2018a). When an allegation is made regarding a nurse's standard of practice or professional behaviour, the NMC has established processes to investigate such concerns. Where necessary, the NMC will take action if a nurse's fitness to practise is called into question.

The Code sets out in detail the professional standards that nurses must uphold and all nurses, regardless of setting, are required to align their practice and behaviour to the Code. The values and principles that are set out in the Code are not negotiable or discretionary.

All nurses will exercise professional judgement in their work as they offer care to people, including the care that is associated with medicines and medicines management: each nurse is accountable for their actions and omissions. Nurses are required to uphold the Code within the limits of their competence associated with the contribution they make to overall care provision. Practising within your sphere of competence and your scope of practice is key to

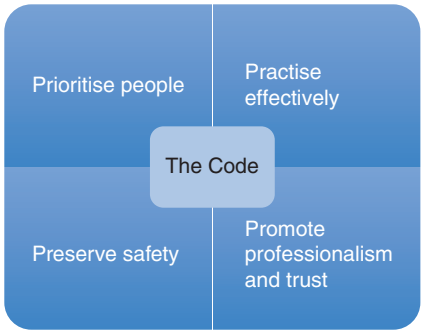


FIGURE 1.2 The code.
Source: Olympus America, Inc. With permission.

the underpinning principle of the Code – to protect the public – and must be upheld at all times.

The Code is made up of a series of statements that, when taken together, imply what good practice looks like. It makes clear that the interests of patients and service users come first, that care is safe and effective, and that it promotes trust through professionalism (see Figure 1.2).

Clause 18 of the Code is specifically related to medicines. Nurses are required to advise on, prescribe, supply, dispense, or administer medicines that are within the limits of their training and competence, the law and in relation to NMC guidance and other relevant policies, and guidance and regulations. In order to do this, the nurse must:

- Prescribe, advise on, or provide medicines or treatment, including repeat prescriptions (only if the nurse is suitably qualified) if the nurse has enough knowledge of that person's health and is satisfied that the medicines or treatment serve that person's health needs.
- Adhere to appropriate guidelines when providing advice on using controlled drugs and recording the prescribing, supply, dispensing, or administration of controlled drugs.
- Ensure that the care or treatment that the nurse advises on, prescribes, supplies, dispenses, or administers for each person is compatible with any other care or treatment that the person is receiving, including (where possible) over-the-counter medicines.
- Take all steps to keep medicines stored securely.
- Wherever possible, avoid prescribing for yourself or for anyone with whom you have a close personal relationship.

It must be noted that prescribing is not within the scope of practice of everyone on the NMC register. Nurses

who have successfully completed a further qualification in prescribing and recorded it on the NMC's register are the only people on the register that can prescribe.

The Nursing and Midwifery Council's Standards of Proficiency

In 2018, the NMC published future nurse proficiencies for registered nurses (NMC 2018b) and for nursing associates (NMC 2018c) along with a range of other revised and updated standards. The standards of proficiency provide the education and training standards that underpin all aspects of nurse education delivery and management.

The standards make significant changes to proficiencies for nurses, introducing a new education framework. The standards of proficiency are designed to enable nurses to meet the changing health needs of the population, to provide them with more clinical autonomy where appropriate, and to prepare them for leadership roles in the sphere of care provision, ensuring the nurse is fit for purpose. The standards are based on the following requirements (platforms) to:

- be an accountable professional;
- promote health and prevent ill health;
- assess needs and plan care;
- provide and evaluate care;
- lead and manage nursing care and work in teams;
- improve safety and quality of care;
- coordinate care.

As well as understanding the principles of safe and effective administration and optimisation of medicines and adhering to local and national policies, the nurse must also demonstrate proficiency and accuracy when they are calculating dosages of prescribed medicines. The nurse has to demonstrate knowledge of pharmacology and the ability to recognise the effects of medicines, allergies, drug sensitivities, side effects, contraindications, incompatibilities, adverse reactions, prescribing errors and the impact of polypharmacy, and also over-the-counter medication usage. See Table 1.1 for the procedural competencies for nurses (registered and associate) that are essential for best practice, evidence-based medicines administration, and efficacy.

