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 selfmanagement 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 OI project:
- Patient Diabetes Ouestionnaire (PDO)
- 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 preimplementation 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 precontemplation 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).

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		% within Weight drange readiness	908.0%	100.8%	105.05	
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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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