

Slide 1 – Title Slide

Healthcare Management System (MediCare Solutions)
Electronic Health Records (EHR)
MSc Cyber Security and Digital Forensics

Slide 2 – Organization Overview

MediCare Solutions is a healthcare provider using an EHR system to manage patient information digitally.

Services: Patient Care, Appointment Management, Laboratory Services, Pharmacy Services, Treatment Monitoring.

Slide 3 – System Overview

Main Components: Patient Records, Appointment System, Laboratory Management, Prescription Management, Treatment Tracking, Billing & Administration.

Slide 4 – Electronic Health Records (EHR)

Digital repository of patient information accessible by authorized healthcare professionals. Benefits: Real-time access, improved accuracy, reduced paperwork, better outcomes.

Slide 5 – Data Stored in the EHR

Personal Data, Medical History, Appointments, Lab Results, Prescriptions, Treatment Plans.

Slide 6 – Stakeholders

Doctors, Nurses, Laboratory Staff, Pharmacists, Administrators, Patients.

Slide 7 – Information Flow

Patient Registration → Doctor Consultation → Laboratory Testing → Diagnosis → Prescription → Treatment & Follow-up.

Slide 8 – Cyber Security Risks

External Threats: Ransomware, Malware, Phishing. Internal Threats: Unauthorized Access, Human Error, Insider Misuse.

Slide 9 – Security Controls

Preventive Controls: MFA, Password Policies, Encryption. Detective Controls: Audit Logs, Monitoring. Corrective Controls: Backups, Disaster Recovery.

Slide 10 – CIA Triad

Confidentiality, Integrity, Availability – core principles protecting healthcare information.

Slide 11 – Governance & Compliance

UK GDPR, Data Protection Act 2018, Information Governance principles.

Slide 12 – Benefits

Improved patient care, faster service, accurate records, better efficiency, reduced costs, stronger security.

Slide 13 – Recommendations

Zero Trust Security, Security Audits, Employee Training, Data Encryption, Continuous Monitoring, Incident Response Plan.

Slide 14 – Conclusion

EHR systems improve healthcare operations while requiring strong cybersecurity and governance controls.

Slide 15 – References

WHO, NHS, NCSC, NIST, HL7.