

Type: Essay

Subject: Others (Specify in the next page)

Subject area: Nursing

Education Level: Undergraduate

Length: 4 pages

Referencing style: APA

Preferred English: US English

Spacing Option: Double

Title: Summative Assessment: End of Course Essay NURS 3030: Nursing Informatics

Instructions: the end of course essay should demonstrate how the concept of nursing informatics influences the science and the practice of nursing. the essay should reflect the student's ability to not only apply the ana definition of nursing informatics but to demonstrate how professional nursing practice is influenced by informatics. the essay should be between 1[removed] words, conveying an informed understanding of how nurses are involved in the the practice of informatics in the workplace. the student should also convey why it is important to include an informatics course within a bsn curriculum. this essay must follow apa guidelines.

Focus: essay content and structural expectations: the paper must include the following: 1. in your discussion, you must use the concept of nursing informatics to demonstrate how it relates to computer science, cognitive science, and nursing science. (must address all three components of nursing informatics; may use ana definition and explanation as a start) 2. in your discussion, you are able to convey how the professional nurse applies the components of nursing science, computer science, and cognitive science through the application of nursing informatics definition (the practice of nursing informatics, or the application of nursing informatics in the practice of nursing at the bedside- may use actual examples; must address all three components) 3. in your discussion, you are able to convey your understanding of the informatics definition through the appropriate utilization of the terms data, knowledge, information, and wisdom in relationship to nursing informatics- (may use ana or qsen resources for assistance or credible web searches) essay structure and grading criteria 1. essay is between 1000 words, maximum 1200 words, excluding citations and reference page. you are writing about the "1" importance of nursing in the field of informatics in healthcare, "2" how the professional nurse uses informatics in the workplace, and "3" why it is important for the nursing student to complete a nursing informatics course in a bsn curriculum. these components must show appropriate utilization of the nursing informatics definition and model terms as stated above. 2. conveys informed understanding of the reasons why nursing's involvement is important in the practice of informatics in the healthcare workplace; use examples 3. conveys informed understanding of the importance of a nursing informatics course in a bsn curriculum: use examples and may use personal examples 4. grammar and apa format including citations. apa expectations are a cover sheet, introduction, body of paper, a conclusion, reference page all appropriately formatted following apa guidelines. a reminder, your word count does not include references. peer reviewed references are not older than 5 years.

Structure: essay is between 1000 words, maximum 1200 words, excluding citations and reference page. you are writing about the "1" importance of nursing in the field of informatics in healthcare, "2" how the professional nurse uses informatics in the workplace, and "3" why it is important for the nursing student to complete a nursing informatics course in a bsn curriculum. these 3 components must show appropriate utilization of the nursing informatics definition and model terms as stated above.

Nursing Informatics

Name

Module

Module Code

Nursing informatics can be defined as the combination of computer, information, and nursing sciences and the application of the knowledge to all facets of nursing practice to improve nursing and patient care. Exposing nurses to computerization is critical in confronting the highly computerized workplace and health facilities. Nursing informatics also enable nursing professionals to use the most cost-effective health-care methods. Nursing informatics provides nursing professionals with the necessary information hence ensuring that they understand the evidence based that underpins nursing practice. According to Honey et al. (2017) numerous countries have realized the benefits of nursing informatics in the professional nursing practice where nursing informatics has been integrated to the pre-registration, pre-licensure and undergraduate education.

Nursing informatics is closely related to three main elements including computer science, cognitive science, and nursing science. Computer science can be viewed as the study of computers and involves both theoretical and practice applications. The field of computer science involves the concepts of engineering, mathematics, software, hardware and artificial intelligence. Nursing informatics interact with computer science to ensure that nurses and other health professionals use computer technologies to access information related to patients in real time. For example, electronic health records (EHR) involve the collection of patient health information in a digital format and allow professionals to access and share the information across health settings (Kim et al. 2019). Computer scientist have also developed devices that allow nurses to share patient information in real time. For example, the Personal Digital Assistants (PDAs) are used in various health care facilities to allow health professionals record and view patient information in real time hence boost the quality of care offered. Mobile phones and handheld computers allow nursing professionals to access patients' records and information and update the records from anywhere in the health

facilities. Computer scientists also create software that enable nursing and other healthcare professionals to store and update patient information. For example, computerized physician order entry (CPOE) programs allow medical practitioners to provide instructions relevant for the treatment of a patient. Such information includes medication, laboratory, and radiology orders which are necessary for the delivery of quality care.

