

Diabetes Self-Management Education and Health Coaching in a Care Management Program

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Background and Significance

- Type 2 diabetes (T2DM) is a leading chronic health condition in the US effecting an estimated 34.1 million adults.
- Oklahoma has over 390,000 cases of diabetes which is about 9.7% of the state's population (CDC, 2022).
- Successful management of T2DM requires ongoing self-care practices to prevent complications.
- Health coaching for self-management skills can be effective in achieving glycemic control (Bodenheimer, 2022).
- Registered nurse (RN) care managers in diabetes management are integral in improving patient outcomes through care coordination and self-management support, however, RNs are unprepared to deliver effective diabetes health coaching (Pirbaglou et al., 2018).
- The Clinical Nurse Specialist (CNS) is educationally prepared for complex chronic disease management that can impact the long-term health outcomes of patients with type II diabetes in primary care.

Purpose

- Develop an evidence-based, diabetes-focused, self-management protocol for patients with Type 2 diabetes followed by the University of Oklahoma Primary Care Clinic care managers.
- Demonstrate the impact of the CNS on patient outcomes
- Primary outcome of interest is improvement in participants' HgbA1c levels after three months.

Literature Review

- Databases searched: Ovid MEDline and CINAHL Ultimate.
- Search terms: "Type II diabetes", "diabetes self-management education," "Care Management," "health coaching", "ADCES7", "glycated hemoglobin levels" and "SMART goal."
- Search years 2013-2023
- 9 studies were retrieved, and 15 studies were used to develop the practice change protocol.

Findings

The strengths of the collective evidence suggest the efficacy of diabetes self-management education with health coaching and its effects on improving hemoglobin A1C, as well as other behavioral factors such as self-efficacy and disease self-management. There is also supporting evidence in the use of motivational interviewing and behavior change as well as goal-setting.

Theoretical Framework

The Information-Motivation-Behavioral (IMB) Skills theoretical model and the Association of Diabetes Care Education Specialists (ADCES) 7 guided this project. The IMB skills model is an approach to behavioral change required for successful disease self-management (Fisher et al., 2009). The model will be used to guide care managers to use the ADCES7 self-care behaviors as the educational content to build upon in diabetes self-management (Kolb, 2021).



The IMB model

Figure 1. Transformation of the ADCES7 image. Reproduced with permission of the Association of Diabetes Care & Education Specialists, 2020

Methods

Inclusion Criteria:

Adults aged 18 and older with a diagnosis of T2DM.

- Patients from the O.U. Family Medicine Clinic who are currently engaged with a care manager.
- HgbA1c greater than 9%
- Ability to speak clearly on the telephone in the English language.
- Willing to have a goal related to diabetes self-management.

