Evaluating Heart Failure Knowledge

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Conflict of Interest

The author had no conflict of interest with this article.

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Abstract

Aim: To evaluate the effectiveness of Krames education on patients with heart failure that have been admitted to the hospital with a heart failure exacerbation.

Design: Quantitative research

Methods: Exclusion criteria included less than one year heart failure diagnosis, sedating procedure that day, palliative consult, dementia diagnosis, unwillingness to participate, end stage renal disease, and increased shortness of breath/work of breathing/oxygen demands. Inclusion criteria included at least one heart failure hospital admission, must have seen Krames education in the past, willingness to participate, alert and oriented, able to talk without getting short of breath, and close to baseline respiratory status.

Data Sources: I used PubMed and Google Scholar to find a heart failure knowledge test to implement this project.

Results: Diet and nutrition are the most common areas of weakness while symptoms and behaviors are the most common areas of strength for participants.

Conclusion: The Atlanta heart failure knowledge test is a reliable indicator for testing heart failure knowledge. While Krames education does have the latest guidelines for heart failure education, most patients have trouble retaining the information and need re-education periodically.

Implications for the profession and/or patient care: This study proved the need for periodic assessment of knowledge and re-education as needed for patients with chronic conditions.

Impact: The study aimed to improve organizational health literacy by evaluating the knowledge retained that had been given Krames heart failure education. The study showed that there is a

need for organizations to ensure patients are up to date on the latest guidelines for their chronic conditions to better care for themselves after discharge from the hospital. This study had an impact on the participants with heart failure diagnosis and the health care providers that serves these participants.

Keywords: Atlanta heart failure knowledge test (AHFKT), Krames, organization health literacy, heart failure

Introduction

Heart failure is one of the top chronic disorders for hospital readmissions (Nair et al., 2020). These readmissions are related to medication nonadherence and lack of outpatient self-care techniques. In 2020, the average healthcare cost for each heart failure patient in the United States per year was over $24 thousand with 65% of this being for hospitalizations (Shaw, 2021). Low health literacy rates contribute to nonadherence of treatment plans and high admission rates. Health literacy is a crucial mechanism for patients to be able to manage their own care. Being health literate decreases hospitalizations and decreases health care costs. The definition of health literacy was updated from Health People 2020 to Healthy People 2030. This change highlights people's capacity to use health information instead of just understanding it. It also emphasizes the ability to make well-informed decisions rather than just the right choice. Additionally, this change incorporates organizational and public health responsibility to address health literacy concerns (CDC, 2023). By improving health literacy patients with heart failure can be managed appropriately outpatient and decrease healthcare costs.

Background

One in four heart failure patients are readmitted within 30 days of discharge. These readmissions account for over $30 billion in health care costs. Centers of Medicare and Medicaid Services use readmissions to assess hospital performance and adjust reimbursements. In Healthy People 2030, one initiative is to eliminate health disparities by improving health literacy. Healthy People and the U.S. Department of Health and Human Services now agree that health literacy is a personal and an organizational need (Healthy People 2030). Healthy People 2030 defines organizational health literacy as "the degree to which organizations equitably enable individuals to find, understand, and use information and services to inform health-related decisions and

actions for themselves and others." Even people with high health literacy can suffer under an organization with limited health literacy.

Patients receiving care at organizations with low health literacy can have difficulty assessing services and suffer from miscommunication resulting in negative health outcomes. Dunn et al., 2018 points out in the Health Literacy Instructional Model that the teach back method is the most common way the healthcare industry assesses understanding of health information. However, this technique does not distinguish between newly obtained knowledge and existing knowledge. There is limited research on techniques to improve health literacy. Strategies such as speaking clearly and slowly, using plain language, and avoiding medical jargon are all communication techniques that do not necessarily increase someone's health literacy level. Improving health literacy would affect all three aims of the Institute for Healthcare Improvement initiative (Berwick et al., 2008).

This project was completed at a not-for-profit organization with 974 licensed beds. This facility is a level one trauma center in the eastern part of North Carolina and serves over one million people across 29 counties. Its mission is to improve the health and wellbeing of eastern North Carolina. Patient healthcare experience would benefit from improving health literacy. If patients truly understand their healthcare, and can communicate effectively with healthcare providers, satisfaction of their healthcare experience and quality of life would improve while ultimately decreasing healthcare costs. Low health literacy rates contribute to non-adherence of treatment plans and high admission rates (Nair et al., 2020). Health literacy is a crucial instrument for patients to be able to manage their own care. Being health literate not only decreases hospitalizations but also decreases health care costs.