Nursing informatics is also closely related to cognitive science. Cognitive science can be defined as the scientific study of the human mind and involves various fields including neuroscience, psychology and philosophy. Nursing informatics involves the adoption of technologies that focus on human information processing. The combination of nursing informatics and cognitive science give rise to the field of cognitive informatics which is an interdisciplinary involving cognitive and information sciences. Cognitive informatics aims at extending nurses' information management capacity through the development of computer applications that reduce cognitive issues like limitations in memory and attention that may hinder the delivery of quality care. For example, patient identification technologies enhance the memory of the nurses since they eliminate the need for the nursing professional to memorize each patient. Technologies like radio-frequency identification (RFID) tags enable nurses to correctly identify patients and contain more information regarding the patients (Islam et al. 2018). Artificial intelligence is also a major facets of cognitive science which has been adopted in nursing informatics to enable nursing professionals to synthesize information and make informed decisions that improve patient outcomes. Artificial intelligence provides an opportunity to improve the quality of care provided and allow nurses and other medical professionals to interact within themselves and with machines. Artificial intelligence systems mimic human behaviour. For example, nurses are mandated to detect at-risk patients hence adopt patient-centred clinical interventions and prevent adverse events. Artificial intelligence can be adopted to aid nurses and other health care professionals better identify at-risk patients

by analysing high amounts of patient data. For example, Duke University researchers developed the Sepsis Watch that has the ability to analyse 32million data points hence determine whether individuals are at risk of suffering from sepsis. The Sepsis Watch combines deep learning technologies with artificial intelligence systems to detect risk of developing sepsis, alerting health facility's rapid response teams and guide nurses and other health care professionals in providing care within the first 3 hours hence enable the professionals to make the right decisions. Cognitive science involves the process of acquiring knowledge and understanding through thoughts, senses and thoughts. A health care professional should use their senses, thoughts and experience to detect defective cells and body parts hence recommend treatment. Nursing informatics involves imaging technologies that enable the nursing professionals to detect and monitor abnormalities. For example, a database that stores CT scans can be used to monitor the progress of neurological abnormalities and cancer. Monitoring the progression of diseases is critical in the delivery of quality care.

Nursing informatics is also closely related to nursing science. Nursing science can be viewed as the adoption of theories and practical concepts that improve how nursing professionals administer care. Nursing science enable nursing professionals to communicate with their patients and colleagues to facilitate improved diagnoses and experiences to patients. Nursing informatics is based on nursing theories and concepts and uses technology to help nurses engage in their duties which are in-line with the nursing concepts. For example, clinical handover is a nursing concept which refers to the transfer of professional responsibility and accountability from one healthcare professional to another mostly at the end of one shift. Various computer programs including the Clinical Handover Database ensure that the handover is efficient and effective. Patient-centred care (PCC) is also a vital concept in nursing science which can be defined as the provision of care that responds to

specific patient preferences, needs and values. There are numerous technologies under nursing informatics that are structured to embrace patient-centred care. For example, the myED system is a computerized system that provides real-time information to emergency department (ED) patients regarding their ED medical journey (Westphal et al. 2020).

Nursing informatics course in a Bachelor of Science in Nursing (BSN) curriculum is crucial due to various factors. First, nursing informatics expose BSN students to various computer technologies and devices which they are expected to use in their workstations. The exposure is critical in allowing them to have experience and expertise on using the software and hardware. Secondly, nursing informatics is critical since it presents a new opportunity for students to conduct their research and apply their clinical knowledge. Nursing students who are interested in technology can take the opportunity to develop programs and devices that would enable them offer quality and advanced care to their patients hence contribute to the nursing knowledge and research. Thirdly, nursing informatics demonstrates how patient information and data should flow within the clinical set-up and demonstrates how patient data can be used to make informed health care decisions.

References

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