

1. The Need for Maintaining Healthcare Standards in a General Practice

Multiple-Choice Questions

Question 1

Which of the following is the primary purpose of maintaining healthcare standards in a general medical practice?

- A. To reduce the amount of paperwork completed by healthcare professionals
- B. To ensure that patients receive safe, effective, evidence-based, and consistent care
- C. To increase the number of patients seen during each consultation
- D. To reduce referrals to specialist services regardless of clinical need
- E. None of the above

Question 2

Which one of the following best illustrates the role of healthcare standards in preventive medicine?

- A. Performing surgery for advanced disease
- B. Prescribing antibiotics for all patients with respiratory symptoms
- C. Providing routine immunisations, health screening, and lifestyle counselling
- D. Restricting patient access to follow-up appointments
- E. None of the above

Question 3

How does maintaining accurate and comprehensive medical records improve patient care?

- A. It reduces the need for informed consent.
- B. It allows patients to bypass specialist referrals.
- C. It improves continuity of care, facilitates informed clinical decision-making, and reduces the risk of medical errors.
- D. It eliminates the need for clinical guidelines.
- E. All of the above

Question 4

Which of the following is considered a key component of evidence-based practice in general practice?

- A. Using only personal clinical experience when making decisions
- B. Following treatments that patients request, regardless of scientific evidence
- C. Combining current best research evidence, clinical expertise, and patient preferences when making clinical decisions
- D. Avoiding continuing professional development once qualified
- E. None of the above

Question 5

Why is continuing professional development (CPD) considered essential for maintaining healthcare standards?

- A. It is primarily intended to increase practice income.
- B. It enables healthcare professionals to maintain clinical competence, remain current with evolving medical evidence, and continually improve the quality of patient care.
- C. It replaces the need for clinical audits.

- D. It allows healthcare professionals to avoid regulatory oversight.
- E. All of the above

2. Prostate Cancer: Current Concepts in Diagnosis, Risk Stratification and Management

Question 1

Which of the following is the preferred management strategy for most men with low-risk localized prostate cancer?

- A. Immediate radical prostatectomy
- B. Active surveillance
- C. Long-term androgen deprivation therapy
- D. Chemotherapy
- E. All of the above

Question 2

What is the primary intent of active surveillance in localized prostate cancer?

- A. Symptom control only
- B. Avoiding all future monitoring
- C. Curative management with delayed treatment if progression occurs
- D. Immediate palliation of metastatic disease
- E. All of the above

Question 3

Which monitoring component is commonly included in active surveillance protocols?

- A. PSA measurement every 3–6 months
- B. Annual chemotherapy assessment
- C. Routine pelvic exenteration
- D. No repeat imaging or biopsy
- E. None of the above

Question 4

Following radical prostatectomy, biochemical recurrence is defined as which of the following?

- A. Any detectable PSA after surgery
- B. PSA ≥ 0.2 ng/mL confirmed by a second measurement
- C. PSA rise ≥ 2 ng/mL above the nadir
- D. PSA < 0.1 ng/mL on two occasions
- E. None of the above

Question 5

Which statement best describes the side-effect profile comparison between radical prostatectomy and radiation therapy?

- A. Radiation therapy always causes immediate urinary incontinence.

- B. Radical prostatectomy is more often associated with immediate erectile dysfunction, while radiation-related erectile dysfunction may develop gradually.
- C. Surgery and radiation have identical short-term recovery profiles.
- D. Bowel symptoms are more common after radical prostatectomy than after radiation therapy.
- E. None of the above

3. The Influence of Lifestyle and Dietary Modification on the Progression of Type 2 Diabetes Mellitus

Question 1:

The Influence of Lifestyle and Dietary Modification on Type 2 Diabetes

1. Which of the following is a major risk factor for developing Type 2 Diabetes?

- A. Regular physical activity
- B. Obesity and sedentary lifestyle
- C. High water intake
- D. Adequate sleep
- E. All of the above

Question 2.

What is one of the primary benefits of regular exercise for individuals with Type 2 Diabetes?

- A. Increases blood glucose levels
- B. Reduces insulin sensitivity
- C. Improves blood glucose control
- D. Eliminates the need for healthy eating
- E. All of the above

Question 3.

Which dietary modification is most beneficial for managing Type 2 Diabetes?

- A. Increasing intake of refined sugars
- B. Consuming foods high in saturated fats
- C. Eating a balanced diet rich in whole grains, fruits, and vegetables
- D. Skipping meals regularly
- E. None of the above

Question 4.

