

Implementation of a Virtual Diabetes Self-Management (DSM) Program with Text Message Campaign to

Improve Patient Follow-up Rate

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PROBLEM STATEMENT

- The COVID-19 pandemic has negatively impacted follow up rates for the FQHC being evaluated.
- Patients with T2DM are at an increased risk for severe illness related to COVID-19 and had been advised to socially isolate to prevent contracting the virus (Centers of Disease Control [CDC], 2020).
- From January 2020-July 2020, the FQHC saw an overall decrease in follow up appointments by approximately 15,000.
- The American Diabetes Association (ADA) fully supports the dissemination of diabetes self-management (DMS) information virtually, through the utilization of technology to improve diabetic patient outcomes (2020).

PROJECT PURPOSE

- The purpose of this DNP project will be to utilize a text messaging campaign to advance registration and enrollment of Type 2 Diabetes Mellitus (T2DM) patients with the FQHC diabetes educator and to increase the number of follow up appointments scheduled with a PCP in order to improve T2DM outcomes.
- The overarching aim is to achieve better DSM care at the FQHC by increasing enrollment in the DSM program and increasing follow up appointments with the PCPs.
- Will the implementation of a virtual DSM program, through a secure text messaging campaign, improve enrollment and completion of the DSM program with the diabetes educator and improve the number of follow up appointments with the PCPs in T2DM adults with HbA1c >7.5 over 12 weeks?

MODEL/NURSING THEORY

- EBP Model: Modified Iowa Model
- Nursing theory: Pender's Health Promotion Model

METHODS

Subjects (Participants)

- 112 participants were randomly selected based on their HbA1c >7.5%
- Inclusion criteria: adults 18-65 years of age, female or male, English speaking, working cell phone contact number, a diagnosis of T2DM, and a HbA1c result of greater than 7.5% will be included.
- Exclusion criteria: patients under the age of 18 or over the age of 65, non-English speaking patients, any patients without a diagnosis of T2DM, nonworking cell phone, and pregnant women.
- After applying inclusion criteria, the final number of participants was 74.

Setting:

- Federally Qualified Healthcare Center (FQHC)
- The setting of this project will take place virtually through text messaging, phone calls with the diabetes educator, and on-site appointments with the PCP at the FQHC.

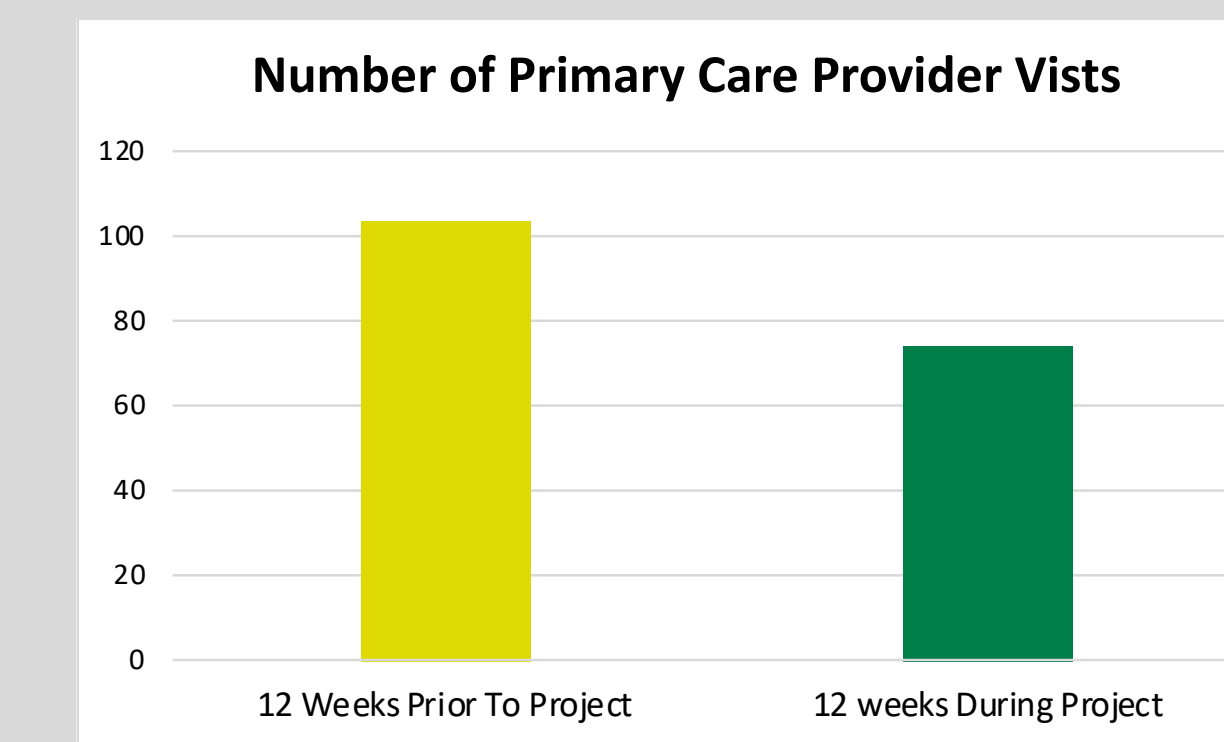
Tools:

