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Interactive Technology is Shaping Patient Education and Experience

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The evolution of knowing has been exponential in the past forty years due to the new ways of learning that have been discovered. Nursing in particular has benefitted from these new concepts and continues to find newer and better methods to improve patient care. Through the use of information technologies and the results of research performed using these technologies nursing has begun to develop newer and better methods for bringing information to patients and their families. The pattern of empirical knowledge is founded in evidence-based research and objective experience, and has been identified as the most prevalent in nursing practice. Evidence based practice functions as the key standard for quality in nursing practice by enhancing patient outcomes. Patient education is an important component of any organization because a knowledgeable and educated patient can dynamically participate in his or her own treatment, help identify errors before they occur, increase patient satisfaction and reduce the length of stay. The purpose of patient education is to increase comprehension and participation in the self-management of health care needs and improve their quality of life. Because of the complex management of many chronic diseases in today's population, patient education through interactive technology becomes a vital instrument in patient's safety and their quality of care.

Patient Education Concept

Patient education is a structured, individualized and methodical process that evaluates and conveys knowledge to patients and their families that will alter their health behaviors in order to improve their health status. Its main purpose is to maintain or to augment patient health or, in some cases, to slow deterioration. Patient education is a vital component for the healthcare professionals that can facilitate clinician-patient communication, promote shared decision making based on medical evidence, assist in clinical recommendations, and engage patient cooperation in their medical treatment. Research studies showed that patients that are involved in their health decisions are more likely to cooperate and understand their disease process (Hibbard & Greene, 2013). Because of this reason many organizations are implementing various strategies to employ and involve patients in decisions about their care. According to Carman, et al., (2013), patient participation is an attribute of a patient's ability, skills, knowledge, and motivation in managing their own healthcare while patient's engagement is a method that incorporates the activation phase with interventions designed to improve patient's behavior about their health decisions.

Discovery Research and Evidence

Over the years, patient education has slowly become a major concern and hospitals want to get involved in implementing better education for patients and their families. The importance of patient education is a product of critical study and evidence based practice by nurses that has shown that knowledge, on the part of patients and their families, can reduce re-admission rates, decrease healing time, and improve mental discomfort. Many nurses are devoting their time to educate patients in certain illnesses and medical procedures. Numerous studies revealed that patients do not retain the information provided from nurses, and many of them walk away experiencing confusion about the information provided. A study was performed by Farahani et al., (2013), where the authors described several studies indicating that, when the patients are discharged from the hospital, they have received insufficient information about their diseases and follow up care. According to a study done by the Agency for Healthcare Research and Quality (AHRQ) in 2009, patients with an understanding of their hospital discharge instructions are thirty percent less to be readmitted compared to the patient's that are lacking the information on discharge. Other important factors that contribute to the inadequate patient education are the language barriers and health literacy. Language barriers are the biggest impediment in satisfying our culturally diverse patient populations. Berkman et al., (2011) stated that low health literacy is linked to a greater use of the emergency services, increased hospitalizations, less compliance of treatment recommendation, and higher mortality rates. Nurses working with a diverse cultural group encounter daily challenges in providing care for their patients. Healthcare organizations that have a large number of Spanish, Indian, and Russian patient's , create multiple challenges for nurses in ensuring patient's understanding of their illnesses and the information provided. Because nurses encounter frequent obstacles in providing successful patient education, healthcare workers will need to implement a more comprehensive patient education system that would benefit the patient populations and their families.

Innovation

Patient education has changed noticeably throughout the past forty years, where the biggest change is the move from a healthcare professional deciding for the patient what is best for their care, to a practice of patient empowerment where treatment decisions are made in cooperation. Traditional patient education relies on written material about disease processes, medication, medical management, and self-care instruction guidelines. The use of technology has revolutionized the technique in which patients are educated about their healthcare while eliminating the traditional health pamphlet provided before discharge, leaving the patient uninformed. Today, patients benefit from many forms of education including television, watching a video, looking on the internet for different sources, or utilizing electronic devices for more information. Interactive technology is an innovative and an emerging healthcare delivery model that emphasizes providing educational and entertainment resources to the patient on the premise that a more involved patient will result in a positive experience. The interactive technology delivery model is designed by interactive services such as pain management or medication teaching that is tailored to meet the patient's individual needs. A study was performed by The Beryl Institute where they analyzed different hospitals on how interactive technology is utilized to communicate with patients and enhance patient satisfaction. The study revealed that the interactive technology is very efficient in communicating with patients and that the patient satisfaction increased by 42 percent (Dunn, 2011).