Weight loss in overweight individuals with Type 2 Diabetes can help:

- A. Increase insulin resistance
- B. Improve insulin sensitivity
- C. Worsen blood sugar control
- D. Eliminate the need for monitoring glucose levels
- E. All of the above

Question 5.

Which lifestyle change is most effective when combined with dietary modification for managing Type 2 Diabetes?

- A. Smoking
- B. Reduced physical activity
- C. Regular physical activity
- D. Increased consumption of processed foods
- E. None of the above

4. GLP-1**Question 1**

Which of the following best describes the primary mechanism of action of GLP-1 receptor agonists?

- A. Direct stimulation of insulin release regardless of glucose levels
- B. Glucose-independent suppression of glucagon secretion
- C. Glucose-dependent insulin secretion with delayed gastric emptying and appetite modulation
- D. Increased renal glucose excretion via SGLT2 inhibition
- E. All of the above

Question 2

Which medication is classified as a dual GLP-1 and GIP receptor agonist?

- A. Semaglutide
- B. Liraglutide
- C. Tirzepatide
- D. Dulaglutide
- E. None of the above

Question 3

Which of the following clinical benefits has been demonstrated in trials such as SUSTAIN 6?

- A. Increased risk of cardiovascular events
- B. Reduction in major adverse cardiovascular events
- C. No effect on renal outcomes
- D. Increased incidence of hypoglycaemia as monotherapy
- E. None of the above

Question 4

Which of the following adverse effects is MOST commonly associated with GLP-1 receptor agonists?

- A. Severe hypoglycaemia
- B. Gastrointestinal disturbances such as nausea and vomiting
- C. Acute myocardial infarction
- D. Hyperthyroidism
- E. All of the above

Question 5

Which of the following represents a triple agonist targeting GLP-1, GIP, and glucagon receptors currently in development?

- A. Orforglipron
- B. Retatrutide
- C. Danuglipron
- D. Lixisenatide
- E. None of the above

5. Clinical Standards in Allergy diagnosis and management: A Comprehensive Guide for a Family Practice.

Question 1

During the sensitisation phase of an allergic response, which cytokines are primarily responsible for promoting IgE production?

- A. IL-4 and IL-13
- B. IL-1 and TNF- α
- C. IFN- γ and IL-2
- D. IL-10 and TGF- β
- E. None of the above

Question 2

Which of the following is a key principle in the diagnostic approach to allergic diseases?

- A. Perform broad screening panels for all patients
- B. Use diagnostic tests only to confirm clinical suspicion
- C. Avoid taking a detailed clinical history
- D. Prioritise imaging over laboratory testing
- E. All of the above

Question 3

Which medication is most appropriate for rapid relief of acute asthma symptoms?

- A. Budesonide
- B. Montelukast
- C. Prednisone
- D. Salbutamol
- E. All of the above

Question 4

Which of the following is a common clinical feature of IgE-mediated food allergy?

- A. Symptoms occurring several days after ingestion.
- B. Isolated chronic fatigue

- C. Rapid onset urticaria and angioedema
- D. Progressive neurological decline
- E. All of the above

Question 5

Which of the following is an appropriate adjunctive management step after stabilising a patient with anaphylaxis?

- A. Immediate discharge without follow-up
- B. Avoid identifying the trigger
- C. Withhold patient education to reduce anxiety
- D. Provide an emergency action plan and auto-injector training
- E. None of the above

6. Cardiometabolic Syndrome - The Prevalence in Affluent Western Cultures**Question 1**

Which of the following is a key feature of cardiometabolic syndrome?

- A. Reduced blood pressure
- B. Central obesity
- C. Low fasting blood glucose
- D. Increased HDL cholesterol

Question 2

Which lifestyle factor is strongly associated with cardiometabolic syndrome in affluent Western cultures?

- A. High physical activity
- B. Low-calorie diets
- C. Sedentary behaviour
- D. High fibre intake

Question 3

What is considered the central pathological mechanism underlying cardiometabolic syndrome?

- A. Anaemia
- B. Insulin resistance
- C. Vitamin deficiency
- D. Hypothyroidism

Question 4

Which dietary pattern is associated with reduced cardiovascular risk?

- A. Western fast-food diet
- B. Mediterranean diet

- C. High-sugar beverage diet
- D. Ultra-processed food diet

Question 5

Which medication class may provide cardiovascular and weight-loss benefits in appropriate patients?

