

NURS-FPX4040 Assessment 1

Nursing Informatics in Health Care Sample

Course	NURS-FPX4040: Managing Health Information and Technology
Assessment	Assessment 1
Sample Type	Evidence-based nurse informaticist position proposal
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Educational sample notice. This original model demonstrates one way to address the public assessment format and scoring expectations. Learners should compare it with the current courseroom instructions and scoring guide, verify all sources, and create their own submission.

Executive Summary

This proposal recommends creating a full-time nurse informaticist position for a 250-bed community hospital that is expanding its electronic health record (EHR), barcode medication administration, patient portal, clinical decision support, and quality dashboards. The role is needed because technology decisions now shape nursing workflow, documentation quality, patient safety, privacy, staff efficiency, and the reliability of quality data. A nurse informaticist combines clinical nursing knowledge with information and analytical skills, making the role different from a general information-technology analyst. The proposed nurse informaticist would serve as the clinical bridge among bedside nurses, nursing leadership, information technology, quality improvement, pharmacy, risk management, and vendors.

The strongest return is expected from fewer technology-related workarounds, safer EHR configuration, better staff adoption, more reliable data, and faster identification of workflow problems. The recommendation is to establish the position under nursing leadership with a formal partnership to the chief information officer. First-year priorities should include EHR optimization, medication-safety workflow review, privacy and security education, dashboard validation, and measurable reduction of documentation burden.

Nursing Informatics and the Nurse Informaticist

Nursing informatics is the specialty that integrates nursing science with information and analytical sciences to manage and communicate data, information, knowledge, and wisdom in nursing practice. In simple terms, it helps nurses use technology in a way that fits real clinical work. The nurse informaticist is not merely a “computer nurse.” The role involves workflow analysis, system design, implementation, staff education, data quality, usability, clinical decision support, privacy, quality measurement, and evaluation of whether a technology actually improves care.

A useful reason to create this position is that technology can create both benefits and new hazards. An EHR may improve access to information but also produce alert fatigue, duplicated documentation, or unsafe workarounds when the screen does not match nursing workflow. Asif and Khan (2024) describe nurse

informaticists as important clinical contributors during EHR implementation because they translate clinical needs into system requirements and support adoption. Recent competency research also shows that informatics work requires more than basic computer skills; nurses need competence in information management, data interpretation, system use, and safe digital practice (Kleib et al., 2021; Zareshahi et al., 2022).

Nurse Informaticists and Other Health Care Organizations

Health care organizations use nurse informaticists as translators, workflow specialists, educators, project leaders, and data partners. During a technology project, the nurse informaticist can observe the current process, identify failure points, map future-state workflow, test the system with end users, build education, support go-live, and monitor the results after implementation. This clinical perspective is especially valuable when a technical build appears correct to an analyst but creates unnecessary clicks, hides critical information, or interrupts care at the bedside.

The role should be embedded in interdisciplinary work rather than isolated in an information-technology department. For example, an EHR medication change should involve nursing, pharmacy, providers, information technology, patient safety, and the informaticist. The informaticist can clarify what nurses need to see, when the information should appear, what data must be discrete for reporting, and what backup workflow is needed if the technology fails. A systematic review of informatics competencies for nurse managers found that information and technology capabilities are increasingly important for organizational management, communication, quality, and decision making (Farokhzadian et al., 2023).

Impact of Full Nurse Engagement in Health Care Technology

Patient Care and Safety

Full nurse engagement improves the chance that technology supports rather than disrupts safe care. Bedside nurses understand medication passes, admissions, handoffs, deterioration, discharge education, and documentation under time pressure. Their participation in design and testing can identify unsafe defaults, missing fields, poorly timed alerts, and duplicate work before implementation. The nurse informaticist gives frontline nurses a structured path to influence system design and can convert informal complaints into measurable improvement work.

Protected Health Information: Privacy, Security, and Confidentiality

The proposed position should work with privacy, compliance, and information security leaders to strengthen safe handling of protected health information (PHI). Evidence-based strategies include role-based access, multifactor authentication where appropriate, automatic screen locking, secure messaging, minimum-necessary access, audit-log review, phishing education, clear downtime procedures, and rapid reporting of suspected breaches. Nurses should understand that privacy means the patient's right to control information, confidentiality means the professional duty to protect information entrusted to the care team, and security refers to safeguards that protect electronic information from unauthorized access, alteration, or loss.

Workflow and Staff Experience

Technology adds value only when it works within clinical workflow. A nurse informaticist can conduct usability rounds, examine help-desk patterns, measure documentation time, review override and scanning data, and facilitate rapid-cycle improvements. The position should also maintain a super-user network so that each unit has trained staff who can identify problems early and support peers. This approach reduces the common gap

in which a system is technically available but inconsistently used because staff do not understand it or because the workflow is poorly designed.

Costs and Return on Investment

The position creates a direct salary and benefit cost, but the financial case should be evaluated against avoidable technology-related costs. These include overtime during poorly planned implementations, repeated vendor rework, medication errors, inefficient documentation, low adoption of purchased tools, privacy incidents, and unreliable quality reporting. Return on investment should therefore be measured as a portfolio rather than a single number. Recommended measures include documentation minutes per patient, medication scanning compliance, help-desk tickets, duplicated charting steps, staff training completion, privacy events, quality-indicator accuracy, and the number of system changes that remove unnecessary work.

Opportunities and Challenges

The main opportunity is to connect nursing practice with the organization's digital strategy. The nurse informaticist can improve data quality, strengthen staff confidence, support evidence-based decision making, and make quality dashboards more clinically meaningful. The position can also help prepare the organization for artificial intelligence, remote monitoring, and patient-generated health data by ensuring that implementation decisions consider nursing workflow, bias, privacy, and patient safety.

Challenges include role confusion, resistance to workflow changes, unrealistic expectations that one informaticist can solve every technical problem, and the risk that the position becomes consumed by routine help-desk work. These risks can be reduced with a written charter. The nurse informaticist should own clinical workflow analysis, requirements gathering, training strategy, usability evaluation, and nursing data quality, while the information-technology team retains responsibility for infrastructure, network security, hardware, and technical system administration.

Summary of Recommendations

The organization should create one full-time nurse informaticist position and evaluate the role after 12 months. The position should report through nursing leadership, maintain a formal partnership with information technology, and chair a frontline nursing technology council. The first-year work plan should focus on five priorities:

- Optimize high-burden EHR nursing documentation and remove unnecessary duplication.
- Review barcode medication administration and clinical decision-support workflows for safety and workarounds.
- Establish a nursing super-user network and recurring informatics education.
- Partner with privacy and cybersecurity leaders on PHI protection and incident response education.
- Validate nursing quality dashboards so that data definitions, documentation, and reporting are reliable.

Success should be demonstrated through measurable improvement, not technology adoption alone. The nurse informaticist should provide quarterly reports on workflow, safety, data quality, staff adoption, and cost avoidance. Creating the role is justified because nursing practice is now inseparable from digital systems, and the organization needs a clinical professional who can make those systems safer, more usable, and more valuable.

References

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Assessment Coverage Map

Assessment expectation	Where the sample addresses it
Define nursing informatics and the nurse informaticist role.	Nursing Informatics and the Nurse Informaticist.
Describe how other organizations use nurse informaticists and how they collaborate.	Nurse Informaticists and Other Health Care Organizations.
Explain effects of nurse engagement on patient care, PHI, workflow, and EHR.	Impact of EHR Engagement in Health Care Technology.
Identify opportunities and challenges.	Opportunities and Challenges.
Make an evidence-based recommendation.	Summary of Recommendations.