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Case Management for Patients Diagnosed With Heart Failure and Diabetes: Integrated Case Management Model Evaluation

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Abstract

Purpose of the study: To evaluate the effectiveness of the Integrated Case Management Model versus treatment as usual (TAU) for diabetics diagnosed with heart failure.

Research Question: Does implementation of the Integrated Case Management Model reduce unplanned 30-day readmissions for diabetic patients with heart failure compared to treatment as usual (TAU)?

Setting, sample: The setting is a single-site facility in the metropolitan area of Washington, D.C. The sample will consist of a total of 80 conveniently selected medical records. Patients in this sample have been diagnosed with heart failure and diabetes and have been discharged from inpatient treatment and subsequently readmitted within 30-days. There is documentation of The Integrated Case Management Model in the medical records of 40 patients. Treatment as usual (TAU) will be documented in the other 40 patients’ medical records.

Measures: The dependent variable is the readmission in 30 day end point. The independent variables are characteristics of diabetic patients diagnosed with heart failure who have discharged and subsequently readmitted within 30 days at the observation and inpatient levels of care.

Method: A retrospective descriptive comparative analysis.

Procedures: The procedure of the study involves three major steps: 1) Random selection of 40 Integrated Case Management Model and 40 TAU medical charts of patients discharged between September 1, 2015 and June 30, 2017. 2) Data collection in accordance with preset categories of clinical characteristics 3) Data entry into Statistical Analysis System (SAS) database.

Data Analysis: The data will be cleaned and analyzed using SAS. Independent sample t-tests will be used in this quantitative, retrospective analysis.

Nursing implications - Krumholz et al. (2002) stated that heart failure in the diabetic results in a high rate of readmission; however, various case management programs have reduced readmission rates. The results of this project will show whether the Integrated Case Management Model is more effective than treatment as usual in reducing readmission rates.

Keywords: integrated case management model, heart failure, diabetes, evaluation

Title:

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Keywords:
evaluation, high risk and quality improvement

References:


Abstract Summary:

Evaluate the effectiveness of the Integrated Case Management Model versus treatment as usual (TAU) for patients diagnosed with heart failure and diabetes. Does implementation of the Integrated Case Management Model reduce unplanned 30-day readmissions for diabetic patients with heart failure compared to treatment as usual (TAU)?

Content Outline:

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To address the increased risk of developing heart failure in the diabetic population, it is recommended to implement the case management as an intervention to decrease readmissions and associated costs. Clinicians should examine the self-care education and teaching and evaluate case management interventions for improvement in self-care behaviors to aid in the effort of hospitalization and cost reduction. The literature offers that implementing the aforementioned intervention aids the clinician in determining a patient’s needs in order to improve a patient’s outcome and support autonomy (Bauman & Dang, 2012; Dunbar, S.B., et al., 2014; Parker & Smith, 2010). However, the efficacy of the intervention is not well-known. The literature supports incorporating case management into the treatment plan of the target population may improve self-managed care. As such, a decline in the prevalence of hospitalizations and cost associated with the care of heart failure in the diabetic population can be documented and nurses play a major role in this effort.

A Hospitals can be penalized if readmissions are not reduced. Title III: Section 3025 of the Patient Protection and Affordable Care Act (abbreviate) further stipulates that the Readmissions Reduction Program (RRP) should penalize hospitals by recouping reimbursement for readmitting patients with the qualifying conditions of heart failure (HF), myocardial infarction (AMI), and pneumonia (PN). This section also mandates that hospitals publish readmission rates for specific disorders (CMS, 2017).
Marcinkiewicz, Ostrowski, and Drzewoski (2017) found that diabetics diagnosed with heart failure have a higher mortality rate than non-diabetics.

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1 Disease management programs have a favorable impact on reducing the readmission rate
   a Further, diabetic patients are two to three times more likely to be diagnosed with heart failure compared to non-diabetics.
   b Dunbar et al (2014) stated that 30% to 47% of people suffer from heart failure (HF) in the setting of diabetes mellitus (DM).

2 A major objective of Healthy People 2020 is for healthcare practitioners to participate in practice improvement initiatives that are grounded in evidenced based practice (ODPHP, 2016).
   a Procedures such as intravenous medication administration to providing discharge instruction are examples that receive such scrutiny with regard to particular disorders.
   b According to CMS, measures relevant to this proposal in which data is collected include communication with nurses, discharge information, care transition, willingness to recommend the hospital, and heart failure 30-day readmission as well as mortality rates (CMS, 2017).

Jonkman (2016) reviewed 20 RCTs from 1985 until 2013 totaling 5,624 patients in the setting of clinics, hospitals, and home.

1 Patients in this study were voluntary recipients of telephonic case management.
   a The comparison between a customized case management intervention and usual care resulted in the intervention being more effective
   b The study was statistically significant for the intervention as evidenced by reducing hospitalizations

2 Baker (2013) found that the Health Buddy model of case management more effectively reduced hospitalizations and mortality among patients with heart failure and diabetes.
   a Baker reviewed 1,767 Medicare FFS subjects in two CMS clinics located in the northwest United States.
   b The intervention group resulted in a decrease in admissions each quarter.

C Extramatch Collaborative (2004) reviewed 9 datasets totaling 801 patients. The study examined 395 interventions compared to usual care for eight weeks.

1 The outcome was that mortality was significantly lower in the intervention group
   a Also the patients in the intervention group admitted into the hospital at 426 days compared to the control group that admitted at the 371 day end point.
   b Diabetic patients with heart failure who were managed with exercise experienced a reduced risk of mortality and a reduced readmission to the hospital compared to the group receiving standard care.
2 Huber (2002) states that there are various case management models that can be used as frameworks to evaluate individual case management interventions.

a The category whose definition is most closely associated with the current definition of the Integrated Case Management Model is the interdisciplinary models of case management (Huber, 2002). In the literature, Huber (2002) states that the acute care case management models is where discharge planning and utilization review roles are married and performed by the nurse case manager.

b Complex cases are risk stratified by the nurse case manager and then delegated to the social workers if necessary (Huber, 2002; Cesta, 2016).

III Therefore, the current study will be useful in providing evidence to substantiate a specific case management model to reduce 30-day readmissions for the target population. The evaluation of the specific case management model utilizes research skills, which are a component of the scholarship of practice (AACN, 2017).

A Improving health outcomes of patients is a primary responsibility of the healthcare team, with the nurse and the patient as the focal point.

B Baker, L.C. et al. (2013) found that a care management model that integrated telehealth with case management had the potential to increase the quality of care for patients who carry Medicare. However, the authors highlight that the readmission rate was not captured.

First Primary Presenting Author

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**Professional Experience:** More than 15 years in the medical field. Nurse case management for 10 years.  
Founded a non profit Advising the development of a novel diabetes quality measure for older adults for Mayo/Yale Center for Outcomes Research Evaluation.  

**Author Summary:** A life long learner, Mrs. McCants has completed four college degrees. There are three core competencies that comprise Dr. McCants’ nursing philosophy: 1) the ability to design and lead, 2) effective management, and 3) the ability to convert data into useful information. As a nurse leader, Dr. McCants is devoted to making a domestic and global difference in the health of individuals, which will also favorably impacts an organization’s effectiveness.