ABSTRACT

Purpose of Project

Heart failure is a progressive disease with cyclical patterns of symptom exacerbation that necessitate frequent hospitalization, and often hospital readmission within 30-days of discharge. Financial incentives imposed by the Affordable Care Act (ACA) have shifted the management of heart failure to the primary care setting. Telehealth interventions have emerged as cost effective methods to safely manage chronic disease in the outpatient setting. The purpose of this evidence-based practice (EBP) project is to evaluate the impact of a heart failure-specific smartphone application on heart failure-related 30-day readmission rates and participant self-care measures.

Synthesis of Supporting Evidence

Noninvasive telemonitoring systems that include daily transmission of patient health status data to the care provider have been shown to decrease heart failure-related hospitalization and the need for hospital readmission after discharge. The comprehensive literature search included five database searches in addition to handsearching and citation-chasing methods. Sixteen total pieces of good to high-quality evidence, ranging from Level I to Level VII, were selected for inclusion in the EBP project. The Iowa Model Revised was used to guide this EBP project that was implemented in a rural for-profit hospital in the Northwest Indiana region.

Practice Implementation

Retrospective chart reviews helped to establish pre-intervention 30-day hospital readmission rates. Patients who declined inclusion in the EBP project composed a comparison group. Participants were encouraged to upload health status data (weight, blood pressure, symptoms) each day for review by the provider. If any abnormalities were identified, early intervention could be made to prevent exacerbation of symptoms.

Method of Evaluation

Thirty-day readmission rates will be evaluated at 8 weeks prior to intervention, 30-days post-intervention, and 8 weeks post-intervention. Data will be analyzed using one-way repeated measures analysis of variance (ANOVA).

Outcomes

The primary outcome desired is an overall reduction in heart failure-related 30-day readmission rates. The secondary outcome is related to patient self-care measures.

Recommendations

Future research initiatives should be conducted to determine the cost effectiveness of various telehealth platforms.