Integrating Telehealth Technology into a Clinical Pharmacy Telephonic Diabetes Management Program

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Abstract

Background:

Use of home monitoring technologies can enhance care coordination and improve clinical outcomes in patients with diabetes and other chronic diseases. This study was designed to explore the feasibility of incorporating a telehealth system into an existing telephonic diabetes management program utilizing clinical pharmacists.

Methods:

This observational study was conducted at three Providence Medical Group primary care clinics. Adults with a diagnosis of diabetes and a recent hemoglobin A1c (HbA1c) >8% were referred by their primary care provider to participate in the study. Participants utilized the telehealth system developed by Intel Corporation and were followed by clinical pharmacists who provide telephonic diabetes management. The primary clinical outcome measure was change in mean HbA1c. Secondary outcomes included blood glucose levels, participant self-management knowledge, and the degree of participant engagement.

Results:

Mean HbA1c level decreased by 1.3% at the study end ($p = .001$). Based on participant satisfaction surveys and qualitative responses, participants were satisfied with the telehealth system. Mean blood glucose values decreased significantly over the 16-week study period from 178 mg/dl [standard deviation (SD) 67] at week 1 to 163 mg/dl (SD 64) at week 16 ($p = .0002$). Participants entered the study with moderate to good knowledge about managing their diabetes based on three questions, and no statistically significant improvement in knowledge was found post-study.

Conclusion:

Telehealth technology can be a positive adjunct to the primary care team in managing diabetes or other chronic conditions to improve clinical outcomes.

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