

***Handbook of Informatics for Nurses and Healthcare
Professionals 7th edition Hebda Test Bank***

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Handbook of Informatics, 7e (Hebda)

Chapter 1 An Overview of Informatics in Healthcare

1) Healthcare today should address the Quintuple Aim. What of the following best demonstrates how healthcare information technology might be used to help address disparities in care?

- A) Collect data elements that could be used to identify vulnerable individuals
- B) Use collected data to identify vulnerable individuals
- C) Incorporate GPS locators into predictions
- D) A and B

Answer: D

Explanation: A) Many demographic and other relevant data elements are/or could easily be collect that could be used to identify vulnerable individuals.

B) Collected data can be used and leveraged to identify vulnerable individuals.

C) Location may be an indicator of risk but zip code alone does not indicate vulnerability. Other factors that include familial predisposition, occupational risks, economic level, personal health habits, living conditions, and community support all factor into determination of vulnerability.

D) Both A and B together comprise the best response.

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Cognitive Level: Applying

QSEN Grad. Competencies: A3, B1

AACN Essen. Competencies: 8.1g,h; 8.2i; 8.3g

2) Which of the following best reflects benefits realized from the use of health information technology?

- A) Improved safety, improved efficiencies, decreased clinician documentation times
- B) Improved safety, improved efficiencies, improved charge capture, improved communication
- C) Improved safety, improved efficiencies, improved protection of personal health information
- D) Improved safety, improved efficiencies, significant reduction in costs for care, improved protection of patient information

Answer: B

Explanation: A) HIT can result in improved safety through measures such as positive patient identification and may improve efficiencies but clinician documentation burden is an issue seen with poorly designed and poorly used systems.

B) HIT can result in improved safety through positive patient identification, alerts, and similar measures. HIT may improve some efficiencies such as improved charge capture and shortened revenue cycle and theoretically improves communication.

C) HIT can result in improved safety and improved efficiencies in some respects but despite safeguards to protect patient health information it also increases vulnerabilities in some respects.

D) Despite its promise to significantly reduce costs for care costs associated with the purchase and maintenance of HIT, among other U.S. issues have not resulted in significant reduction in costs for care.

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Cognitive Level: Applying

QSEN Grad. Competencies: A1,4; C1,5

AACN Essen. Competencies: 8.1j,k; 8.2 I; 8.3i; 8.4g

- 3) In which ways can health information technology support the learning health system?
- A) Incorporation of evidence-based practice and big data findings to provide care interventions that are proven to be effective
 - B) Real-time analysis of data
 - C) Integration of devices and the data that they collect to inform care decisions
 - D) All of the above

Answer: D

Explanation: A) Big data findings supplement EBP often providing information and knowledge in a more timely fashion.

B) Real-time analysis of data can be particularly useful when healthcare delivery systems and providers are facing challenges that are new to them as was seen with the emergence of a body of knowledge relative to the impact of COVID and most successful treatment modalities.

C) Data streams from all relevant sources provide a more complete picture.

D) A combination of research and big data findings from a myriad of sources that is analyzed in real time provides a quick turnaround to support, and further improve, care delivered.

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Cognitive Level: Applying

QSEN Grad. Competencies: A5; B8, 9, 11; C1, 2

AACN Essen. Competencies: 8.1g; 8.2f; 8.3j; 8.4f

- 4) Which of the following are considered necessary components to create a learning or informatics culture? Select all that apply.

- A) Standardized languages and terminologies
- B) Data in digital format
- C) Interoperability and data sharing
- D) Prerequisite information knowledge and skills

Answer: A, B, C, D

Explanation: A) Standardized languages and terminologies ensure that concepts maintain a uniform meaning across settings and the ability to generalize results.

B) Data in digital format is conducive to electronic capture, storage, analysis, transmission, and re-use.

C) In order to have value data must be shareable which is best attained when systems are interoperable.

D) Computer, information, and (for the consumer), health literacy are foundational skills in the learning health system where data, information, and knowledge are constantly generated as a result of care processes as well as the integration of research findings to support best practices for patient care.