- A. GLP-1 receptor agonists
- B. Antihistamines
- C. Proton pump inhibitors
- D. Antibiotics

7. Related reading Menopause Implications for South African clinicians - clinical guidelines

Question 1

Which statement is true for using FSH hormone testing in menopausal women:

- A. It is useful in women younger than 45 years with menopausal symptoms
- B. FSH is not useful and essential in the diagnosis of menopause in women older than 45 years with symptoms.
- C. Two tests of FSH, 4 – 6 weeks apart should be done in the younger symptomatic patient to diagnose premature ovary insufficiency (POI)
- D. All of the above

Question 2

Choose the correct statement statements / recommendations:

Hormonal therapy (HT) for menopausal symptoms:

- A) Combination estrogen and progestogen is recommended for women with uterus intact
- B) Estrogen alone is recommended for women who had a hysterectomy
- C) Tibolone is recommended for women with or without an uterus with similar clinical benefits and risks to other estrogen and progestogen formulations
- D) All of the above

Question 3

Factors to consider prescribing oral HT and risk of spontaneous or elicited venous thrombo-embolism (VTE) includes:

- A. Risk is high in the first year
- B. Obesity, older age at onset of treatment and higher dose increase the risk for VTE
- C. Risk is mostly related to progestogen
- D. Transdermal HT has a high association with VTE risk

Question 4

Choose the correct considerations in HT and breast cancer:

- A. Observational evidence suggests that HT does increase the further risk in women with a family of breast cancer
- B. Does not increase the risk of breast cancer or for peritoneal cancer after bilateral salpingo-oophorectomy for BRCH 1 and 2 genetic variants
- C. HT can be advised for survivors of breast cancer
- D. All of the above

Question 5

Compound bio-identical HT (BHT) – Choose the correct recommendations:

- A. Compound BHT is tested for safety, quality and negative side effects
- B. They meet the minimal government regulation and monitoring safety data requirements
- C. Dosage is reliable
- D. Compounded BHT can be considered in patients with allergies to ingredients in approved products or with the unavailability of dosage or medications (off-label use)

8. POSTMENOPAUSAL BLEEDING: AN UPDATE

Question 1

The differential diagnosis of postmenopausal bleeding (PMB) includes:

- A. Vaginal atrophy (the most common cause)
- B. Endometrial cancer
- C. Cervical cancer (need to make sure PAP smear is up to date)
- D. Indiscriminate use of menopause hormone therapy
- E. Tamoxifen use
- F. All of the above

Question 2

Which of the following statements are true regarding endometrial cancer in PMB:

- A. 6 to 19% of women with PMB will have endometrial cancer
- B. The risk increased in women older than 55 years
- C. Risk is high with history of recurrent episodes of bleeding and bleeding volume that exceeds five pads per day.
- D. All of the above

Question 3

Endometrial biopsy is required:

- A. If repeated bleeding persists for women who showed normal findings on primary evaluation
- B. The endometrial lining is thicker than 4mm
- C. The endometrium is not adequately visualized on ultrasonography
- D. All of the above

Question 4

Evaluation of PMB should include:

- A. Proper history – medical, menstrual, family and risk factors
- B. Clinical examination – speculum, vaginal and rectal examination
- C. Hysterectomy evaluation and endometrial sampling if the endometrial thickness is equal to or more than 4mm
- D. All of the above

Question 5

Choose the correct recommendation: Specific treatment in PMB includes:

- A. Atrophic vaginitis: Local oestrogen treatment in women suffering from vaginal atrophy.
- B. Endometrial polyps: Polypectomy at hysteroscopy with histopathological examination (endometrial sampling)
- C. Endometrial thickness less than 4mm – Follow-up with repeat ultrasound unless bleeding continues
- D. Endometrial thickness more than 4mm – Endometrial sampling with hysterectomy
- E. All of the above

9. Pneumococcal Vaccine in Patients with Recurrent Infections**Question 1**

What is the main purpose of administering the 23-valent pneumococcal polysaccharide vaccine (PPV23) in patients with recurrent infections?

- A) To treat ongoing infections
- B) To diagnose asthma
- C) To reduce the risk of future bacterial infections
- D) To replace all other vaccines

Question 2

According to the study, which of the following infections showed the greatest risk reduction after PPV23 vaccination in patients with an adequate response?

- A) Sinusitis
- B) Otitis
- C) Pneumonia with parapneumonic effusion
- D) Skin infections

Question 3

In the context of the article, what is considered an adequate serological response to the PPV23 vaccine in children under six years old?

- A) Antibody levels above 1.3 µg/mL for all serotypes
- B) Antibody levels above 1.3 µg/mL for more than 50% of serotypes tested
- C) Antibody levels above 2.0 µg/mL for 30% of serotypes tested
- D) No increase in antibody levels

Question 4.

Which group of patients benefited most from the PPV23 vaccine according to the study?

- A) Patients with ongoing sepsis
- B) Patients with an adequate serological response to PPV23
- C) Patients with heart disease only
- D) Patients who never had any infections

Question 5.

