Implementing a Diabetes Support Group Intervention in a Federally Qualified Health Center: Evaluating Provider Perceptions and Feasibility

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NURS 703B: Project Planning

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Abstract

Diabetes is a major global health concern, with primary care providers playing a key role in its management. Effective diabetes care involves regular monitoring, medication management, lifestyle changes, and patient education. Continual diabetes education and support are crucial for enhancing patient knowledge retention and self-management, especially as A1C levels above 6.5% indicate diabetes, and levels over 8% suggest poor control with significant implications for patients and healthcare providers. Provider attitudes and social support significantly influence glycemic control, with poor support linked to higher A1C levels. Diabetes support groups, providing social support and education, have been effective in increasing patient adherence to management plans. Within the time-limited context of primary care, the potential of diabetes support groups becomes prominent. This Doctoral of Nursing Project (DNP) project evaluated providers' views on integrating diabetes support groups into clinics to improve glycemic control. It involved a pre and post survey assessing the intervention's impact, which included an educational session on the benefits, key elements, and integration strategies of diabetes support groups. This DNP project demonstrated a positive influence on provider perceptions towards diabetes support groups, evidenced by increased familiarity with the concept, higher confidence in the effectiveness of these groups on patient care, and a greater belief in their clinic's ability to implement such programs. Notably, there was an increase in the belief that support groups can significantly impact patients' A1C levels and enhance patient satisfaction, alongside improved confidence in the clinics' capabilities to conduct and sustain these support groups, indicating a promising potential for the integration of support groups into diabetes care.

Implementing a Diabetes Support Group Intervention in a Federally Qualified Health Center: Evaluating Provider Perceptions and Feasibility

Primary care providers (PCPs) play a pivotal role in the management of diabetes, a prevalent and complex chronic disease that requires comprehensive care including blood glucose monitoring, medication management, lifestyle changes, and ongoing patient education (Gatlin et al., 2017; Saeedi et al., 2019). The primary challenge within primary care settings is the dual constraint of limited appointment times and high patient volumes, which significantly restricts the ability of PCPs to deliver comprehensive and individualized diabetes management education and care (Saeedi et al., 2019). These challenges often lead to non-adherence to management plans, poor glycemic control, and serious complications (Blonde et al., 2019; Nozawa et al., 2022). Enhancing patient diabetes education and support in primary care, is essential for improving disease outcomes (Wang et al., 2019; Wu et al., 2018).

Continuous diabetes education and support improve knowledge retention and self-management (Wang et al., 2019; Wu et al., 2018). The American Diabetes Association (ADA) defines diabetes with an A1C level above 6.5% and poor control above 8%, which can lead to complications and increased healthcare costs (ADA, 2021; Boye et al., 2023; Chang et al., 2019; Kutz et al., 2018). Social support and provider attitudes play a significant role in glycemic control with insufficient support being linked to higher A1C levels (Hill-Briggs et al., 2020; Nam et al., 2011). Evidence-based interventions and diabetes support groups are effective in lowering A1C levels and improving self-management (Hill-Briggs et al., 2020; Li et al., 2020; Wang et al., 2019).

In addressing social determinants of health (SDOH) such as poverty, food insecurity, and inadequate healthcare access, it's crucial to consider their impact on diabetes management, especially in populations facing these challenges. Wang et al. (2019) highlighted that older adults

with type 2 diabetes and comorbid conditions like hypertension and chronic kidney disease often have higher A1C levels, a trend exacerbated by lower socioeconomic status and limited healthcare access (Hill-Biggs et al., 2021). These factors, combined with the challenge of managing diabetes and its medications within the constraints of brief appointments, underscore the necessity for additional support mechanisms. Culturally tailored education and support interventions are pivotal, as they significantly improve glycemic control, enhance diabetes knowledge, and promote self-care practices (Cuddapah et al., 2022; Hill-Biggs et al., 2021; Wang et al., 2019).

In a Western Oregon clinic, there currently exists no educational or support group for diabetes patients, highlighting a significant gap that could be effectively addressed through the implementation of such a system. This DNP project introduces the concept of a diabetes support group to providers at the clinic, evaluating their views on its potential benefits and the practicality of establishing such a group in the clinic.