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Cognitive Level: Knowledge

QSEN Grad. Competencies: A5; B2, 11; C1, 4

AACN Essen. Competencies: 8.1g; 8.2i; 8.4g

5) When asked to explain what the SAFER Guides are and their relevance for HIT what should the informatics nurse first know?

A) SAFER Guides are a resource provided by the Centers for Medicare and Medicaid to guide reimbursement.

B) SAFER Guides are a resource provided by the Consortium of Vendors for selection of HIT.

C) SAFER Guides are a resource provided by the ONCHIT to ensure best practices for HIT implementation and use.

D) SAFER Guides are the result of a report by the Commonwealth Fund to improve U.S. health outcomes.

Answer: C

Explanation: A) SAFER Guides have nothing to do with reimbursement although the Centers for Medicare and Medicaid added them to ensure an ongoing focus on improving interoperability and patient access to health information.

B) SAFER Guides complement tools and research developed by the Agency for Healthcare Research and Quality and the ONCHIT, not from vendors.

C) The SAFER acronym stands for Safety Assurance Factors for EHR Resilience and are therefore intended to guide implementation practices and use for HIT, and EHRs in particular.

D) SAFER Guides having nothing to do with the Commonwealth Fund reports.

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Cognitive Level: Applying

QSEN Grad. Competencies: B1, 12

AACN Essen. Competencies: 8.1g,h; 8.4f,k

6) A large healthcare organization is planning to implement a new electronic health record. What should be considered when selecting this system?

A) Whether training is required

B) Nursing staff documentation requirements are the top priority

C) The organization needs to meet multiple competing demands

D) Integration with laboratory and pharmacy would be nice

Answer: C

Explanation: A) No evidence supports limiting training on the system.

B) Every department in a large healthcare organization has an essential role in patient care.

C) The healthcare organization today is a complex system faced with multiple, competing demands.

D) Every department in a large healthcare organization has an essential role in patient care.

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Cognitive Level: Applying

QSEN Grad. Competencies: GA1, GA3

AACN Essen. Competencies: 8.1k, 8.3e, 8.3g

7) The leadership team of a multisystem healthcare organization is replacing the current electronic medical record with one that would integrate information throughout the entire system. The advantages of this proposed approach would include which of the following? Select all that apply.

- A) Decreased support costs
- B) Reduce staff turnover
- C) Improved communication
- D) Improved safety and quality of care
- E) Ensure care is provided in an effective, efficient manner

Answer: A, C, D, E

Explanation: A) Technology is a pervasive part of every aspect of society, including healthcare delivery. Health information technology (HIT) provides the tools to decrease costs.

B) Technology is a pervasive part of every aspect of society, including healthcare delivery.

Health information technology (HIT) is not identified as a mechanism to reduce staff turnover.

C) Technology is a pervasive part of every aspect of society, including healthcare delivery.

Health information technology (HIT) provides the tools to improve communication.

D) Technology is a pervasive part of every aspect of society, including healthcare delivery.

Health information technology (HIT) enables the delivery of safe, quality care.

E) Technology is a pervasive part of every aspect of society, including healthcare delivery.

Health information technology (HIT) ensures care is provided in an effective, efficient manner.

Sharing data enables learning.

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Cognitive Level: Knowledge

QSEN Grad. Competencies: A1-4; B1, 5, 8, 12; c1, 2

AACN Essen. Competencies: 8.2i; 8.3g

- 8) The informatics nurse is preparing a presentation for new nursing staff. Which definition should the nurse use when explaining informatics to these colleagues?
- A) A subspecialty of nursing that focuses on training in the use of computers
 - B) A specific area of medicine that highlights the importance of technology in patient care
 - C) A profession that is seeking an identity separate from medicine, nursing, or other behavioral sciences
 - D) An interdisciplinary field that includes computer, decision, information, management, and cognitive sciences

Answer: D

Explanation: A) Informatics is a subspecialty of nursing but its focus extends well beyond the use of computers.

B) Informatics is not a specific area of medicine that highlights the importance of technology in patient care.

C) Informatics is not a profession that is seeking an identity separate from medicine, nursing, or other behavioral sciences.

