Effect of Certified Diabetes Clinical Education Specialists on Adults with Type 2 Diabetes

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Purpose

The purpose of this quality improvement project is to show the value of Certified Diabetes Care and Education Specialists' (CDCES) visits in patients with poorly controlled type 2 diabetes in a metropolitan underserved primary care clinic and implement a successful CDCES referral program to improve the quality of care for these patients.

Background

- Type 2 diabetes mellitus affects 13.1% of adults living in Shelby County and over 30 million adults in the United States.
- This chronic disease creates a higher risk of macrovascular and microvascular complications for this population, resulting in poor outcomes if not properly managed.
- Improving glycemic control can help to improve the quality of life for people living with diabetes and reduce healthcare costs.
- Currently, 20% of funds spent in the United States on healthcare is utilized for diabetic care.
- CDCES primarily educate patients on managing their diabetes, including health promotion, that can improve healthcare outcomes.
- Data show that referrals to CDCES by a primary healthcare provider can help improve A1c levels and diabetes management for people with poorly controlled diabetes.

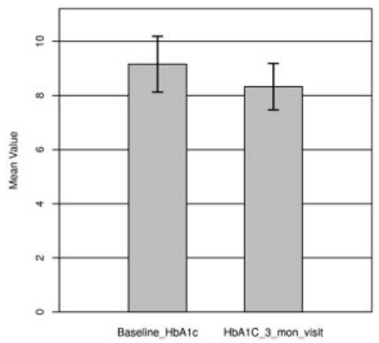
Methods

A retrospective chart review was conducted at a metropolitan underserved primary care clinic in the Mid-South region for patients with type 2 diabetes mellitus over 21 years of age who received at least one diabetes education session with CDCES.

Inclusion Criteria:
- Speaks the English language
- All races and ethnicities
- Male or female, Age 21 and over
- Diagnosis of type 2 diabetes mellitus 3; Hemoglobin A1c level greater than or equal to 8%

Demographic data, baseline HbA1c, and post-education HbA1c were extracted from 29 random charts. All patients were deidentified to only include gender (21 females, 8 males) along with HbA1c results. A two-tailed paired samples t-test was conducted to determine the mean difference in pre- and post-intervention HbA1c at baseline and 3 months later.

Results



Results

Retrospective Chart Review of Pre- and Post-CDCES HbA1c

Variable	M	SD	N	SE_M	Min	Max	Mdn
Baseline_HbA1c	9.16	2.84	29	0.53	0.50	13.50	9.60
HbA1c_3_mon_visit	8.32	2.36	29	0.44	0.30	12.00	8.40

While our results were not statistically significant (p = .113), there was a detectable decrease in the mean HbA1c after a CDCES visit. Prior to a CDCES visit, the baseline HbA1c average was 9.16. After the visit a CDCES, HbA1c average decreased to 8.32.

Implications for Practice

CDCES visits are effective
- Including CDCES in the diabetes care management team can improve glycemic control.
- CDCES can help to empower patients to better manage and control diabetes and their hemoglobin A1c.

Referral to CDCES can help improve outcomes and lower costs
- Better hemoglobin A1c control can lead to a lower risk of diabetes-related complications.
- Fewer complications and comorbidities will lead to a lower total cost of care.

More research is needed to assess the long-term impacts of CDCES intervention
- This data analysis showed improvement after three months, but additional research is needed to examine the effects of CDCES visits on long-term hemoglobin A1c control.

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