Available Knowledge

Importance of Glycemic Control

Patients with an A1C over 9% face a significantly higher risk of cardiovascular complications, including stroke and coronary artery disease, compared to those with lower levels (Fonseca et al., 2021). Poor control also leads to increased hospitalizations, infections, and prolonged hospital stays, emphasizing the need for better outpatient management (Chang et al., 2019; Saeedi et al., 2018). Diabetes support groups represent a vital intervention in addressing these challenges, as evidenced by their success in improving A1C levels and other health outcomes (Asmiardi et al., 2022).

Support Group Effectiveness

Diabetes support groups provide a platform for patients to exchange experiences and successes in managing diabetes, fostering a sense of belonging and encouraging active self-management (ADA, 2022; Azmiardi et al., 2022; Upsher et al., 2019). These groups offer educational sessions on nutrition, exercise, and medication adherence, enhancing knowledge, self-care, and informed decisions. The group setting also enhances accountability and motivation, leading to behavioral changes, increased self-efficacy, better management, and improved A1C levels.

Research supports the effectiveness of support groups, especially in rural and underserved areas, in reducing A1C levels, enhancing knowledge, and improving psychosocial well-being and glycemic control (Azmiardi et al., 2022; Liang et al., 2021; Mizokami-Stout et al., 2021; Patil et al., 2016; Salis et al., 2022; Xie et al., 2014). Peer-led and professional-led sessions significantly lower blood glucose levels, enhancing group success through targeted diabetes education and support (Heisler, 2009; Samudera et al., 2021; Sharpless et al., 2021; Tang et al., 2014; Tshiananga et al., 2011; Upsher et al., 2020; Wang et al., 2019). By incorporating support groups into standard care protocols, primary care providers can offer a more holistic approach that addresses not only the medical but also the educational, psychosocial, and support needs of patients with diabetes (Samudera et al., 2021; Tshiananga et al., 2011). This integration can significantly enhance patient engagement, self-management capabilities, and overall health outcomes, positioning support groups not just as a beneficial addition but as a fundamental aspect of effective diabetes management in primary care.

Challenges to Implementing Support Groups

Implementing diabetes support groups within primary care settings encounters a complex array of challenges that extend beyond the immediate concerns of time, resources, and

reimbursement constraints (Azmiardi et al., 2022; Gatlin et al., 2017). Patient-specific barriers such as transportation difficulties and cultural mismatches can significantly hinder access and participation (Albright et al., 2013). Innovative solutions like virtual groups and the use of patient navigators offer flexibility and potentially broader access, yet they also introduce challenges related to digital literacy and internet access (Azmiardi et al., 2022; He et al., 2017).

Securing stakeholder buy-in is crucial for the successful implementation and integration of diabetes support groups into the primary care workflow. Without the support and belief in the importance of these groups from clinic staff, healthcare providers, and administration, successful integration is unlikely. Stakeholder engagement is vital not only for initial adoption but also for sustained operation and effectiveness (Norris et al., 2017; Silver et al., 2016). Furthermore, the current landscape of research on diabetes support groups reveals critical gaps, especially a shortage of high-quality, long-term outcome studies (Azmiardi et al., 2022; He et al., 2022). This limitation is exacerbated by the variability in group formats, durations, and content, which complicates the ability to compare studies and draw generalized conclusions (He et al., 2022). Such variability not only makes it difficult to establish best practices but also challenges the scalability and adaptability of support groups across different primary care contexts.

Rationale

Guided by the IHI Model for Improvement and its Plan-Do-Study-Act (PDSA) cycle, this DNP project was conceived in response to the challenge primary care providers face in managing diabetes effectively, as evidenced by persistently elevated A1C levels among patients. The core intervention of the project was not the direct implementation of diabetes support groups but rather an exploratory approach aimed at understanding healthcare providers' perceptions, knowledge, and the perceived feasibility of introducing such groups into clinical practice. This

foundational step, critical to the project's success, involved a pre-survey to gauge providers' support and perceived value of these groups, followed by an informational session, and a post-survey to gauge participant response. Recognizing that the effectiveness and successful implementation of support groups hinge on provider endorsement, this approach ensured that any subsequent steps would align with provider attitudes and readiness to embrace such models for diabetes care.

