

Information Systems and Technologies

Assignment Guidelines:

This assignment examines how digital technologies and health information systems (HIS) transform administrative, clinical, and financial operations within healthcare organisations. Students are expected to evaluate electronic health records (EHR), telemedicine platforms, system interoperability, cybersecurity, and health data analytics to improve care coordination, administrative efficiency, and evidence-based decision-making.

Submission Format:

- Type: Detailed Digital Systems Evaluation & Implementation Report
- Font: Times New Roman, Size 12, Double Spaced
- Word count: 3000 – 4000 words
- Submission Deadline: To be announced by the respective professors

Assessment Criteria:

- Understanding and application of health information systems and technology concepts – 20%
- Critical analysis of digital tools in clinical, administrative, and financial decision contexts – 25%
- Use of academic literature, regulatory standards, and healthcare case studies – 20%
- Strategic insight, data protection evaluation, and quality of technical recommendations – 25%
- Structure, academic writing, presentation, and APA referencing – 10%

Mandatory Sections:

- Title Page
- Table of Contents
- Abstract
- Introduction
- Literature Review
- Methodology
- Findings
- Discussion
- Conclusion
- References
- Appendices

Assignment Task – Choose ONE of the following written assignments:

Option 1: EHR Modernisation, System Interoperability, and Operational Efficiency

Analyse how healthcare institutions can design and evaluate Electronic Health Record (EHR) and Health Information System (HIS) deployment plans to streamline operations and elevate care quality. Your paper should:

- Describe the major healthcare technologies such as EHR, HIS, patient portals, etc. and the clinical and operational processes they support.
- Describe the technical workflow and the interoperability standards necessary to facilitate the exchange of data among disparate caregivers.
- Analyse practical case studies of healthcare providers that adopted enterprise EHR systems nationwide, highlighting tangible benefits and the complexity of integration.
- Propose a workable evaluation schema that health care managers could apply to assess gains in the speed of administration, accuracy of clinical procedures, and quality of patient care.

Option 2: Telemedicine, Remote Patient Monitoring, and Digital Care Delivery

Investigate how virtual care platforms, IoT medical devices, and digital tools are transforming service management and patient access across healthcare settings. Your paper should:

- Analyse the role of telemedicine, remote monitoring, and patient-facing digital tools in streamlining resources, outpatient monitoring, and clinical processes.
- Evaluate the effects of digital care delivery on the efficiency of operations, financial outcomes, clinical effectiveness, and patient satisfaction.
- Address barriers to human and organisational adoption such as clinician resistance to tech, digital literacy, and task shifting.
- Use hospital or regional health service examples to describe a cost-effective, scalable strategy for introducing remote care models in mid-sized hospitals.

Option 3: Healthcare Data Governance, Cybersecurity, and Analytics in Decision-Making

Evaluate how health service managers can leverage clinical data analytics for strategic planning while maintaining robust data privacy and cybersecurity standards. Your paper should:

- Put frameworks and metrics in place to measure the impact of health data analytics on resource planning, financial management and quality of care.
- Evaluate critical risk factors in digital healthcare: ransomware vulnerabilities, Data breaches, Regulatory compliance, System downtime.
- Assess case studies of prominent health system cyber incidents vs. governance implementations to learn from risk mitigation and continuity.
- Inform strategic recommendations for healthcare executives on how to create a resilient, data-driven system that optimises analytics capabilities and cyber protection.