

Identifying and Addressing Barriers in Type 2 Diabetes: A Three-Step Telemedicine Approach

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Structured Abstract

PROBLEM / BACKGROUND

Recent studies estimate that only one-half of patients diagnosed with type 2 diabetes ever reach target hemoglobin A1C levels (Nyenwe et al., 2011). According to the American Diabetes Association (ADA), over 15.2% of adults living in Alabama have diabetes which equates to over 600,000 people (American Diabetes Association [ADA], 2016). Combining these two statistics implies that only 300,000 Alabamians are achieving a hemoglobin A1C level less than 7.0.

PROJECT PURPOSE

The purpose of this project is to help patients diagnosed with type 2 diabetes adapt and manage their diabetes. This will be accomplished through telemedicine support calls offered between scheduled office exams to offer further support and education. Research shows that poor provider to patient communication accounts for one reason why patients with diabetes miss their medical appointments (Brewster et al., 2020).

THEORETICAL FRAMEWORK

To adequately investigate barriers that exist for patients attempting to adapt to the diagnosis of type 2 diabetes, the Health Belief Model (HBM), a theoretical framework that was one of the first to have roots in the social sciences (Rosenstock, 1974) will be utilized to understand the influence of patient's beliefs and understanding regarding the disease process of type 2 diabetes, and its effects on behavior resulting in favorable or unfavorable outcomes.

METHODOLOGY

The Three-Step provider initiative intersects within the Health Belief Model between Patient's Perceptions and Actions. This optimal point for intervention allows a provider to not only assess patient beliefs and understanding regarding type 2 diabetes, but also offer emotional support.

IMPLEMENTATION

The three-step intervention is intended to expand on current established practice guidelines for type 2 diabetes. By adding telemedicine, communication with patients regarding adaptation and barriers will help increase successful management. The three-step approach includes 1) Initial visit, 2) Weekly telemedicine, 3) Follow-up visit for progress evaluation.

EVALUATION

The effectiveness of telemedicine support calls will be evaluated based on pre-telemedicine and post-telemedicine hemoglobin A1C levels with a goal of less than 7.0. Further evaluation will include pre and post vital signs, as well as overall patient satisfaction feedback.

RESULTS

Five patients who had hemoglobin A1C levels greater than 7.0 participated in the student-designed study, with the last week consisting of an in-person follow up hemoglobin A1C level and patient feedback survey. All five participants achieved a combined 12.8% reduction in their hemoglobin A1C levels, as well as reduced daily glucose levels. The overall feedback was positive and showed great support for intermittent telemedicine support. Congruent feedback among all participants was the accountability and encouragement received for their journey to health, and the increased sense of capability each felt in their efforts adopt healthy behaviors.

IMPLICATIONS FOR PRACTICE

Telemedicine support calls are an effective tool in helping patients adopt healthy behaviors. Focused dialogue can further target barriers, access resources, and help modify any counterproductive beliefs regarding diabetes. As the Health Belief Model implies, thoughts and actions are directly connected. Providers can make a difference through communication.

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