The rationale for this intervention is rooted in the premise that well-informed and supportive providers are crucial for the successful integration of innovative patient care models, such as diabetes support groups (Norris et al., 2017; Silver et al., 2016). By enhancing provider knowledge and perceptions, the project anticipated creating a supportive environment conducive to exploring and potentially implementing support groups, thereby addressing the gap in diabetes care and contributing to better patient outcomes.

Specific Aims

The specific aim of this project was to assess healthcare providers' perception of the impact of a diabetes support group on patients' A1C scores and evaluate their perception of the feasibility of implementing such a group in a primary care clinic setting.

Methods

Context

The intervention was conducted at a federally qualified health center (FQHC) in Western Oregon, serving diverse patients including those of low socioeconomic status, houseless individuals, students, immigrants, and uninsured persons. The center provides a broad range of medical, psychiatric, and community resources, focusing on social determinants of health. Its clinical staff includes primary care providers, psychiatric mental health nurse practitioners,

medical doctors, pharmacists, and behavioral health providers, totaling 18 providers at the time of the intervention.

From 2020 to 2021, the center cared for over 11,000 patients, with 35,589 visits including in-person and telehealth. Diabetes ranks among the top ICD-10 codes billed and is a prevalent condition within the clinic's patient population. However, due to the dynamic nature of patient turnover, new diagnoses, and instances of lost follow-up, the exact number of diabetes cases fluctuates constantly. A significant quality metric monitored at the clinic involves the management of diabetes and the tracking of A1C levels in patients treated by providers. This data is then compared across different providers to assess performance as uncontrolled diabetes is a persistent concern with the patient population seen at the clinic. The center also employs a quality improvement team and analysts dedicated to enhancing patient outcomes and clinical policies.

Intervention

The intervention focused on healthcare professionals at a clinic who were involved in diabetes care, consisting of three parts: a pre-survey, an educational session, and a post-survey. Participants were invited via email for voluntary participation, with the intervention conducted during a regular all-provider meeting that are held twice monthly.

Pre-Survey (See Appendix A)

A 12-question pre-survey assessed healthcare providers' baseline views on diabetes support groups' impact on A1C levels and their implementation feasibility at the clinic. This survey was adapted from prior studies that utilized surveys to gauge participant responses and sought to assess providers' knowledge of the benefits and challenges associated with support groups (Barnes et al., 2022; Mannion et al., 2021).

Educational Session

The intervention session aimed to inform providers about structuring and integrating diabetes support groups into clinical practice, based on previous successful models (ADA, 2023; Bain et al., 2022; Naik et al., 2023). The presentation, lasting 30 minutes, covered topics for group sessions, billing methods, and reimbursement strategies, emphasizing the benefits of support groups for A1C management and overall diabetes care (ADA, 2023; Bain et al., 2022; Naik et al., 2023).

Post-Survey

The pre-survey was repeated post-intervention to measure any shifts in provider perceptions regarding the efficacy of support groups and their implementation feasibility.

Measures

The primary outcome measure for this project was the change in providers' perceptions between the pre-intervention and post-intervention survey. This project's process measure is the number of participants from the clinic who had access to the survey and the number of completed surveys. The link to the surveys were emailed to participants pre and post intervention. Responses were monitored online. A balancing measure was represented in the decline in survey engagement post intervention that despite changing perceptions, might have negatively impacted interest.

Data Analysis

This DNP improvement project was implemented between August 2023 and September 2023. Quantitative data from the pre-survey and post-survey was downloaded from Qualtrics and analyzed using descriptive statistics. Changes in providers' perceptions between the pre- and post-survey were assessed using the percentage change method to determine whether there was a

positive or negative shift in perceptions. This goal of this method of evaluation was used to identify the direction and extend of change in perceptions among providers as a result of the intervention.

Ethical Considerations

Several ethical considerations were addressed throughout the implementation of the diabetes support group intervention. Participation in the survey was voluntary and there was no punitive action taken if staff chose not to participate. Confidentiality and privacy of the participants survey results was maintained throughout the project. All collected data was anonymized and securely stored to protect the identities of the participants. Informed consent was obtained from providers involved in the survey (see Appendix B).