Medicine Management and Standards

Nurses, along with other health and social care staff, frequently manage medications on behalf of the people they care for. Care providers have a responsibility to ensure the safe and effective use of these medicines. According to the Care Quality Commission (CQC 2025), failure by healthcare organisations to uphold these standards can create significant risks, particularly for vulnerable individuals, including:

- older people;
- individuals with reduced mental capacity, limited mobility, or sensory impairments;
- people who depend on others for assistance with taking their medications.

Medicine management standards provide nurses with a framework for safe practice. All nurses must read and comply with these standards and undergraduate students must also be familiar with them. The requirements laid out in the various standards consider issues essential for the safe management of all medications and also include controlled drugs.

Episode of Care: Mental Health

Mr Murphy, an 80-year-old man with vascular dementia, lives in a care home and depends on staff to manage his medications safely. He was admitted to hospital after showing signs of a venous thromboembolism and was discharged four days later on anticoagulant therapy, with an 18-day supply of medication.

Following discharge, the care home staff had failed to order a new prescription once the supply ran out. The care home's systems did not identify that Mr Murphy had missed his medication for 30–33 days. As a result of this, he was readmitted to hospital with a diagnosis of pulmonary thromboembolism and deep vein thrombosis. He remained in hospital for over three months and subsequently died.

This incident highlights a failure to follow local policies and procedures designed to minimise medication errors. Regulatory standards exist to ensure people receive safe care and treatment, prevent avoidable harm and maintain safe medication practices. Medicines must be supplied in sufficient quantities, managed appropriately, and administered correctly to protect patient safety.

TABLE 1.1 **Registered nurse procedural competencies and the procedural competencies required by the nursing associate.**

The registered nurse	The nursing associate
• Undertake initial and continued assessments of people receiving care and their ability to self-administer their own medications. • Understand the various procedural routes under which medicines can be prescribed, supplied, dispensed, and administered; and the laws, policies, regulations, and guidance that underpin them. • Make use of the principles underpinning safe remote prescribing and directions for the administration of medicines. • Undertake accurate drug calculations for a variety of medications. • Undertake accurate checks, including transcription and titration, of any direction to supply or administer a medicinal product. • Apply professional accountability so as to ensure the safe administration of medicines to those who are receiving care. • Administer injections using intramuscular, subcutaneous, intradermal, and intravenous routes and manage injection equipment. • Administer medications using a range of routes. • Administer and monitor medications using vascular access devices and enteral equipment. • Recognise and respond to adverse or abnormal reactions to medications. • Undertake safe storage, transportation, and disposal of medicinal products.	• Continually assess people who are receiving care and their ongoing ability to self-administer their own medications. • Know when and how to escalate any concerns. • Perform accurate drug calculations for a variety of medications. • Use professional accountability in order to ensure the safe administration of medicines to those receiving care. • Administer medication via oral, topical, and inhalation routes. • Administer injections using subcutaneous and intramuscular routes and manage injection equipment. • Administer and monitor medications using enteral equipment. • Administer enemas and suppositories. • Manage and monitor effectiveness of symptom relief of medications. • Recognise and respond to adverse or abnormal reactions to medications and know when and how to escalate any concerns. • Undertake safe storage, transportation, and disposal of medicinal products.

Source: Adapted from NMC (2018b, c).

In England, the Health and Social Care Act 2008 (Regulated Activities) Regulations 2014: Regulation 12, for example, aims to prevent people from receiving unsafe care and treatment and prevent avoidable harm or risk of harm. Those who provide care must undertake a risk assessment with regards to people's health and safety when receiving care or treatment and make sure that their staff have the appropriate qualifications, competence, skills, and experience to maintain people's safety. If an organisation fails to comply with laws and regulations, they may be prosecuted.

Clinical Considerations

Managing Medicines in Care Homes

(NICE 2014) has published comprehensive guidelines on best practice for managing medicines in care home settings. These guidelines are designed to support the safe and effective use of medications for residents, ensuring that care providers maintain high standards of practice.

The guidance covers a wide range of processes, including the prescribing, handling, storage, and administration of medicines. It also provides recommendations for monitoring and reviewing medication use to minimise errors and potential harm. Importantly, the guidelines emphasise that medicines-related care should be person-centred, tailored to the needs of each resident, and delivered in a manner that respects their autonomy and dignity.

By following these standards, care homes can establish robust systems for medicines management, promote continuity of care, and reduce the risk of medication-related incidents. Effective medicines management not only protects residents from avoidable harm but also supports staff in delivering consistent, safe, and accountable care.

