

Midterm Review

General principles of Nursing Informatics

Verbalize the importance of health information systems with clinical practice. Have knowledge of types and clinical and administrative uses of health information systems. Ensure confidentiality of protected patient health information. Assure access control in the use of health information systems. Informatics is the science and art of turning data into info. Nursing Informatics ANS: The specialty that integrates nursing science with multiple information and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. Nursing Informatics supports nurses, consumers, patients, the inter-professional healthcare team, and all other stakeholders in their decision making in all roles and settings to achieve desired outcomes. 2 Levels NI practice generalists and informatics-nurse specialists.

Knowledge

Data – uninterpreted items, often referred to as data elements. An example might be a person's weight. Without additional data elements such as height, age, overall well-being it would be impossible to interpret the significance of an individual number.

Information – a group of data elements that have been organized and processed so that one can interpret the significance of the data elements. For example, height, weight, age, and gender are data elements that can be used to calculate the BMI. The BMI can be used to determine if the individual is underweight, overweight, normal weight or obese.

Knowledge - is built on a formalization of the relationships and interrelationships between data and information. A knowledge base makes it possible to understand that an individual may have a calculated BMI that is over 30 and not be obese. At this time, several automated decision support systems included a knowledge base and a set of rules for applying the knowledge base in a specific situation. For example, the knowledge base may include the following information. A fever or elevated temperature often begins with a chill. At the beginning of the chill the patient's temperature may be normal or even sub-normal but in 30 minutes it is likely the patient will have spiked a temp. A rule might read: if a patient complains of chills, then take the patient's temperature and repeat in 30 minutes.

Wisdom

Wisdom may be defined as the appropriate use of data, information, and knowledge in making decisions and implementing nursing actions. It includes the ability to integrate data, information, and knowledge with professional values when managing specific human problems.

Scientific Underpinning

The scientific underpinnings of practice provide the basis of knowledge for advanced nursing practice. These scientific underpinnings include sciences such as biology, physiology, psychology, ethics, and nursing. The sciences underpinning nursing informatics: Nursing science, information science, and computer science