What is the recommended approach for vaccinating patients with recurrent pneumococcal infections, based on the article's conclusions?

- A) Only use conjugate vaccines
- B) Use PPV23 after completing the pneumococcal conjugate vaccine schedule
- C) Avoid all pneumococcal vaccines
- D) Vaccinate only adults over 65 years old

10. The recent landscape of RSV vaccine Research

Question 1

Which group of infants is at the highest risk for severe RSV-related lower respiratory tract infection (LRTI)?

- A) Infants with no risk factors¹
- B) Infants born prematurely or with underlying health conditions²
- C) Infants exclusively breastfed
- D) Infants living in rural areas
- E) All of the above

Question 2

What is the main advantage of nirsevimab over palivizumab for RSV prevention in infants?

- A) Oral administration
- B) Broader antiviral spectrum
- C) Single-dose protection for an entire RSV season¹
- D) Lower risk of injection site reactions
- E) All of the above

Question 3

Which of the following statements about RSV vaccination in older adults is most accurate?

- A) RSV vaccines are only recommended for adults with chronic lung disease
- B) Recently approved RSV vaccines have demonstrated efficacy in preventing severe LRTI in adults aged 60 and older¹
- C) RSV vaccination is contraindicated in adults with a history of Guillain-Barré syndrome
- D) RSV vaccines are not yet available for use in any adult population
- E) None of the above

Question 4

What is a key consideration when recommending RSV prevention strategies in low- and middle-income countries (LMICs)?

- A) RSV is not a significant cause of morbidity in LMICs
- B) Cost and accessibility of monoclonal antibodies and vaccines are major barriers³
- C) Only live-attenuated vaccines are effective in LMICs
- D) RSV prevention is only needed during the summer months
- E) All of the above

Question 5

Which of the following is a potential adverse event under ongoing surveillance following RSV vaccination in older adults?

- A) Anaphylaxis⁴
- B) Guillain-Barré syndrome (GBS)⁵
- C) Nephrotoxicity
- D) Stevens-Johnson syndrome

11. Causes of Chronic Obstructive Airways Disease and Their Management

Introduction

Question 1

What is the most important cause of Chronic Obstructive Airways Disease (COAD/COPD)?

- A) Poor diet
- B) Cigarette smoking
- C) Lack of exercise
- D) Low blood sugar
- E) Kidney disease

Question 2

Which test is considered the gold standard for diagnosing COPD?

- A) Blood pressure measurement
- B) Chest X-ray only
- C) Spirometry
- D) Urine test
- E) Electrocardiogram only

Question 3

Which of the following is a common symptom of COPD?

- A) Progressive shortness of breath

- B) Increased appetite
- C) Sudden hair loss
- D) Skin rash
- E) Joint swelling only

Question 4

What is the main goal of pulmonary rehabilitation in COPD management?

- A) To replace all medication
- B) To improve exercise capacity and reduce breathlessness
- C) To increase smoking habits
- D) To cure COPD completely
- E) To reduce the need for vaccination

Question 5

Which inherited condition is a recognized genetic cause of COPD?

- A) Sickle cell disease
- B) Alpha-1 antitrypsin deficiency
- C) Haemophilia
- D) Down syndrome
- E) Iron deficiency anaemia

12. The final report of the Section 59 investigation panel

Question 1

What was the primary purpose of the Section 59 Investigation?

- A. To investigate allegations of unfair racial discrimination in fraud, waste and abuse (FWA) systems.
- B. To determine whether medical schemes should be abolished.
- C. To investigate procedural unfairness in the implementation of Section 59.
- D. To establish a new medical scheme regulator.
- E. To review healthcare tariffs.

Question 2

According to the investigation, which statements were supported by the evidence?

- A. Black healthcare providers were more likely than non-black providers to be found guilty of FWA.
- B. Medical schemes intentionally programmed their software to discriminate.
- C. The investigation found evidence of systemic discrimination in FWA implementation.
- D. All medical schemes were found guilty of racism.
- E. The investigation recommended abolishing fraud investigations.

Question 3

Which recommendations were made by the investigation panel?

- A. Introduce early warning systems to notify providers of potential Section 59 action.

- B. Increase the length of audit and claw-back periods.
- C. Improve transparency regarding software, algorithms, and AI used in FWA systems.
- D. Eliminate all peer review processes.
- E. Replace the Council for Medical Schemes with a new authority.

Question 4

How did the report distinguish systemic discrimination from individual discrimination?