By utilizing personalized patient information, reinforced by nursing support, motivational support, and teach-back methods the use of interactive technology will improve patient's knowledge and understanding of their condition. One method of interactive technology being adopted is specialized installed software, to be used for patient education that will show in the patient's room on a monitor. The patient education software contains multiple languages and the educational content is at the fifth grade level. In this way the patient and their families would be able to comprehend the materials provided. When the patient arrives in the room, his/her name will appear on the screen welcoming them to the hospital stay. On the screen the patient will see the name of the clinicians that will take care of them. Then the nurse will greet the patient and based on the patient's diagnosis, she will schedule the teaching sessions with the patient, at their convenience. By involving the patient from the beginning, the patient would not be overloaded with too much information at one time. The screen is updated daily keeping the patient informed of the process of their stay including the tests that need to be done, physicians to see, and an approximate time of discharge. After the nurse schedules the educational sessions, she will talk to the patient about their illness, and utilize the teach-back method to analyze what the patient retained and learned from the educational session. The teach-back method is a strategy for the nurses to evaluate and assess the comprehension of the patients. By asking questions to determine the retention of information given, and taking in consideration the language barriers, literacy levels, hearing impairments, and evidence of dementia or delirium, determine if additional education is required.

Patient education, as part of the nursing intervention, is supported by complexity theory. The concept of complexity offers a variety of theories in the nursing profession. These theories are applied toward many organizations to clarify the organizational behaviors in the settings in which they function (Nelson, Batalden, & Godfrey, 2011). The importance of patient education is an example of complexity theory that encourages nurses to see the possibility of greater effects of with minimal changes. The educational session provided by nurses may not affect the patient instantly but it has the possibility that the patient will assimilate that education many years later. For instance, if a nurse is teaching a patient about congestive failure, then information about weight management, exercise programs, and balanced meals will help the patient benefit from a healthier lifestyle that will help repress congestive failure in the future.

The adoption of IPads and tablets as an interactive technology is an efficient method of patient education that has been implemented in many organizations. The apps enable the presentation of patient education information in a customized view that could be significant in improving patient care and experience during the hospital stay. Nurses can perform rounds and show patients their diagnosis including the images on a tablet. The patients could see images together with the information and these images will help them to visualize what is happening with their illness. An example of the workflow is when the patient is diagnosed by the doctor and the nurse is assessing the patient concerning their illness, then the nurse will offer the patient a tablet with the illness information and pictures. After a period of time, the nurse returns and asks the patient what they learned.

Tablets make patient education mobile and more accessible due to the power of videos, animations and diagrams which help them understand their illness better than just words. The article, "Expanding the Role of the iPad and Tablet Devices to Cosmetic Patient Consultations" written by Wang, Hsu and Bhatia (2012), mentioned the use of tablets for patient education in cosmetic consultations. The article describes how the tablets are utilized for patients to show pictures before and after cosmetic procedures. The pictures will help the patients to envision how they will look after the procedure and to see pictures of other patients recovered after their surgeries. These handheld devices promote better, safer, and faster care by allowing doctors and other clinicians to educate themselves and their patients. The use of IPads aides in improving conversations between patients and clinicians through easy access to videos and illustrations. The ultimate goal in utilizing IPads for patient care is to provide them with a snapshot of the clinical care information that makes their hospital stay less stressful and more entertaining. There are many of uses of the IPad in clinical situations besides basic patient education such as education for the clinicians, to inform, to make money, to impart history, and to heal. For example, Brockton Hospital in Massachusetts uses tablets with an app called "Survey on the Spot" for the purpose of patient feedback so that real time feedback enables the staff to educate themselves on patient satisfaction in order to improve service. An app was developed by Twin Cities Community Hospital that acts as a reference guide to help patients learn key information specific to their hospital. The app helps patients to find physicians, provide contact numbers, directions to the hospital, and even time waits for the emergency department. There is also a health library provided in the app. The Mayo Clinic in Minnesota started developing apps for the IPad and the IPhone as early as 2009 and is the leading hospital in the app development of medical apps including one for meditation, blood transfusion education, dermatitis education, and a symptom checker reference guide. They are still developing new applications that will soon be available. Cleveland Clinic has developed a "heritage app" which guides patients through the history of medical advancements created by the clinic. It is an interactive history, featuring videos and photos that describe the accomplishments of the clinic. Central Ohio hospital created an app called "women's health" that includes explanations of the tests, appointment reminders, and educational information about pregnancy (Glenn, 2011).

