**Discussion1:**

**From Data to Knowledge to Evidence-Based Practice**

**Post  an explanation of how theoretical models and the concepts of data, information, knowledge, and wisdom relate to evidence-based practice in nursing. Be specific and provide examples.**

Data are uninterpreted items that can be height, weight, and age. Information is the group of data elements that are organized and processed so that one can interpret the importance of the data elements. For instance, weight and height can be used to calculate one's BMI which will help us determine whether someone is normal weight or not. Knowledge is built on a formalization of data and information relationships. The knowledge base may provide us the information such as elevated temperature may start with the chill and at the start of the chill, the temperature may be normal but in half an hour the patient may spike the temperature. Wisdom is the appropriate use of data, information, and knowledge in making decisions. (Nelson., 2018).

Data, information, knowledge, and wisdom (DIKW) falls under the criteria of a grand theory that outlines roles, and interrelationships within DIKW and has been instrumental in moving towards the goal of making nursing work visible. Theoretical models provide direction on how data can be processed and transformed from different bodies to a complex knowledge base describing how wisdom ultimately can guide clinical practice and decision-making. (Ronquillo et al., 2016)

Theoretical models and the concept of data, information, knowledge, and wisdom are considered as the main theories of Informatics and Nursing practice. The Informatics concept is based on evidence-based practice because the data, information, knowledge, and wisdom that is used in practice show how nurses apply facts to provide quality care and make decisions. This provides an understanding of how nursing informatics can contribute to decision-making and evidence-based practice. I totally agree with Gail E. Latimer, vice president and CEO of Siemens Health Care that DIKW  is based on evidence-based practice. For instance, when a new system is introduced, informaticists will make sure that content is built from evidence-based practice and this can be done via a shared governance structure using evidence-based practice to align with the magnet hospital designation. This way the care provided to the patient is based on evidence-based practice. Once it is ensured that the care delivered is evidence-based then the matrix is achieved. Matrix defined by the National Quality Form (NQF) can be seen from core measures such as the Joint Commission and paying agencies such as the Centers for Medicare and Medicaid Services (CMS) and from the National Database of Nursing Quality Indicators (NDNQI).  Along with ensuring the correct content the informaticists will ensure that the structured vocabulary should be present as it can be used to abstract out of EHR the information that is necessary to demonstrate that we have achieved the matrix. This shows how Theoretical models and the concepts of data, information, knowledge, and wisdom are related to Evidence-based practice.

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Response1:

Hello Claudine

Thank you for the informative post. I totally agree with you that the progression from data to wisdom reflects the EBP in Nursing. DIKW provides a foundational framework that is essential for the broader nursing community providing a basis for linking theory and practice. A computer system that is programmed with information and knowledge to promote human learning, understanding, and personal growth, in turn, will support the development of human-centered wisdom. The DIKW helps nurses and other professionals articulate how we use data, information, and knowledge reflecting the EBP within our practice and how they can support the development and application of wisdom within the context of healthcare. (Kaminski, 2022) In order to successfully implement evidence-based care, nurses need access to the most up-to-date research and new information can be integrated into daily workflows by using digital health technologies. In my organization we did a project called "no pass zone" to reduce falls in our unit, no pass zone means everyone in the unit is responsible for attending the call bell if the light is on and it can be anyone working on the unit. We did a lot of research, it was evidence-based and a pilot study was conducted for 6 months and was a successful project, our leaders and the nurses involved in the project decided to use EHR to disseminate this information in the entire hospital and also we have a check box in the EHR where an individual who responds to the call bell will check the box.  Practitioners and other staff members can use an EHR system to obtain and disseminate the most up-to-date research. Leaders and administrators can leverage technology to implement new evidence-based practices more effectively. (Patnam et al., 2022)

**References:**

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Response2:

Hello Brooke,

Great post, I also think that Nurses work needs to be visible and the DIKW framework if applied effectively can make nurses work visible.  The integration of information management and analytic science can expand the DIKW framework to a new dimension changing nursing practice as newer technology is adopted and integrated beyond hospital walls.  DIKW concept will evolve as it integrates clinical systems application and analytic science to proactively support patient’s self-empowerment in disease management and health maintenance (Dia, 2019)

In my organization, programmers working with the nursing informatics specialist have designed the flowsheet so that the vital signs data can be presented as a snapshot using graphs the user can either expand/collapse the rows and columns to filter information. This can be helpful for busy clinicians as reading the rows and columns can be time-consuming, especially during urgent situations. Understanding the usability of electronic health tools is critical to developing and maintaining health information technology that will assist clinicians in delivering high-quality, cost-effective care.  Applying this framework to the Usability Evaluation of Electronic Health Record Systems for Nursing Professionals allows nursing perceptions about the impact of EHRs on patient care to influence reform efforts on quality and safety initiatives for patients.   (Anderson & Nation, 2021)

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