- A. Systemic discrimination refers to institutional practices that disproportionately affect groups.
- B. Individual discrimination focuses on the treatment of a specific person.
- C. Systemic discrimination only applies to government departments.
- D. Individual discrimination is always intentional.
- E. The Constitution prohibits only individual discrimination.

Question 5

Which statements about the investigation's findings are correct?

- A. The findings automatically became legally binding on the Council for Medical Schemes.
- B. The panel clarified that finding systemic discrimination does not mean schemes or administrators are racist.
- C. The CMS is legally obliged to accept every recommendation.
- D. The panel's recommendations aim to improve fairness, transparency, and compliance with the Constitution.
- E. The investigation concluded there should no longer be fraud detection systems.

13. Medicolegal Implications of Artificial Intelligence

1. Which South African legislation primarily governs the processing and protection of personal health information used by AI systems?

- A. National Health Insurance Act (NHI)
- B. Promotion of Access to Information Act (PAIA) only
- C. Protection of Personal Information Act (POPIA)
- D. Consumer Protection Act (CPA)

2. The "black box" problem in artificial intelligence refers to:

- A. AI systems that cannot store patient data securely.
- B. AI systems whose decision-making processes are difficult to understand or explain.
- C. AI systems that operate only without internet access.
- D. AI systems that have no clinical applications.

3. Which of the following is the best example of algorithmic bias in healthcare AI?

- A. An AI system that processes laboratory results more quickly than a clinician.
- B. An AI system trained mainly on lighter skin tones that performs poorly when diagnosing skin diseases in darker-skinned patients.

- C. An AI system that encrypts patient records before storage.
- D. An AI system that automatically updates its software.

4. According to current professional guidance, the role of artificial intelligence in healthcare should be to:

- A. Replace clinicians in making all patient-care decisions.
- B. Eliminate the need for informed consent.
- C. Support and augment clinical judgement while maintaining meaningful human oversight.
- D. Transfer all legal responsibility from clinicians to software developers.

5. Which of the following is recommended as part of good clinical documentation when AI is used in patient care?

- A. Recording only the AI-generated diagnosis.
- B. Documenting the AI system used, whether its recommendations were accepted or overridden, and the reasons for clinical decisions.
- C. Avoiding mention of AI to reduce medicolegal risk.
- D. Deleting AI-generated recommendations after treatment.

6. When an AI system is regarded as a medical product, legal responsibility for defects is most likely to fall under:

- A. Criminal law
- B. Product liability law
- C. Employment law
- D. Contract law

7. Which of the following is an example of an adversarial attack on a healthcare AI system?

- A. Deleting a patient's electronic health record
- B. Introducing subtle changes to a medical image to mislead the AI algorithm
- C. Performing routine software updates
- D. Encrypting patient data before storage

8. Which of the following is NOT one of the four traditional ethical principles described by Beauchamp and Childress?

- A. Beneficence
- B. Justice
- C. Autonomy
- D. Confidentiality

9. Explainable Artificial Intelligence (XAI) is primarily designed to:

- A. Replace clinicians in decision-making
- B. Improve internet security for healthcare organisations
- C. Provide understandable explanations for AI-generated decisions
- D. Eliminate the need for patient consent

10. Healthcare organisations should establish multidisciplinary AI governance committees to:

- A. Replace hospital ethics committees
- B. Evaluate AI systems before implementation and monitor their ongoing performance
- C. Market AI products to healthcare professionals
- D. Develop new computer hardware

11. Which international regulatory body classifies many healthcare AI systems as high-risk under its AI legislation?

- A. World Bank
- B. European Union AI Act
- C. United Nations Security Council
- D. World Trade Organization

12. Which of the following is considered a major medicolegal concern associated with continuously learning AI systems?

- A. They cannot analyse electronic health records.
- B. Their performance may change after regulatory approval.
- C. They cannot be used outside hospitals.
- D. They require no software maintenance.

13. Which recommendation is specifically directed at AI developers?

- A. Avoid documenting AI involvement in clinical decisions.
- B. Design transparent and explainable AI systems using representative datasets.
- C. Transfer all legal responsibility to clinicians.
- D. Eliminate human oversight whenever possible.

14. AI offers which potential benefit for healthcare delivery in South Africa?

- A. Eliminating the need for healthcare professionals
- B. Earlier diagnosis of tuberculosis through automated chest X-ray interpretation
- C. Replacing all pathology laboratories
- D. Removing the need for informed consent

15. Which of the following best reflects a recommendation for healthcare professionals using AI?

- A. Accept every AI recommendation without question.
- B. Allow AI to make all final clinical decisions independently.
- C. Verify AI-generated recommendations before implementing them in patient care.
- D. Avoid using AI because of legal uncertainty.

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