Do Diabetic Education Sessions Improve Clinical Management?: A Retrospective Analysis
A Quality improvement Study

Abstract:

Introduction: According to the Centers of Disease Control and Prevention (CDC), there are currently 34.3 million Americans living with diabetes. Over the course of years, the diagnosis and management of diabetes has significantly improved. However, there still remains a large gap between patient education and engagement. The purpose of our study is to examine Diabetic Self Management Education (DSME) as a tool to improve the quality of diabetes care in an underserved patient population through retrospective analysis. The primary outcome of the study is to analyze improvement in HbA1c (A1C) and secondary outcomes including changes in body mass index (BMI), compliance with annual eye and foot examination and other diabetic variables.

Methods: Study participants were seen at underserved, federally qualified health center and received a referral for diabetic education from July 2019 to December 2019. After applying inclusion and exclusion criteria, 66 participants were included in the experimental group and 15 were in the control group.

Results: Our primary outcome indicated that in the diabetes education experimental group, average baseline HbA1c was 10.1 and the 6 month follow-up HbA1c was 8.75, while the total change in HbA1c was -1.35. In contrast, the control group baseline A1C was 9.85 and follow-up A1C was 7.5, while the change in A1C was calculated as -0.36. There was a general trend of decreased average change in A1C as diabetic importance was rated higher. The changes in the secondary outcomes are as follows: change in BMI was -0.149 in experimental vs -0.195 control; eye examination was 36.9% in experimental vs 36.8% control, and foot examination was 50% in experimental vs 50% control, and oral diabetic drug was 70% in experimental vs 44% in control. The role of language was also analyzed, in which 43.9% of the diabetes education population used an interpreter while 13.6% did not use an interpreter and did not have English as their primary language. Those with English as a first language had a change in A1C of -1.77 vs. non-english speakers -1.07.

Conclusion: Recommendations based on this study include encouraging clinicians to refer diabetic patients to DSME; to scale up the provision of one-on-one DSME sessions in patients’ native language; automated alerts within EMR systems to improve PCP adherence to annual foot and eye exams; and lastly, further research on effective methods of weight management into DSME. In conclusion, this study demonstrated a significant avenue to improve the quality of education and care provided to underserved patients living with diabetes mellitus through DSME, as well as further directions for research.