Utilizing Telehealth Medicine to Deliver Diabetes Education

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Background

➢ Diabetes mellitus is a commonly managed condition in the primary care setting

➢Healthcare expenditures related to diabetes places a financial burden on the healthcare system

➢Knowledge deficit is the primary cause of diabetes-related complications

➢Primary care providers can limit complications

➢Diabetes self-management education (DSME) can lead to change in self-care behaviors

➢Dorothea Orem's self-care deficit theory

Purpose

➢Improve provider identification of patients that may benefit from telehealth diabetes self management education (DSME) from the development of an assessment tool

➢Develop and implement a telehealth guided protocol.

➢Provide healthcare providers with a training session on the DSME protocol

➢Improve patient understanding of DSME and self-care management of DM.

Methods

➢Quality improvement (QI) project was performed at a local community clinic in an underserved area with patient ethnicities that included Hispanics, African-Americans, and Caucasians

➢Three nurse practitioners (NPs) were staff members of the clinic and were chosen as project participants
➢Each NP selected 9-10 patients for a total of 28 patients that would receive telehealth diabetes self-management education from the NPs

➢Patients selected by the NPs had a diagnosis of diabetes for at least 12 months or greater

➢Patients that were not selected could not be diagnosed less than twelve months ago or have not Type 1 Diabetes

➢14 patients received DSME

➢14 patients will not receive DSME

➢The following tools were used in the QI project:
• Patient Diabetes Questionnaire (PDQ)
• Nurse Practitioner (NP) Competency Evaluation - Framework
• Telehealth Sessions – 3-session Program Manual
• Chart Audit Tool

➢Project implementation spanned a period of five weeks

➢NPs completed a PDQ for each patient in both groups – DSME group and non-DSME group during initial (Week 1) and post implementation (Week 5) clinic visits

➢NPs scheduled patients for telehealth sessions via video calls or regular calls (Week 1)

➢Non-DSME group had routine clinic visits (Week 1 and Week 5)
➢Intervention groups had three DSME telehealth sessions (Week 2, Week3, and Week 4)

➢PDQ scores were put in a SPSS codebook for pre-implementation and post-implementation scores

➢Scores between pre and post were compared using the chi test for independence

➢Analyzed scores to determine effectiveness of quality improvement

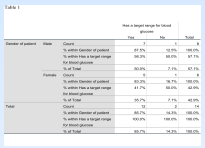
Results

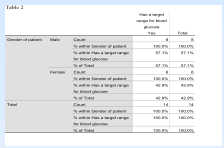
➢Non-DSME group:
➢Approximately 14.3% of patients experienced high blood sugar readings on a daily basis pre and post implementation

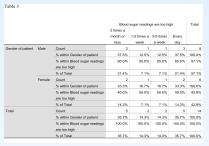
➢DSME group:
➢85.7% of patients that reported that they were aware of the target range for their blood glucose pre-implementation (Table 1). This increased to 100% awareness post-implementation (Table 2).

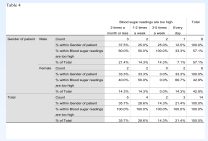
➢There was a decrease in the number of patients who reported high blood sugar readings on a daily basis. This decreased from 35.7% to 21.4% (Table 3-4).

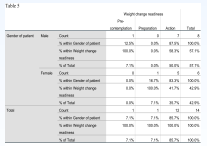
➢There were 7.1% patients in the pre-contemplation phase of weight loss (Table 5). The post-implementation assessment conducted by the NPs showed that there were 14.3% in the preparation phase (Table 6).

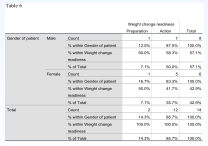












Conclusion

➢Telemedicine is a powerful approach to transform delivery of healthcare services.
➢ Telemedicine makes it possible for healthcare practitioners to provide care to their patients inside and outside the clinic setting.
➢Telehealth DSME improves patient outcomes, increases organizational revenue, increases patient satisfaction, and improves the overall health care system.
➢ Satisfaction scores increased from 75% to 92% at this clinic
➢Telemedicine will ultimately complement many primary care practices as it can help with early detection and effective monitoring of the progression of the disease.
➢Orem's self-care theory applicability to DSME and the necessity for providers to provide education that encourages self care agency for effective long-term management of diabetes

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