Professional guidance produced by the Royal Pharmaceutical Society (RPS) (2024) provides a framework for the safe and secure handling of medicines; this

replaces the NMC's previous standards. This guidance uses an all-professional approach, providing information and advice for all healthcare professionals on medicines management and administration. The RCN and RPS (2019) have co-produced Guidance on the Administration of Medicines in Healthcare Settings, offering principles-based guidance to ensure the safe administration of medicines by healthcare professionals.

Clinical Considerations

Managing Medicines for Those Receiving Social Care in the Community

NICE (2017) has published guidelines that cover medicines support for adults who are receiving social care in the community. It aims to ensure that people who receive social care are supported to take and look after their medicines effectively and safely at home. Guidance offers advice on assessing if people will require help with managing their medicines, who should provide medicines support, and how health and social care staff should work together.

Advisory guidance for Nursing Associates with regards to the administration of medicines is issued at local level in conjunction with national guidance. The guidance plays a key part in ensuring the Nursing Associate is able to work safely and appropriately with regards to medicine and as part of the nursing team.

As well as the various standards, advice, and guidance issued, NHS trusts and other organisations will have also prepared their own guidance on how to safely and effectively handle medicines. The healthcare worker should always check and follow this local guidance when providing care that is related to the administration of medicines.

It should also be remembered that there may be a need to consult other sources of guidance concerning specific areas of practice, such as:

- NICE;
- publications by the British National Formulary;
- the Royal College of Nursing;
- the four UK Health and Social Care Departments;
- specialist associations, such as the British Association of Sexual Health and HIV, and UK Oncology Forum;
- the World Health Organization.

Clinical Considerations

Managing Oxygen in Care Homes

Oxygen is a medical gas and as such should be treated as a medicine.

Home oxygen therapy is commonly used in care homes. It involves breathing oxygen mixed with air from a cylinder or machine. It is often prescribed for those people who have respiratory conditions, such as chronic obstructive pulmonary disease, that can result in low oxygen levels in the blood. Home oxygen therapy can be given via:

- nasal cannulae;
- face mask;
- tracheostomy mask.

The oxygen is delivered via tubing or mask from an oxygen cylinder, an oxygen concentrator, or a ventilator.

Oxygen is prescribed on a home oxygen order form. The form contains details of how the oxygen is to be used. The prescriber sends the home oxygen order form to the oxygen supplier who then arranges delivery.

Staff at the care home should tell the person prescribing the oxygen about any changes in a person's clinical condition; this then allows the prescriber to amend and organise for a new home oxygen order form, if required.

The person's care plan should include information about home oxygen therapy. This should include who it is who will be monitoring the person who is using the oxygen.

The care plan (documentation) should also address the administration of oxygen. This has to include flow rate, frequency, and duration of use; the prescriber's details should also be included. Each time staff administer oxygen, these details should be checked to ensure that the oxygen is being administered correctly.

If the person is self-administering the oxygen, a risk assessment has to be carried out (individual risk assessments should include information about the potential dangers of having and using oxygen in the care home). A copy of the risk assessment should be kept in the person's care plan.

Local policy and procedure must be adhered to at all times. The tubing and masks must be clean and in good condition and replaced when needed. Tubing and masks must only be used for the person the oxygen was prescribed for.

Staff have to be trained and deemed competent to manage home oxygen therapy.

As with all medications, oxygen cylinders have an expiry date. The expiry date has to be checked to ensure that out-of-date cylinders are not used.

If equipment is no longer in use or it is out of date, it should be returned to the oxygen supplier.

Medicines Optimisation

The term medicines optimisation is generally used to encompass a more people-centred approach to the use of medicine as part of a person's care (NICE 2015). It is essential that patients get the best quality outcomes from medicines: medicines play an important role in maintaining health, preventing illness, managing chronic conditions, and curing disease – all against a backdrop of significant economic, demographic, and technological change. There is evidence to suggest that there is an urgent need to get the essentials of medicines use right. Medicines use is too often suboptimal and a step change is needed in the way that all healthcare professionals offer support to patients in order to get the best possible outcomes from their medicines (see NHS England 2024).