D) The American Medical Informatics Association states that informatics is an interdisciplinary field that draws from, as well as contributes to, computer science, decision science, information science, management science, and cognitive science.

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Cognitive Level: Knowledge

QSEN Grad. Competencies: B2, C1

AACN Essen. Competencies: 8.3i

- 9) The nurse is preparing a white paper, explaining how informatics supports the use of data. Which example should the nurse include that demonstrates a structure for data use?

- A) Care plans
- B) Concept map
- C) Nursing process
- D) Nursing diagnosis

Answer: D

Explanation: A) Care plans are not identified as a structure to use data.

B) Concept maps are not identified as a structure to use data.

C) The nursing process is a problem-solving approach to provide patient care. It is not a structure to use data.

D) To be useful, data and information must be available when needed and in a form that can be analyzed or used. Improved communication among professionals requires the adoption of standardized languages and terminologies. An example of a standardized language is NANDA, which provides standardized terms for nursing diagnoses.

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Cognitive Level: Applying

QSEN Grad. Competencies: A5, B11, c1

AACN Essen. Competencies: 8.1g; 8.2h

10) The informatics nurse is focusing on the analysis of big data. What would be an expected outcome of this analysis? Select all that apply.

- A) Support decisions
- B) Recommend actions
- C) Enhance staff satisfaction
- D) Forecast the likelihood of an event
- E) Improve patient perception of care providers

Answer: A, B, D

Explanation: A) Real-time analytics use current data from multiple sources to support decisions.
B) Analysis of big data, or analytics, looks for patterns in data, then uses models to recommend actions.

- C) Analysis of big data is not used to enhance staff satisfaction.
- D) Analytics can be used to forecast the likelihood of an event.
- E) Analytics is not used to improve patient perception of care providers.

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Cognitive Level: Applying

QSEN Grad. Competencies: B11

AACN Essen. Competencies: 8.3j

11) The leadership team of a multisystem healthcare organization is strategizing ways to create a culture that values informatics. On which foundational skills should the team focus? Select all that apply.

- A) Health literacy
- B) Establish policies
- C) Computer literacy
- D) Information literacy
- E) Enforce competencies

Answer: A, C, D

Explanation: A) Health literacy is a foundational skill required for an information-driven culture and is the ability to understand and act upon basic healthcare information.

B) Policy establishment is a separate action that needs to be developed to create an information-driven culture.

C) Computer literacy is a foundational skill required for an information-driven culture. It is a term used to refer to the basic understanding and use of computers, software tools, spreadsheets, databases, presentation graphics, social media, and communication via email.

D) Information literacy is a foundational skill required for an information-driven culture. It is defined as the ability to read and understand the written word and numbers as well as the ability to recognize when information is needed.

E) Competency development and enforcement is a separate action that needs to be developed to create an information-driven culture.

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Cognitive Level: Applying

QSEN Grad. Competencies: B1, C2

AACN Essen. Competencies: 8.1g

12) The committee working on the implementation plan for the clinical information system is finalizing a policy to address responsibilities when safeguarding sensitive information. Which ethical values should the committee emphasize in this policy? Select all that apply.

- A) Justice
- B) Veracity
- C) Autonomy
- D) Beneficence
- E) Nonmaleficence

Answer: A, C, D, E

Explanation: A) Justice refers to the standards practiced by healthcare professionals.

B) Veracity refers to telling the truth; however, it is not identified as a guiding principle for moral action with informatics.

C) Autonomy is the individual's freedom to control interferences by others, retaining a personal capacity for intentional action.

D) Beneficence refers to actions that result in positive outcomes in which benefits and utility are balanced.

E) Nonmaleficence is the obligation to do no harm.

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Cognitive Level: Applying

QSEN Grad. Competencies: G3

AACN Essen. Competencies: 8.5h, j, k

13) The nurse on the clinical information system committee is charged with locating information on technical infrastructure. Which federal agencies should the nurse research before the next committee meeting?

- A) The Joint Commission (TJC)
- B) National Institutes of Health (NIH)
- C) Centers for Medicare and Medicaid Services (CMS)
- D) Agency for Healthcare Research and Quality (AHRQ)
- E) Office of the National Coordinator for Health Information Technology (ONCHIT)

Answer: E

Explanation: A) TJC is not a federal agency that addresses technical infrastructure.

