

1. Define Evidence-Based Medicine (EBM)

Evidence-Based Medicine is the use of **best available scientific evidence**, along with **doctor's experience** and **patient's preferences**, to make decisions about patient care.

👉 **Simple words:**

Treating patients using **research + clinical judgment + patient choice**.

2. Steps of Evidence-Based Medicine (5 A's)

1. Ask

Form a clear clinical question about the patient's problem.

👉 **Example:**

Which drug is best for hypertension in elderly patients?

2. Acquire

Search for the **best available evidence** (guidelines, trials, reviews).

3. Appraise

Check whether the evidence is **valid, reliable, and useful**.

4. Apply

Use the evidence in patient care, considering:

- Patient condition
- Patient preference
- Available resources

5. Assess

Evaluate the outcome and improve future practice.

📌 **Easy memory tip:**

Ask → Acquire → Appraise → Apply → Assess

3. Levels (Hierarchy) of Evidence

From **strongest to weakest**:

1. **Systematic reviews & Meta-analyses**
2. **Randomized Controlled Trials (RCTs)**
3. **Cohort studies**
4. **Case-control studies**
5. **Case series & Case reports**
6. **Expert opinion**

📌 **Golden exam point:**

Systematic review / Meta-analysis = highest level of evidence

1. MCQs on Evidence-Based Medicine

Q1. Evidence-Based Medicine (EBM) is defined as:

- A) Using only clinical experience to treat patients
- B) Making treatment decisions based on the best research evidence, clinical expertise, and patient preferences
- C) Treating all patients with the same standard protocol
- D) Relying solely on expert opinion

 **Answer:** B

Q2. Which of the following is the **first step** in the EBM process?

- A) Appraise
- B) Acquire
- C) Ask
- D) Apply

 **Answer:** C

Q3. Arrange the steps of EBM in correct order:

1. Apply
2. Acquire
3. Ask
4. Appraise
5. Assess

- A) 3 → 2 → 4 → 1 → 5
- B) 2 → 3 → 4 → 1 → 5
- C) 3 → 4 → 2 → 1 → 5
- D) 1 → 2 → 3 → 4 → 5

 **Answer:** A

Q4. Which of the following is considered the **highest level of evidence**?

- A) Randomized Controlled Trials
- B) Case-control studies

C) Systematic reviews / Meta-analysis

D) Expert opinion

 **Answer:** C

Q5. A cohort study is best used to:

A) Study rare diseases retrospectively

B) Study prognosis or outcomes over time

C) Summarize multiple RCTs

D) Replace clinical judgment

 **Answer:** B

Q6. Which EBM step involves checking validity and reliability of the evidence?

A) Acquire

B) Appraise

C) Apply

D) Assess

 **Answer:** B

1. Concepts of Patient Safety

Patient safety means **preventing harm to patients** during healthcare.

Core Concepts (Easy Points)

1. **Do no harm**
 - a. Avoid preventable injuries during treatment.
2. **Safe systems**
 - a. Errors usually occur due to **system failure**, not individual negligence.
3. **Risk identification**
 - a. Identify high-risk patients, drugs, and procedures early.
4. **Standardization**
 - a. Use guidelines, protocols, and checklists.
5. **Team communication**
 - a. Clear handovers and teamwork reduce errors.
6. **Reporting & learning**
 - a. Errors should be reported to prevent repetition.
7. **Patient involvement**
 - a. Educating patients improves safety.

One-line exam definition:

Patient safety focuses on **reducing risk, errors, and harm** to patients during healthcare.

2. Medical Errors

Definition

A **medical error** is a **failure of a planned action** or use of a **wrong plan** that leads to patient harm.

Types of Medical Errors

Type	Explanation	Example
Medication error	Wrong drug, dose, route, or time	Insulin overdose
Diagnostic error	Delay or wrong diagnosis	Missing MI diagnosis
Surgical error	Wrong site, wrong patient	Wrong-side surgery
Communication error	Poor handover	Incorrect discharge instructions
System error	Equipment or policy failure	Faulty ventilator
Documentation error	Incomplete records	Missing allergy history

3. Etiology (Causes) of Medical Errors

Human Factors

- Fatigue
- Lack of training
- Stress
- Poor judgment

System Factors

- Inadequate staffing
- Poor protocols
- Lack of supervision
- Unsafe work environment

Communication Issues

- Poor handover
- Illegible prescriptions

Patient-Related Factors

- Complex illness
- Non-compliance
- Language barriers

📌 Exam favorite:

Most medical errors are due to system failure, not individual blame.

4. Prevention of Medical Errors

Individual Level

- Follow guidelines
- Double-check medications
- Proper documentation

System Level

- Standard protocols
- Checklists (e.g., WHO surgical checklist)
- Electronic medical records
- Bar-code medication systems

Team Level

- Clear communication
- Structured handover (SBAR)

Patient Level

- Patient education
- Encourage patients to ask questions

High-Yield Summary Box (For Exams)

- **Patient safety** = prevention of avoidable harm
- **Medical errors** = failure of plan or wrong plan
- **Commonest cause** = system failure
- **Best prevention** = protocols, checklists, teamwork, reporting

Here are **high-yield MCQs on Patient Safety & Medical Errors**, written in a **simple, exam-focused style** 

MCQs: Patient Safety & Medical Errors

Q1. Patient safety primarily aims to:

- A) Eliminate all complications
- B) Prevent harm caused by healthcare
- C) Punish healthcare workers for mistakes
- D) Improve hospital profits

 **Answer:** B

Q2. Patient safety is best defined as:

- A) Correct diagnosis in every patient
- B) Use of advanced technology in hospitals

- C) Reduction of risk, errors, and harm to patients
- D) Avoidance of legal issues

 **Answer:** C

Q3. Most medical errors occur due to:

- A) Negligence of doctors
- B) Incompetence of nurses
- C) System failure
- D) Patient non-compliance

 **Answer:** C

 *Exam favorite*

Q4. Which of the following is a medication error?