Medicines optimisation is concerned with ensuring that the right patients get the right choice of medicine, at the right time. When healthcare providers focus on patients and their experiences, there is much potential to help patients improve their outcomes, take their medicines correctly, avoid taking unnecessary medicines, reduce wastage of medicines, and improve medicines safety. Medicines optimisation can help to encourage patients to take ownership of their treatment. In order to ensure medicines optimisation reaches its full potential, this requires a multidisciplinary team working approach. Healthcare professionals work together to individualise care, monitor outcomes, review medicines, and support patients when needed.

Medicines management is different to medicines optimisation in a number of ways; most importantly, it focuses on outcomes and patients as opposed to process and systems. Focusing on improved outcomes can help to ensure that patients and the NHS get better value from their investment in medicines. Medicines optimisation considers how it is that patients use medicines over time. This can involve stopping some medicines as well as starting others and utilising opportunities that may arise for lifestyle changes and non-medical therapies to reduce the need for medicines.

Patient Beliefs and Medicines

Patients' beliefs and preferences regarding the medication that they have been prescribed can have a significant impact on concordance. Patients' attitudes and perceptions about treatment are a key factor influencing how prescribed medicines are used. In some cases, patients may shape prescribing decisions based on their expectations or on their reluctance to take medication at all. Strong beliefs about medicines, fixed expectations, and resistance to change are recognised as important barriers to effective prescribing (see Clyne et al. 2017).

Bearing in mind the important role that beliefs can play in medication use, it is important for the nurse to acknowledge this and to explore the beliefs of patients. Non-concordance can result in morbidity and mortality, unnecessary health costs, unnecessary investigations, and changes in treatment regimens (Walsh et al. 2019). Neame and Hammond (2005) conclude that people with strong beliefs in the necessity of taking medication to maintain their health were found to be more adherent to treatment and those with higher levels of concern about medication, commonly about the dangers of dependence and long-term side effects, were more likely to be non-adherent.

Carter et al. (2021) investigated why prescribing variation persists in UK general practice despite widespread guidelines. A range of influences on prescribing exist, including:

Published guidelines

- The prescriber's background (non-medical prescriber or GP).
- Prescriber confidence and access to education.
- Socioeconomic context influenced prescribing decisions.
- Patient pressure and media narratives affected choices.

The professional's different beliefs about medicines are important factors for concordance with medicines, just as patients' beliefs are.

Non-concordance with medicines can arise for many reasons, one of which is the gap between the expectations of healthcare professionals and the behaviour of patients, particularly when the importance of patients' perspectives is overlooked. A patient's beliefs, priorities, and goals are central to decisions about their medicines, meaning that the process of prescribing and delivering care must be based on partnership and negotiation between patients and healthcare professionals.

Patients are invited to make informed decisions about all aspects of their care, and this comes with support from health professionals. In order to make an

BOX 1.1 Reaching a Shared Decision

- Work collaboratively with the patient and where appropriate their carer to support informed decision-making and agree a care plan that respects the patient's preferences, including their right to refuse or limit treatment.
- Recognise and respect each patient's individuality, taking into account their diversity, values, beliefs, and expectations about health and medicines.
- Regularly assess medication concordance in a non-judgemental manner, acknowledging that non-concordance may be intentional or unintentional and identify appropriate ways to provide support.
- Foster a therapeutic relationship that promotes open, two-way communication between the nurse and the patient.
- In partnership with the patient and, where relevant, their carer, explore treatment goals and outcomes that are acceptable and meaningful to them.

Source: Adapted from RPS (2021).

informed decision, then, these decisions have to be well informed. Health professionals are required to provide information that is appropriate and that fits with the patient's health beliefs; they are also required to offer that information in such a way that it is understandable to each individual. The RPS (2021) provides a framework for reaching a shared decision (see Box 1.1)

It can be hard to decide how much information to give a patient; for example, which side effects to mention, where to obtain specialised information, as well as where the boundary of responsibility lies between the health professional and the patient. Chapter 3 of this book addresses some of the ethical and legal issues that are associated with medicines management and pharmacology.