- 10 text messages were developed and sent out to patients weekly
- Corresponding website link with additional information and education was included in weekly text reminders

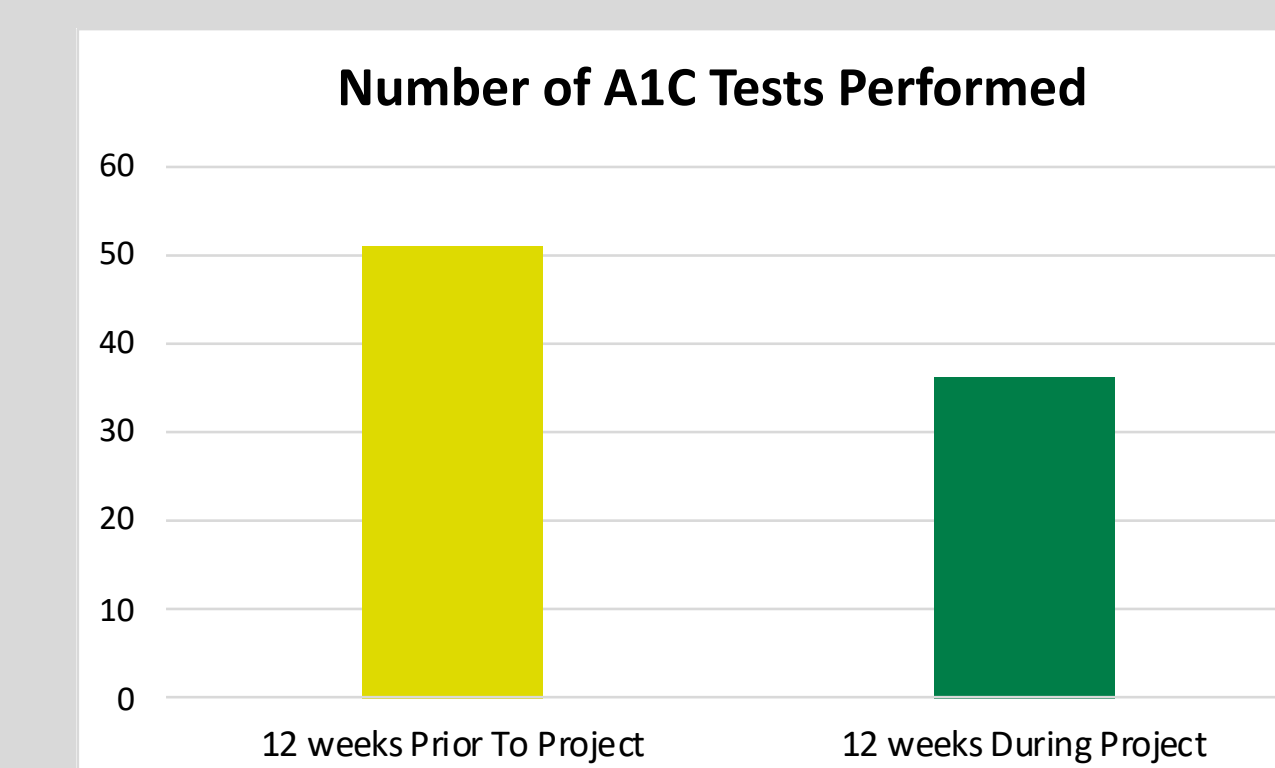
Outcome Measures:

- Enrollment and completion of DSM program
- Number of PCP visits prior and during project
- Number of outreach calls and completed counseling calls made by the diabetes educator during the project
- No-show visits prior and during project
- Number of HbA1c lab tests performed prior and during project
- **Intervention and Data Collection**
- The 12 weeklong project includes 10 weekly DSM text messages that includes a link to virtual education
- The diabetes educator will offer outreach calls and counseling to reinforce DSM education sent via text messages
- The final 2 weeks are used to reinforce follow up visits and data collection.