The Future

The trends influencing today's healthcare industry are personalization and globalization.
Besides personal tablets and centralized computer networks for patient education, patient portals through internet access are being adopted increasingly by hospitals worldwide. There are many uses for the patient portal. Initially patient portals were used by patients for scheduling, viewing medical results, and for messaging between patients and clinicians. However, new features are available and are been implemented in patient portals including video chat, instruction videos for pre and post-operative patients and combining all of the patient's medical records into one location. Although interactive technology is useful for patient education, proper use and timing are as important as the information provided. Patients are not always in the best mental condition while lying in a hospital bed, and education therefore, should be available before hospital admission and after discharge. This information can be made available through the patient portal allowing the patient time to prepare for treatment or surgery and time to heal. Patient portals may also be accessed from the hospital bed at any time the patient chooses to do so by utilizing the IPad or built in computer monitor.

Nurses bring to their practice a personal history that develops the way their nursing care is performed. Nursing theory, standards of practice, legal and ethical obligations must be understood and utilized throughout nursing care and patient education. Cooperation with team members and families is essential to optimal treatment. The adoption of the patient education system through the use of the interactive technology in any organization is a significant positive change in practice which leads to an improvement in nursing quality. A knowledgeable patient has the ability to take control of their lives and enables them to use their education to succeed in maintaining a healthier way of life. Engaging patients in their healthcare decisions journey will create a patient experience that empowers the patient and creates a partnership between patients and healthcare providers.

References

Agency for Healthcare Research and Quality (AHRQ). (2009). Educating patients before they leave the hospital reduces readmissions, emergency department visits and saves money. Retrieved from: http://www.ahrq.gov/news/press/pr2009/redpr.htm
Berkman, N. D., Sheridan, S. L., Donahue, K. E., Halpern, D. J., & Crotty, K. (2011). Low health literacy and health outcomes: an updated systematic review. Annals of Internal Medicine, 155(2), 97–107.
Carman, K. L., et al., (2013). Patient and family engagement: A framework for understanding the elements and developing the interventions and policies. Health Affairs 32, (2): 223-31.
Dunn, L. (2011). Study: Hospitals' use of interactive technology improves patient satisfaction. Retrieved from: http://www.beckershospitalreview.com/healthcare-information-technology/study-hospitals-use-of-interactive-technology-improves-patient-satisfaction.html
Farahani, A.M. et al., (2013). Factors influencing the patient education: A qualitative research. Iran J Nurse Midwifery Res. 18 (2): 133-139.
Glenn, B. (2011). Five ways hospitals are using the iPad. Retrieved from: http://medcitynews.com/2011/11/5-ways-hospitals-are-using-the-ipad/
Hibbard, J. H., & Greene, J. (2013). What the evidence shows about patient activation: better health outcomes and care experiences; Fewer data on costs. Health Affairs 32, (2): 207-14.
Nelson, E. C., Batalden, P. B., Godfrey, M. M., & Lazar, J. S. (2011). Value by design: Developing clinical microsystems to achieve organizational excellence. San Francisco, CA: Jossey-Bass.
Wang, J., Hsu, J. T.S., & Bhatia, A. C. (2012). Expanding the Role of the iPad and Tablet Devices to Cosmetic Patient Consultations. Retrieved from: http://www.oncologypractice.com/fileadmin/content_pdf/san/scms_pdf/SCMS_vol31_no3_iPad_and_Tablets_01.pdf

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