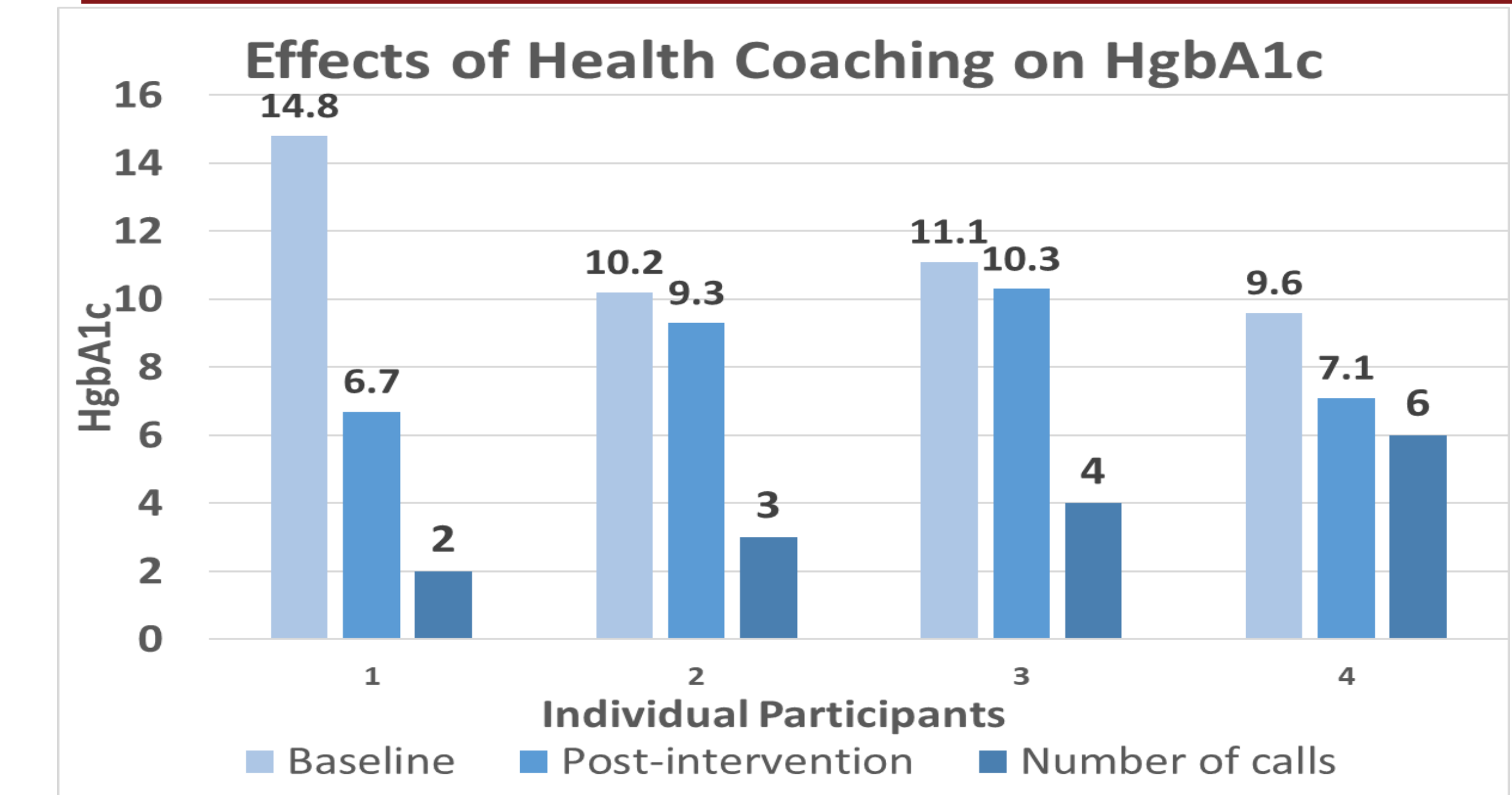
Exclusion Criteria:

- Younger than 18 years of age, diagnosis of Type I diabetes, communication deficit or barrier to accepting/making phone calls independently

Protocol:

- Weekly chart review to identify patients who meet inclusion criteria
- Document baseline HgbA1c and within three months from starting the intervention
- Review patient's medical records and medications to individualize education and coaching
- Weekly telephone education and health coaching for six consecutive weeks with patients
 - Educational content based on the ADCES7:
 - Problem Solving
 - Reducing Risks
 - Monitoring
 - Taking medications
 - Healthy Eating
 - Healthy Coping
 - Being Active
 - Use motivational interviewing skills
 - Ask open-ended questions
 - Use affirmations
 - Use reflections
 - Summarize
 - Set a SMART goal that supports diabetes self-management
 - Specific
 - Measurable
 - Achievable
 - Relevant
 - Time-bound

Preliminary Results



- The graph above shows preliminary results as of 01/2024. 5 participants' data are pending.
- Number of participants = 10
- Number of participants with more than 1 phone call = 9
- As of January 2024, the results of 4 HgbA1c were lower than baseline.
- Initial baseline HgbA1c average was 11.4. Post-intervention average HgbA1c was 8.35.
- Average number of completed phone calls per patient = 4
- Final analysis of participants' results due the end of February 2024.

Discussion

- An average decrease of 24% in participants' HgbA1c
- The most significant barrier was telephone engagement with participants and ensuring they picked up the call every week.
- The participant with the least number of phone calls had the highest decrease in HgbA1c which suggests confounding variables.

Conclusion/Recommendations

- All participants have had a decrease in HgbA1c levels after 2 health coaching calls.
- This program is effective in lowering HgbA1c levels by providing support to patients with T2DM in the primary care setting.
- The strengths of the collective evidence suggest the efficacy of diabetes self-management education with health coaching and its effects on improving hemoglobin A1C, as well as other behavioral factors such as self-efficacy and disease self-management
- These findings also provide support for the use of motivational interviewing, goal setting, and behavior change.
- The CNS is prepared to design evidence-based, cost-effective interventions to meet the multifaceted needs of complex patients.
- The CNS is also prepared to design and employ educational strategies that consider readiness to learn, individual preferences, and social determinants of health