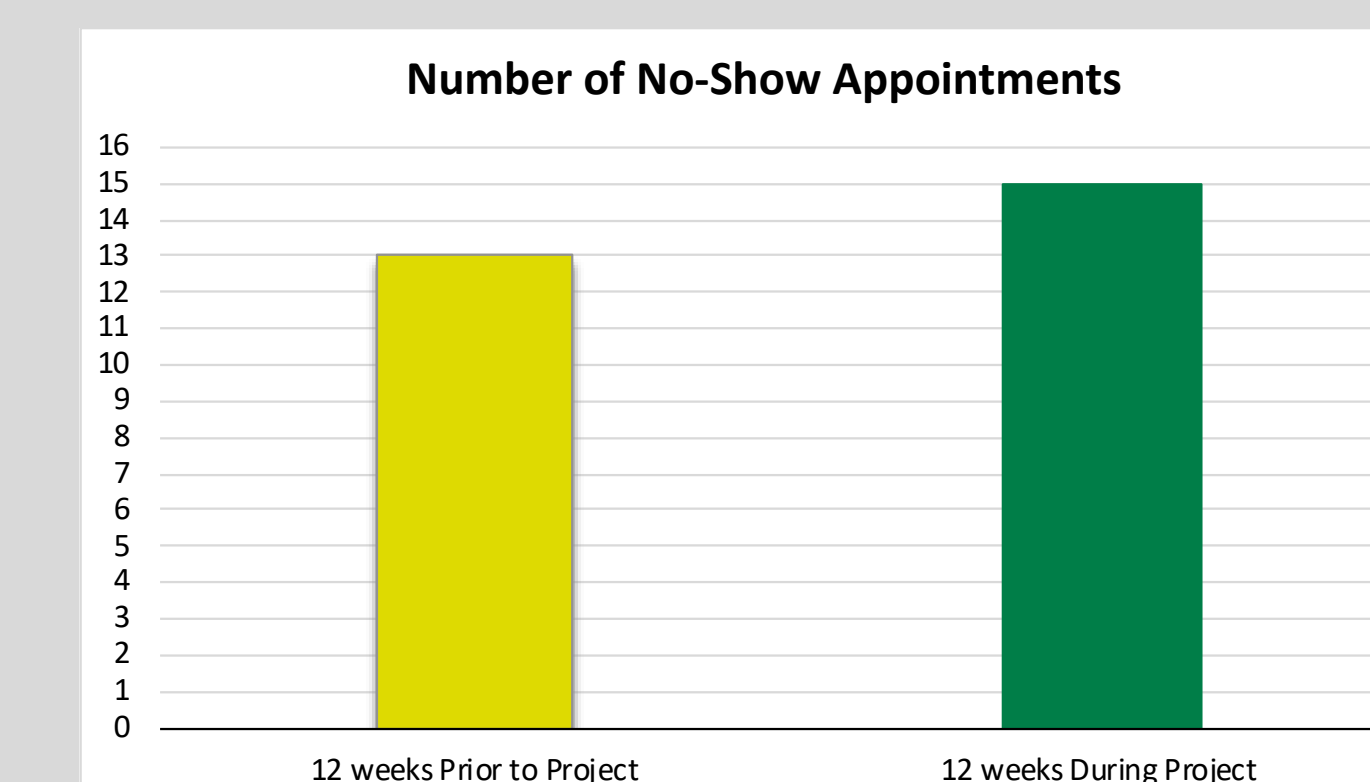
RESULTS



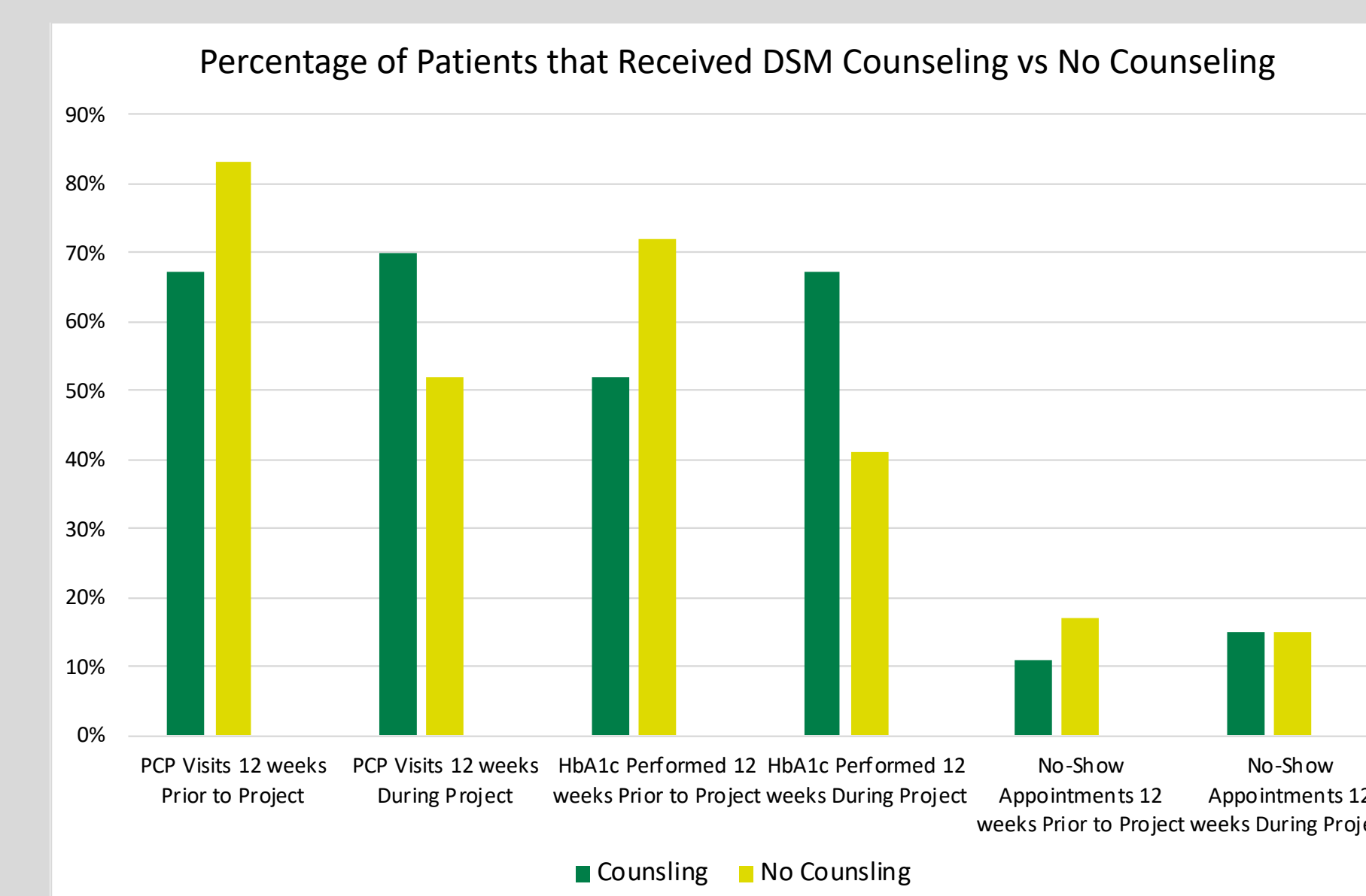
Comparison of the number of PCP visits completed 12 weeks prior and the 12 weeks during DNP project



Comparison of the number of HbA1c tests performed 12 weeks prior and during the DNP project



Comparison of the number of No-show visits that occurred 12 weeks prior and during the DNP project



Comparison of the percentage of patients that did and did not receive DSM counseling during the 12-week project and how these variables affected other outcome measures.

DISCUSSION

- The 74 total participants received 10 weeks of text messages.
 - The diabetes educator contacted 38 patients through outreach phone calls.
 - The diabetes educator contacted and counseled 27 patients
 - 18 of the 27 (66%) patients that received diabetes education counseling completed a follow up visit with the PCP and the HbA1c lab test was performed at the office visit.
 - There was an increase in the number of PCP visits and the number of HbA1c tests performed during the project in patients that received counseling calls versus patients that just received the 10 text message reminders with educational links.
- Limitations of this project include:*
- Lack of patient response
 - Technical limitations of tracking patient usage of text messaging reminders and virtual DSM education
 - The stress that COVID-19 pandemic put on staffing and workflow at the FQHC.

IMPLICATIONS FOR ADVANCE PRACTICE NURSING

This pilot project supports the need for continued exploration of new healthcare technology innovations that can improve continuity of care and follow up rates for patients with T2DM.

SUSTAINABILITY

The pilot project can be modified, sustained and expanded by the PCPs, diabetes educators and other stakeholders at clinical sites to better meet the T2DM patient population needs through text messaging, increased counseling calls and scheduled counseling visits. This project could be replicated and enhanced through interactive text messaging platforms to better track utilization and communication through text messaging.

REFERENCES



The results of this virtual DSM program demonstrate that personalized diabetes education counseling calls were more effective in promoting patient follow up than the 10-week text messaging campaign