



University of Al maarif

Department of Medical Instrumentation Techniques Engineering

Laboratory Medical Instrumentation I

Second Class

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Master of Medical Physics

Lecture Six

Patient Safety



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Patient Safety

Patient safety is preventing and minimizing risks, errors, and harm to patients during the delivery of healthcare services.



Principles of patient safety

- Focus on improving systems
- Continuous learning and training to enhance evidence based practices

Types of Errors

- **Diagnostic Errors:** Misdiagnosis, delayed diagnosis
- **Medication Errors:** Wrong drug, dosage, or timing.
- **Surgical Errors:** Wrong-site surgery, or leaving tools inside the body.
- **Falls and accidents** within the hospital

Error Prevention and Management

Errors in healthcare can occur in various forms, such as medication mistakes, surgical complications, diagnostic errors, so Patient safety aims to:

- Identify the root causes of these errors.
- Prevent them by implementing systems and protocols, such as checklists and standardized procedures.

Establishing Safe Practices

Healthcare organizations follow various practices and strategies to improve patient safety, such as:

Checklists: Used in surgeries, medication administration, and patient transfers to ensure all steps are followed correctly.

Infection Prevention: sterilization, and the use of personal protective equipment (PPE).

Role of healthcare providers in patient safety

- Follow standard protocols and guidelines
- Ensure effective communication among care teams
- Report errors
- Promote teamwork to provide complete care

Technological Solutions

The use of technology plays a significant role in enhancing patient safety:

- Electronic Health Records (EHRs): Reducing errors related to hand-written documentation and facilitating better coordination among healthcare providers.
- Automated Alerts: Systems that alert healthcare professionals .
- Telemedicine offers safe, effective care remotely.