

Introduction to Information Systems in Healthcare

Computer and Information Literate

1. Which healthcare providers are challenged with becoming and staying computer and information literate to facilitate the delivery of safe, quality care? Select all that apply.
 - a. Nurses
 - b. Physical therapists
 - c. Therapists
 - d. Social workers
 - e. Physicians

Healthcare workers in every setting are being challenged with becoming and staying computer literate. Providers (physicians, advanced practice nurses), nurses, therapists, dietitians, social workers, etc. and various nonprofessionals need to be computer literate, and most of them need to be information literate. From a nursing standpoint, many organizations and other interested stakeholders have defined informatics competencies that are deemed essential to facilitate the delivery of safe, efficient care, and to add depth to their knowledge base.

Nursing Skills

2. Which nursing skill involves integrating health information with computerized systems to increase information management and client safety?
 - a. Informatics literacy
 - b. Data acquisition
 - c. Information literacy
 - d. Informatics wisdom

Informatics literacy involves integrating health information with computerized systems to increase information management and ensure patient safety. It enables the knowledge, skill, and attitude (KSA) to use technology to not only input information into a clinical system but also retrieve and manage the information to improve client safety and quality outcomes.

Nursing Informatics

3. Nursing informatics concentrates on finding ways to impact which aspects of health care? Select all that apply.
 - a. Improve information management
 - b. Enhance safety and quality of care
 - c. Improve communication
 - d. Increase costs

e. Improve efficiency

Nursing informatics concentrates on finding ways to improve information management and communication to improve efficiency, reduce costs (not increase cost), and ultimately enhance safety and quality of care.

Informatics Influences

- 4. Integration of informatics influences which aspects of health care? Select all that apply.**
- a. Delivery of healthcare**
 - b. How resources are managed**
 - c. Increases in staffing**
 - d. The function of interprofessional teams**

Remember, the ways in which care is delivered, resources are managed, and how interprofessional teams' function are all influenced by informatics. Informatics does not necessarily influence increases in staffing.

Technology Informatics Guiding Education Reform Initiative

- 5. The technology informatics guiding education reform (TIGER) initiative was designed to use health information technology in nursing practice by focusing on which initiatives? Select all that apply.**
- a. Common vision and strategy in use of health information technology**
 - b. Practice standards in informatics.**
 - c. Ways to improve the delivery of patient care**
 - d. Improve informatics knowledge and skills**

The TIGER Initiative, which is an acronym for Technology Informatics Guide Education Reform, was designed in 2004 with the goal of bringing together nurses to develop a common vision, strategies, and specific goals for the purpose of improving nursing practice, education, and the delivery of patient care using health information technology (IT) (HIMSS, 2016). From this group, recommendations were made for the creation of competencies, intended to guide practice. These competencies have been included in various programs throughout the country.

Reference

Healthcare Information & Management Systems Society (HIMSS). (2016). In HIMSS (Ed.), The TIGER initiative. <https://www.himss.org/tiger-initiative-technology-and-health-informatics-education>

Literacy

- 6. What type of literacy using standardized terminology is required by the nurse documenting a client's plan of care in the electronic health record?**
- a. Information literacy**

- b. Healthcare literacy
- c. Technological literacy
- d. **Informatics literacy**

Informatics literacy involves integrating health information with computerized systems to increase information management and patient safety. For example, documenting the client's plan of care in the electronic health record demonstrates a way to improve client safety and mitigate errors in healthcare systems.

The development of standards and database structures to facilitate clinical care, education, administration or research includes the use of standardized terminology in the electronic health record which aims to improve patient care and safety.

Competencies

7. **Healthcare providers understand which nurse competencies help to mitigate error and increase communication and access to information? Select all that apply.**
- a. **Computer fluency**
 - b. Healthcare fluency
 - c. **Informatics literacy**
 - d. **Information literacy**

Computer fluency, information literacy, and informatics literacy aim to help mitigate errors and increase communication and access to information. Healthcare fluency is not an informatics competency.

Competencies in Informatics

8. **Read each description and identify the correct competency essential in nursing practice.**

Informatics literacy

Computer fluency

Healthcare literacy

Information literacy

includes the use of basic computer operating systems and software for word processing, spreadsheets, and presentation software as well as computer use to find information rapidly and efficiently.

Informatics literacy

Computer fluency

Healthcare literacy

Information literacy

involves knowledge, skills, and attitude (KSA) in finding and assessing information. Knowledge of basic and advanced search techniques in library databases and the internet allows the nurse to find relevant information.

Informatics literacy

Computer fluency

Healthcare literacy

Information literacy

involves integrating health information with computerized systems to increase information management and patient safety. It enables the KSAs to use technology to not only input information into a clinical system but also retrieve and manage the information to improve client safety and quality outcomes.

Computer fluency includes the use of basic computer operating systems and software for word processing, spreadsheets, and presentation software as well as computer use to find information rapidly and efficiently.

Information literacy involves KSAs in finding and assessing information. Knowledge of basic and advanced search techniques in library databases and the World Wide Web allows the nurse to find relevant information. Basic knowledge of assessing information findings related to the credibility of authors and the validity of research studies allows the nurse to use the information wisely.

Informatics literacy involves integrating health information with computerized systems to increase information management and patient safety. It enables the KSAs to use technology to not only input information into a clinical system but also retrieve and manage the information to improve client safety and quality outcomes.

Competency Development

- 9. To deliver safe, quality patient care, the competencies of nursing informatics were determined from which of the following categories? Select all that apply.**
 - a. Computer skills**
 - b. Informatics knowledge**
 - c. Electronic monitoring
 - d. Informatics skills**

The competencies of nursing informatics was determined through the study of three (3) categories:

Computer skills

Informatics knowledge

Informatics skills

A registered nurse should meet nursing competencies in these categories to deliver safe, quality patient care. Electronic monitoring is not a category.

Standardized Language

- 10. Standardized terminology in the electronic health record is used to achieve which primary outcome?**
- a. Ensure absolute competence in client care
 - b. Increase compliance of standardized guidelines
 - c. Lessen the need for documenting events
 - d. **Improve patient care and safety**

Informatics literacy includes “the interpretation of information workflow within the organization, the preparation of process information flow charts for all aspects of clinical systems, the development of standards and database structures to facilitate clinical care, education, administration or research” (Darvish et.al, 2014). This includes the use of standardized terminology in the electronic health record which aims to improve patient care and safety.

Reference

**Darvish, A., Bahramnezhad, F., Keyhanian, S., & Navidhamidi, M. (2014). The role of nursing informatics on promoting quality of health care and the need for appropriate education. *Global Journal of Health Science*, 6(6), 11–18.
<https://doi.org/10.5539/gjhs.v6n6p11>**

Nursing Skill

- 11. Which skill demonstrates an initiative to prevent errors and improve client safety?**
- a. **Documenting the plan of care in the electronic health record**
 - b. Protecting health records
 - c. Discussing computer best practices
 - d. Demonstrating competency in lifelong learning

Documentation in the electronic health record is a skill, not competency in lifelong learning, discussing computer best practices or protecting health records. Those are not skill-based actions of the nurse.

Literacy

- 12. Health care providers use computer fluency, information literacy, and informatics literacy to achieve which outcome?**
- a. **Mitigates error**
 - b. Limits access to information
 - c. Reduces communication
 - d. Inhibits knowledge