- A) Delay in diagnosing tuberculosis
- B) Wrong-site surgery
- C) Administration of wrong dose of insulin
- D) Inadequate handover

 **Answer:** C

Q5. A delay in diagnosing myocardial infarction is an example of:

- A) Surgical error

- B) Diagnostic error
- C) System error
- D) Documentation error

 **Answer:** B

Q6. Wrong-site surgery is classified as a:

- A) Medication error
- B) Diagnostic error
- C) Surgical error
- D) Communication error

 **Answer:** C

Q7. Illegible handwriting on a prescription most commonly leads to:

- A) Diagnostic error
- B) Medication error
- C) System error
- D) Patient-related error

 **Answer:** B

Q8. Which factor is considered a human cause of medical error?

- A) Inadequate hospital policy

- B) Faulty equipment
- C) Fatigue of healthcare worker
- D) Lack of electronic records

 **Answer:** C

Q9. Which of the following is a system factor contributing to medical errors?

- A) Stress
- B) Poor judgment
- C) Inadequate staffing
- D) Lack of motivation

 **Answer:** C

Q10. The most effective way to prevent surgical errors is:

- A) Punishment of surgeons
- B) Increased working hours
- C) Use of surgical safety checklists
- D) Relying on senior opinion only

 **Answer:** C

Q11. SBAR is mainly used to improve:

- A) Documentation

- B) Drug dosing
- C) Communication
- D) Infection control

 **Answer:** C

Q12. Which of the following improves patient safety the MOST?

- A) Blaming individuals for mistakes
- B) Avoiding error reporting
- C) Reporting and learning from errors
- D) Ignoring near-miss events

 **Answer:** C

Q13. Encouraging patients to ask questions helps improve:

- A) Hospital revenue
- B) Diagnostic imaging
- C) Patient safety
- D) Legal protection only

 **Answer:** C

Q14. A medical error is best defined as:

- A) Any bad outcome in a patient

- B) Failure of a planned action or use of wrong plan
- C) Complication of disease
- D) Side effect of drugs

 **Answer:** B

Q15. Which of the following is NOT a type of medical error?

- A) Medication error
- B) Communication error
- C) System error
- D) Evidence-based practice

 **Answer:** D

Exam Tip

- **Most common cause of errors → System failure**
- **Best prevention → Protocols + checklists + communication**
- **Goal of patient safety → Prevent avoidable harm**
- **~~Create clinical scenario based on subjective style~~**
- **~~Provide a flowchart diagram for patient safety~~**

Clinical Governance

In simpler terms, it's a **way for hospitals and clinics to make sure their care is safe, high-quality, and always improving.**

Key components usually include:

1. **Patient safety** – reducing errors and harm.
2. **Clinical effectiveness** – using evidence-based practices.
3. **Risk management** – identifying and managing risks in care.
4. **Audit and quality improvement** – monitoring outcomes and improving them.
5. **Staff training and development** – ensuring competent healthcare professionals.
6. **Patient involvement** – including patient feedback in service improvement.

Clinical Audit – Steps

1. **Identify topic/problem** (choose area needing improvement).
2. **Set criteria & standards** (define best practice benchmarks).
3. **Collect data** (measure current practice).
4. **Analyze results** (compare with standards).
5. **Implement change** (action plan for improvement).
6. **Re-audit** (check if changes worked).

👉 **Core idea:** Audit = *quality improvement cycle*.

SPIKES Model for Breaking Bad News & Counselling (Exam-oriented)

The **SPIKES model** is a **6-step structured approach** used to **deliver bad news empathetically** and provide effective counselling.

S – Setting up the interview

Purpose: Create a safe, private, and supportive environment.

- Ensure **privacy** (quiet room, no interruptions)
- Sit at eye level, maintain **eye contact**
- Involve relatives if the patient wants
- Turn off phones, allocate enough time

◆ *Clinical example:* Breaking a cancer diagnosis in a private consultation room.

P – Perception

Purpose: Assess what the patient already knows or believes.

- Ask open-ended questions
- Identify misconceptions or denial

◆ *Example:*

“What do you understand about your illness so far?”

I – Invitation

Purpose: Determine **how much information** the patient wants.

- Respect patient’s preference
- Some want full details, others limited information

◆ *Example:*

“Would you like me to explain the test results in detail?”

K – Knowledge

Purpose: Deliver the bad news **clearly and gently**.

- Give a **warning shot**
- Use simple, non-medical language
- Avoid blunt statements (Do **not** give bad news in a harsh, sudden, or insensitive way)
- Give information in small chunks

◆ *Example:*

“I’m afraid the results are more serious than we hoped...”

E – Empathy (Emotions)

Purpose: Address the patient’s emotional response.

- Acknowledge feelings
- Allow silence
- Offer verbal and non-verbal support

◆ *Example:*

“I can see this is very upsetting for you. Anyone would feel the same.”

S – Strategy & Summary

Purpose: Plan the next steps and provide hope.

- Summarize information
- Discuss treatment options
- Involve patient in decision-making
- Arrange follow-up

- ◆ *Example:*

“Let’s discuss what we can do next and how we’ll support you.”

One-line exam summary

SPIKES = Setting, Perception, Invitation, Knowledge, Empathy, Strategy