Lecture 6

Nursing Informatics:

Definition: Nursing informatics is a field of nursing that incorporates nursing, computer, and information sciences to maintain and develop medical data and systems to support the practice of nursing, and to improve patient care outcomes.

Nursing informatics includes:

1.Computerized provider order entry (CPOE)

2.Electronic medical records (EMRs)

3.Test results

4.Progress notes

5.Nursing notes

6.Medication records

According to the American Nursing Association, "Nursing informatics (NI) is the specialty that integrates nursing science with multiple information management and analytical sciences to identify, define, manage, and communicate data, information, knowledge, and wisdom in nursing practice. NI supports nurses, consumers, patients, the interprofessional healthcare team, and other stakeholders in their decision-making in all roles and settings to achieve desired outcomes. This support is accomplished through the use of information structures, information processes, and information technology" (ANA, 2015)

The practitioner of nursing has many roles and responsibilities. Among these roles are those of an interface or face between the client and the healthcare system and that of client advocate in the healthcare system.

Nursing functions can be considered under three major categories.

 1. Managerial, which includes establishing nursing care plans, keeping charts, copy documents or orders and requisitions, and scheduling patient appointments for diagnostic procedures or therapy.

2. Delegated tasks, which include physical treatments and administration of medications under the direction of a physician

3. Autonomous nursing functions, which include interpersonal communication skills, application of the psychological principles of client care, and providing physical care to patients. It is the third category of nursing activities that is the core of nursing practice. In this category of autonomous activity nurses use their knowledge, skills, judgment, and experience to exercise independent decision making related to the phenomena for which nurses provide care and the nursing interventions that effect those phenomena and influence patient care outcomes.

Definition Nurse Practitioners (NPs) are registered nurses who have additional education and nursing experience, which enables them to: Autonomously diagnose and treat illnesses. Order and interpret tests. Prescribe medications. Perform medical procedures.

Nursing informatics scope would include
the followings.

1. Use of artificial intelligence or decision-making systems to support the use of the nursing process

2. Use of a computer-based scheduling package to allocate staff in a hospital or healthcare organization

3. Use of computers for patient education

4. Nursing use of a hospital information system

5. Research related to what information nurses use when making patient care decisions and how those decisions are made

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Accordingly, nursing must be part
of future developments in nursing informatics with strong input
regarding such decisions as the following.

1. Which patient care-related nursing functions could be accomplished by nursing informatics?

2. What information do nurses require to make patient care decisions? Nurses and Informatics

3. What information do caregivers from other health professions require from nursing?

4. To what extent can nursing informatics support improvements in the quality of nursing care received by patients?

5. How can the financial and emotional costs of care to patients be reduced using nursing informatics?

6. What is the impact of nursing on client outcomes?

7. What do nursing interventions contribute to patient outcomes?

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New technology and nursing:

The role of the nurse with the widespread integration of computer technology and information science into healthcare agencies and institutions. Nursing will be influenced by informatics, resulting in a better understanding of knowledge and a closer link of that knowledge to nursing practice.

Health technology by WHO: The application of organized knowledge and skills in the form of devices, medicines, vaccines, procedures and systems developed .Medical equipment is used for the specific purposes of diagnosis and treatment of disease or rehabilitation following disease or injury; .

4-Telemedicine

Telemedicine is a system of health care delivery in
Which physicians examine distant patients through the use of telecommunications technology?

Benefits of new medical technologies

1-Telemedicine enable patients to be treated outside hospital settings and by assisting the work of GPs and Primary Care teams enabling more elderly people and those with chronic illnesses or disabilities to live independently.

2. Improvements in the quality of life of patients, efficiency gains to the health and social care systems

3. Avoidance of unnecessary hospital admission and timely discharge

4- Reducing care costs for people with long term conditions and with strokes.

5- Better monitoring of people with chronic obstructive pulmonary disease and diabetes which can alert to changes in condition and significantly reduce out-patient attendances.

6-Reduce medical or nursing errors.

Nurse's difficulties with medical technology ///

1-They have not enough information of new equipment.

2- Instruction manuals are too complex, are not available in native languages and can often not be found.

3-They have not enough time to participate in training new devices.

4-The instruction of devices is not clear in most times because it may be not written by of nurse's language

Benefit of quality care by nurses:

Around the world, no matter the setting, nurses want to provide safe care to patients and families. However, the resources that healthcare providers are able to afford do not always meet the standards nurses believe to be adequate to provide high-quality care. There is disagreement among healthcare leaders about how to allocate nursing resources and, despite research showing that the care provided by nurses has a direct impact on mortality and morbidity, nurse leaders continue to have to justify requests for resources (Aiken et al, 2011). Universally, efforts have been made to ensure high-quality care is affordable, focusing on efficiency or competency and effectiveness.

References:

1. Cummings J, Bennett V (2012) Compassion in Practice: Our Vision and Strategy. NHS Commissioning Board. www.england.nhs.uk/ nursing vision Dowsing DW et al (2013).

2. Achieving Evidence Based Practice: a Handbook for Practitioners. Oxford: Blackwell. Newport F (2012) Congress Retains Low Honesty R.