Concordance, adherence, and compliance are terms that reflect fundamentally different approaches to care. When applied in its strict scientific definition, compliance is a useful term; however, it can also infer 'nurse or doctor knows best' and may be interpreted as condescending, whereby patients do as they are told or advised. Compliance describes a patient's behaviour and concordance implies a process. It is therefore appropriate to refer to patients as compliant or non-compliant, although these terms are increasingly avoided in contemporary practice; however, it is not appropriate to describe patients as concordant or non-concordant, as concordance refers to the process of shared decision-making between the patient and healthcare professional. The relationship between the patient and the health professional is non-concordant, not the patient. NICE (2009) have determined that concordance presumes an agreement between the prescriber and patient about the prescriber's recommendations. Concordance to medicines is defined as the extent to which the patient's action matches the agreed recommendations. When there is non-adherence, this has the potential to limit the benefits of medicines, resulting in a lack of improvement or a deterioration in health and well-being. The economic costs, suggest NICE (2009), are not only limited to wasted medicines but will also include the knock-on costs that arise from increased demands for healthcare if the person's health deteriorates.

Honouring individual choices and beliefs is a hallmark of professional healthcare practice (NMC 2018a). Being aware of the individual's values, acceptance of these values and asking or seeking clarification are essential if the person is to be respected. This can also have a positive impact on medication concordance.

Clinical Considerations

Medicines Management

- Complex treatment regimens: Patients with mental health conditions are often prescribed multiple medicines, including psychotropic drugs and treatments for physical health needs, which increases the risk of interactions, side effects, and adherence challenges (Allen 2022).
- Concordance: Non-concordance is common in mental healthcare and may be influenced by side effects, stigma, lack of insight into illness, or personal beliefs about medicines. Building trust, exploring patients' views and involving carers where appropriate are essential to improve adherence (Allen 2022).
- Monitoring and safety: Many psychiatric medicines require close monitoring (e.g. lithium, clozapine, antipsychotics) to ensure therapeutic effectiveness and to detect potentially serious adverse effects. Nurses and healthcare providers play a critical role in ongoing monitoring and patient education (Greenhalgh 2020).
- Holistic care approach: Medicine management should be considered alongside psychological, social, and lifestyle interventions. Encouraging self-management, providing clear information, and supporting recovery-oriented practice can improve outcomes.
- Multidisciplinary collaboration: Effective medicine management in mental health relies on close teamwork between prescribers, pharmacists, nurses, patients, and carers. Shared decision-making ensures treatment is both safe and person-centred (NICE 2023).

Conclusion

Medicines represent the most frequently used intervention by patients in the management of their health conditions. The volume of medicines prescribed, together with the complexity of treatment regimens, continues to rise and is likely to increase further in the future.

Nurses play a central role in medicines management across almost every area of practice. Medicines management involves ensuring that medicines are used safely, effectively, and cost-efficiently to deliver the greatest possible patient benefit while reducing the risk of harm. To achieve this, nurses must be knowledgeable about the regulatory, professional, legal, and ethical frameworks governing the prescribing, storage, administration, and disposal of medicines and must ensure their practice aligns with these standards.

A strong foundation in pharmacology is also essential. Understanding therapeutic pharmacology, the mechanisms by which drugs act and produce their effects, is a core aspect of clinical practice, enabling nurses to provide safe, evidence-based, and effective care.



Glossary

Autonomy:	Is concerned with self-determination and is a person's ability to make choices on the basis of that person's own preferences, beliefs, and values.
Capacity:	An ability to understand, deliberate, and communicate a choice in relation to a specific healthcare decision at a particular time.
Competence:	The achievement and application of knowledge, intellectual capacities practice skills, integrity, and professional and ethical values needed for safe, accountable, compassionate, and effective practice as a registered practitioner.
Compliance:	Medication compliance refers to the degree or extent of conformity to the recommendations about day-to-day treatment by the healthcare provider with regards to timing, dosage, and frequency.
Conduct:	A person's moral practices, actions, beliefs, and standards of behaviour.
Evidence-based practice:	The conscious consideration and the application of the best available evidence along with the healthcare provider's expertise and a person's values and preferences in making healthcare decisions.
Guidance:	A principle or criterion that guides or directs action. Guideline development emphasises using clear evidence from the existing literature, as opposed to expert opinion alone, as the basis for advisor materials.
Health and well-being:	A state of complete physical, social, and mental well-being; not just the absence of disease or infirmity. It is a positive concept that emphasises personal resources as well as physical capabilities.
Regulations:	A rule or law designed to control or govern conduct.
Standards:	Authoritative statements developed, monitored, and enforced by, for example, healthcare regulators to describe the responsibilities and conduct expected of registrants. The standards are based on the principles and that underpin professional practice.
Therapeutic:	Relating to therapeutics, the branch of medicine concerned specifically with the treatment of disease. The therapeutic dose of a drug is the amount needed to treat a disease.