The Study

This study aims to evaluate the effectiveness of Krames education on patients with heart failure, who also have been admitted to the hospital with a heart failure exacerbation, using the Atlanta heart failure knowledge test (AHFKT). The AHFKT has been studied and proven to be a trustworthy tool to evaluate a patient's understanding of heart failure (Butts, et al., 2018). The current version includes 30 questions that measures domains such as diet and nutrition, medication, symptoms, and behaviors. The test follows recommendations from the American Heart Association (AHA), the Heart Failure Society of America (HFSA), and the American Association of Heart Failure Nurses (AAHFN). The AHFKT is written in a fifth grade reading level and gives one point for each correct answer with the top score being 30 out of 30. Unanswered or skipped questions are marked as incorrect. The AHFKT was given to the participant, and once the participant completed the test, the results were reviewed with the participant. Re-education was provided on areas where patients were lacking knowledge. Krames education is a digital bank of patient education that is used by health institutions all over the United States (Krames, n.d.). This information is embedded into the electronic health record (EHR) and makes searching for patient education easily accessible to healthcare providers. Krames education is at a fifth to eighth grade level and can be accessed in Spanish and English. It's education bank includes information about medications, disease processes, diets, and post-surgical instructions.

Methods/Methodology

The Plan – Do – Study – Act (P-D-S-A) framework applies to this project because it tested and studied a possible change in the educational tools used in the healthcare system. Exclusion criteria for this project included less than one year heart failure (HF) diagnosis, having a sedating procedure that day, have an active palliative consult, having a dementia diagnosis,

being unwilling to participate, having end stage renal disease (ESRD), having increased shortness of breath (SOB) or work of breathing (WOB), and having increased oxygen demands. Inclusion criteria included at least one HF hospital admission in the last year, had been exposed to Krames education in the past, a willingness to participate, being alert and oriented, able to talk without getting SOB, and being close to their baseline respiratory status. Ethical considerations for this project included informed consent, confidentiality, potential for harm, and voluntary participation. The intervention for this project was equal to everyone in that the same test and educational material were provided to each participant. Anxiety, stress, and feelings of being judged were potential harms for this project. Test taking is a stress provoking activity and scoring low may give the participants anxiety and feel belittled. However, there was no risk of participants being taken advantage of during this project.

Results

There were 16 total participants for this project, 56% of these participants were women and 44% were men. All the participants were over the age of 50 and 94% had at least a high school diploma or higher. When asked, every participant reported the AHFKT was helpful at reviewing heart failure education. All participants reported they learned at least one new piece of information that was not known before taking the AHFKT. Most participants asked for additional educational materials or asked for copy of the AHFKT with the answers included. Diet and nutrition are the most common areas of weakness for participants while symptoms and behaviors are the most common areas of strength for participants. Three PDSA cycles were completed which included adding exclusion criteria and changes on how the test was distributed.

Discussion

Seidel, et al. (2023) provides many strategies on improving organizational health literacy including training staff in health literacy, improving spoken communication, creating a welcoming environment, and conducting an organizational health literacy assessment. While Krames education is a very reliable source for patient information, this study shows there are still weaknesses in the knowledge that patients with heart failure are retaining or not being taught. This project can be implemented in all areas of chronic disease management, such as diabetes mellitus (DM), chronic kidney disease (CKD), hyperlipidemia, etc., by developing a test that is based on a particular disease. Continuing to "test" patients on knowledge of their chronic conditions could help patients retain information and give providers an idea of where patients are with their health literacy and areas that need improvement. Periodically administering a test to patients by making it apart of follow up visits would be a way providers can assess where re-education is needed. Testing can be completed by nursing staff at triage or completed by the patient while waiting to see the provider. This would inform the provider of areas of disease education that the patients are still struggling with.

Conclusion

Re-educating patients periodically is very beneficial, as this study showed patients still had trouble remembering certain aspects of the education. After patients admitted to being given education about heart failure in the past, they did not retain all the information. Most patients are willing to put in the effort to learn this information and are very receptive to re-education for their chronic conditions. Most patients enjoyed the one-on-one interaction of testing, discussion of each question, learning something new about their chronic condition, and they like to share the history of their disease process. We cannot assume patients remember every detail about their chronic conditions. It is up to us, the healthcare organizations, to make sure patients are up to

date on their care and understand their disease process. As guidelines change for chronic disease management, our education should also change ensure patients are aware of these changes.

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