B) The NIH provides funding for research to improve health.

C) The CMS does not address technical infrastructure.

D) The AHRQ is a division of the U.S. Health and Human Services committed to research and evidence to improve the safety and quality of healthcare and to provide education for healthcare professionals that will enable them to improve care.

E) The ONCHIT was funded with a grant from the Public Health Service Act (PHSA) and provides electronic health record certification. Its structure includes multiple offices that are relevant for HIT.

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Cognitive Level: Knowledge

QSEN Grad. Competencies: B1

AACN Essen. Competencies: 8.5l

14) The clinical information system committee is finalizing health information standards to safeguard collected data. Which categories of standards need to be addressed by this committee? Select all that apply.

- A) Process
- B) Content
- C) Transport
- D) Vocabulary
- E) Privacy/security

Answer: B, C, D, E

Explanation: A) Process is not a category of health information data standards.

B) Content standards establish the structure and organization of the content.

C) Transport standards establish the format for exchange.

D) Vocabulary standards improve communication through the use of structured terms and facilitate the organization of data.

E) Privacy standards protect personal health information, whereas security standards provide administrative, physical, and technical actions that provide patient confidentiality as well as the availability and integrity of health information.

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Cognitive Level: Applying

QSEN Grad. Competencies: GB5, 7, 8

AACN Essen. Competencies: 8.5g,i

15) The nurse enters the room of a patient whose cardiac monitor alarm is sounding. Which action should the nurse take first?

- A) Greet the patient
- B) Turn off the alarm
- C) Look at the monitor
- D) Check for lead placement

Answer: A

Explanation: A) Electronic devices should not be a replacement for compassionate patient care.

B) Turning off the alarm could harm the patient if it is not reset once the reason for the alarm is discovered.

C) Ignoring the patient when entering the room gives the impression that the machine is more important than the patient.

D) Immediately searching for lead placement before talking with the patient gives the impression that the machine is more important than the patient.

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Cognitive Level: Applying

QSEN Grad. Competencies: GB2, GC5

AACN Essen. Competencies: 8.5 g,h,k

16) While assessing a new patient, the nurse's phone rings. Which action should the nurse take to demonstrate caring?

- A) Answer the phone
- B) Leave the patient's room
- C) Place it on the windowsill
- D) Apologize for the interruption

Answer: D

Explanation: A) Limitations to building a trusting, caring relationship come when patients perceive the nurse as not caring or being distracted during interactions, such as answering the phone during a nurse—patient interaction.

B) Leaving the patient's room indicates that the phone call is more important than the patient.

C) Placing the phone on the windowsill is distracting to the nurse and patient.

D) Apologizing for the interruption is the best approach to demonstrate care.

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Cognitive Level: Applying

QSEN Grad. Competencies: GB2, GC5

AACN Essen. Competencies: 8.5 g,h,k

17) The leadership team of a multisystem healthcare organization is analyzing potential clinical documentation systems. Which demands should the team keep in mind when selecting the system? Select all that apply.

- A) Adopting new models of care
- B) Eliminating disparities in care
- C) Financing the system
- D) Evolving roles for practitioners
- E) Ensuring quality, safety, and transparency

Answer: A, B, D, E

Explanation: A) The healthcare delivery system today is a complex system faced with multiple, competing demands. Among these demands is the need to adopt new models of care.

B) The healthcare delivery system today is a complex system faced with multiple, competing demands. Among these demands are efforts to eliminate disparities in care.

C) The healthcare delivery system today is a complex system faced with multiple, competing demands. Financing the system is not an identified demand.

D) The healthcare delivery system today is a complex system faced with multiple, competing demands. Among these demands are evolving roles for practitioners.

E) The healthcare delivery system today is a complex system faced with multiple, competing demands. Among these demands are the need for quality, safety, and transparency.

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Cognitive Level: Applying

QSEN Grad. Competencies: GB8, GC1, 2

AACN Essen. Competencies: 8.1g; 8.3g : 8.4f