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Further Reading

British Pharmacological Society
www.bps.ac.uk
The BPS exists to promote and advance pharmacology in all its forms.

Royal Pharmaceutical Society
www.rpharms.com
The RPS gives pharmacy a clear, strong voice in all healthcare discussions and decisions across Britain. They also publish the British National Formulary.

The Nursing and Midwifery Council
www.nmc.org.uk
Better and safer care for people is at the heart of what the NMC does, supporting the healthcare professionals on their register to deliver the highest standards of care.

Multiple Choice Questions

1. Which option correctly identifies the five stages of the nursing process?
   A. Assess, diagnose, plan, implement, evaluate
   B. Assess, diagnose, predict, implement, evaluate
   C. Assess, diagnose, plan, implement, identify
   D. Assess, detect, plan, implement, evaluate

2. A thorough nursing assessment involves the nurse:
   A. Observing the environment, conducting a clinical examination, gathering information, and communicating findings
   B. Consulting the BNF, observing the patient, performing a clinical examination, and gathering data
   C. Observing the patient, conducting a clinical examination, gathering information, and communicating findings
   D. Using observation skills, calculating risk, performing a clinical examination, gathering data, and communicating findings

3. A key function of the Nursing and Midwifery Council (NMC) is to:
   A. Regulate hospitals and healthcare organisations
   B. Regulate healthcare assistants
   C. Regulate nurses and midwives
   D. Regulate nurses, midwives, and pharmacists

4. How many central themes (clauses) are there in the NMC Code?
   A. 4 themes and 22 clauses
   B. 4 themes and 24 clauses
   C. 25 themes and 25 clauses
   D. 3 themes and 23 clauses

5. A registered nurse is expected to:
   A. Act in the best interests of the patient
   B. Carry out accurate drug calculations across different medications
   C. Uphold professional values
   D. All of the above

6. Which is a benefit of patients administering their own medicines (self-administration)?
   A. Staff gain more time for other duties
   B. Patients gain greater control over their treatment
   C. Medication errors may be reduced
   D. There is less risk of infection

7. Standards for medicines management provide healthcare staff with:
   A. Legal protection
   B. An option to decline medicines administration
   C. A framework for safe practice in handling medicines
   D. Authority to prescribe controlled drugs

8. Oxygen is best described as:
   A. Safe in all circumstances and not requiring a prescription
   B. A medical gas with no side effects
   C. A medical gas that should be treated as a medicine
   D. Used only in high-dependency units, never at home

9. To ensure patient safety, healthcare staff must:
- A. Pass an internal competence course
- B. Have the appropriate qualifications, competence, skills, and experience
- C. Be registered with a professional regulator
- D. Be trained in CPR

10. Medicines management differs from medicines optimisation because it:
- A. Focuses on outcomes and patients rather than systems and processes
- B. Focuses on patients and families rather than just the patient
- C. Is governed by health or social care regulators
- D. Applies only in community care

11. Shared decision-making about treatment requires that:
- A. The healthcare provider's beliefs and values take priority
- B. The patient's beliefs and preferences about medicines are understood
- C. The regulator's Code is followed above all else
- D. The patient signs a consent form

12. Responsibility for the safe use of medicines lies with:
- A. The pharmacist
- B. The patient
- C. The registered practitioner
- D. All of the above

13. The terms non-compliance and non-adherence are criticised because they:
- A. Are sexist
- B. Suggest a paternalistic, unequal relationship between professionals and patients
- C. Suggest an equal relationship between professionals and patients
- D. Fail to address the patient's age

14. A therapeutic relationship is defined as:
- A. A supportive relationship based on trust and mutual respect
- B. A healing relationship
- C. A curative relationship centred on medicines
- D. None of the above

15. According to the Royal Pharmaceutical Society, the four key principles for safe medicines handling are:
- A. Assess, implement, improve, assure
- B. Establish assurance arrangements, ensure capacity and capability, seek assurance, continually improve
- C. Establish insurance, ensure capacity and capability, seek assurance, continually improve
- D. Establish assurance arrangements, ensure asepsis, seek assurance, continually improve
- E. Establish assurance arrangements, ensure capacity and capability, seek validation, continually improve