Results

At the clinic, all 18 providers participated in the pre-survey, with 13 (72%) completing the post-survey. Analysis showed changes in providers' perceptions due to the educational intervention. Pre-intervention, 56% were familiar with diabetes support groups, while 44% seldom recommended them (44%). Only 39% believed in the support groups' impact on A1C levels, yet 67% recognized their potential to enhance patient satisfaction and care efficiency (67%). About 33% felt their clinic lacked willing staff for diabetes group visits, despite 39% confident in attracting enough patients. Confidence in implementing a support group was evenly split, with 100% either agreeing (50%) or strongly agreeing (50%), but 44% were unclear on group visit requirements, and half were unfamiliar with billing for such visits (50%).

Post-intervention, familiarity with support groups increased to 69%, and those infrequently recommending them decreased to 38%. Belief in the groups' effect on A1C levels rose to 53%, with confidence about enhancing patient satisfaction and care efficiency also

increasing (53%). Staff willingness for group visits slightly improved to 38%. Confidence in recruiting patients for group visits remained stable (38%), while clarity on implementing and billing for group visits saw modest increases. Feasibility perceptions for implementing a diabetes support group improved to 46%. Questions 11 and 12, which were qualitative in nature, aimed to gauge healthcare providers' views on the challenges and advantages of launching diabetes support groups, revealing noteworthy shifts post-intervention. Notably, there was an increase in the recognition of benefits such as enhanced social support, diabetes education, self-care motivation, emotional well-being, and the sharing of useful tips, alongside a reduction in perceived obstacles like the scarcity of groups, patient disinterest, unawareness of existing groups, and time constraints for providers.

This data indicates a positive shift in attitudes towards the value of diabetes support groups in patient care, reflecting a growing acknowledgment of their benefits despite some ongoing uncertainties about implementation details.

Discussion

Summary

Guided by the Institute for Healthcare Improvement (IHI) Model for Improvement and employing the Plan-Do-Study-Act (PDSA) cycle, this DNP project evaluated an educational intervention's impact on healthcare providers’ perceptions of diabetes support groups at a health center in Western Oregon. It found a positive shift in healthcare providers' attitudes and beliefs regarding the efficacy of diabetes support groups in managing patient A1C levels and the feasibility of implementing these groups within the clinic setting. A particular strength of the project was its methodical approach that ensured a structured and systematic process for planning, executing, and evaluating the intervention. The inclusion of both pre- and post-

intervention surveys provided a quantifiable measure of change in provider perceptions, offering a clear demonstration of the intervention's effectiveness.

Interpretation

The project identified a positive shift in healthcare providers' attitudes toward the utility of support groups in diabetes management. The changes in responses observed in the post-survey suggest a positive impact of the educational intervention on providers' attitudes and beliefs regarding diabetes support groups. Although not all changes were statistically significant, the increased agreement in several key areas, such as the perceived impact of support groups on A1C levels and the clinic's ability to implement them, is promising. These results indicate that the educational intervention has the potential to enhance healthcare providers' knowledge and confidence in utilizing diabetes support groups as a tool to improve patient care and glycemic control within the clinic. The positive shifts in provider attitudes suggest that such interventions can be valuable as a first step in promoting the integration of support groups into diabetes care within the clinic.

This project emphasizes the importance of considering participant engagement and response rates in evaluating the effectiveness of educational interventions. Future directions should include strategies to ensure higher participation rates in post-intervention assessments to gain a more comprehensive understanding of the intervention's impact. Moreover, exploring the feasibility of implementing diabetes support groups, based on the enriched provider knowledge and attitudes, could offer valuable insights into practical applications and the real-world benefits of such groups in improving diabetes care outcomes.

Limitations

The DNP project's generalizability is limited, primarily reflecting the specific clinic's provider perspectives and not easily applicable to other settings due to unique contextual factors. The internal validity may be affected by selection bias and the exclusion of key patient care team members like nurses and administrators, possibly distorting the overall clinic viewpoint. The design also missed evaluating long-term sustainability of changes, highlighting a need for future projects to include longitudinal follow-up. Furthermore, incorporating insights from successful community support groups more prominently could enhance the intervention's potential. Simplifying survey scales to "agree" or "disagree" could ease data analysis. Recognizing these limitations is crucial for refining future projects to better gauge the intervention's long-term effectiveness on patient care and glycemic control.

Conclusions

This DNP project demonstrates the potential of educational interventions to shift healthcare providers' perceptions towards diabetes support groups While its immediate applicability appears limited to the specific clinic involved, the positive outcomes suggest a model that could be adapted for wider use, with sustainability dependent on ongoing provider engagement and institutional backing. The project’s short-term nature, with immediate post-survey follow-up, limits insight into the sustainability of attitude changes over an extended period. The project not only highlights the necessity for further longitudinal research to explore the long-term effects of such interventions on patient care but also suggests a potential paradigm shift in practice towards more collaborative, patient-centered models. Future directions should focus on assessing the durability of these educational impacts, exploring scalability to different healthcare settings, and engaging a broader stakeholder base to refine and expand the implementation of diabetes support groups as a standard component of diabetes care.

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cluster randomized controlled trial. *BMC Public Health*, *14*(1).

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Appendix A

Survey Questions

OHSU FNP Program
DNP Project Survey Questions

	Strongly Agree	**Agree**	**Neutral**	**Disagree**	**Strongly Disagree**
1. I am familiar with the concept of diabetes support groups					
2. Within the last year, I have frequently recommended diabetes support groups to my patients					
3. I believe that diabetes support groups have a significant impact on patients' A1C levels.					
4. I feel confident that diabetes support groups can increase patient satisfaction and improve efficiency in patient care.					
5. My clinic has staff/providers willing to be involved in conducting diabetes group visits new					
6. My clinic has the ability to recruit sufficient numbers of patients with diabetes to attend our group visits.					
7. I feel confident in my clinic's ability to implement a diabetes support group at my practice.					
8. I am aware of what is needed to successfully implement group visits in our clinic.					
9. I am familiar with how to bill for group visits new					
10. I believe it is feasible to implement a diabetes s group in our clinic					

11. What are some specific benefits you believe diabetes support groups can offer to patients with regards to managing their A1C levels? (Select all that apply)
a) Improved social support
b) Enhanced diabetes education
c) Increased motivation for self-care
d) Sharing of practical tips and strategies
e) Emotional well-being support
f) Other (please specify): _____

12. What barriers or challenges, if any, do you perceive in integrating diabetes support groups into your patients' care plans?
a) Lack of available support groups in the area
b) Limited patient interest or motivation to participate
c) Lack of knowledge about available support groups
d) Time constraints for healthcare providers
e) Other (please specify): _____

(Mannion et al., 2021; Barnes et al., 2022)

Appendix B

Consent Form

Consent Letter for Participation in a Survey

Dear Participant,

We sincerely thank you for considering participation in our survey. Your insights and feedback are valuable to our study on the concerns and barriers providers encounter when initiating support groups for patients with diabetes.

Purpose of the Survey:

This survey is designed to help us gather data on the challenges healthcare providers face in starting support groups for diabetes patients. To achieve a comprehensive understanding, we request participants to complete a survey before the educational presentation and another after the presentation concludes. It is anticipated that the survey will take approximately 5-10 minutes of your time.

Confidentiality:

Please be assured that your privacy is our utmost concern. This survey is designed to protect your confidentiality. At no point will we collect any personal identifiers such as your name, phone number, social security number (SSN), or address. All responses will remain strictly confidential and will only be used for the intended purpose of this study.

Participation and Withdrawal:

Your participation in this survey is entirely voluntary. You have every right to decline participation, or if you choose to start, you can discontinue at any point without any repercussions.

Contact Information:

Should you have any questions, doubts, or concerns about this survey or the study, please don't hesitate to reach out to us at dull@ohsu.edu.

By proceeding with this survey, you are indicating that you have read and understood the contents of this letter and consent to participate in this research under the terms described.

Thank you for your time and contribution. Your feedback is pivotal to the success of our study and the potential betterment of diabetes patient support in the future.

Daniella Back, FNP-DNP Student, OHSU, 09/12/2023

Appendix C

Project Timeline

August: Obtained approval from the Institutional Review Board (IRB) by submitting the necessary documentation and ensuring compliance with ethical guidelines and regulations for conducting research involving human subjects.

September:

Conducted a comprehensive survey among healthcare providers within the clinic to assess their knowledge and perception of diabetes support groups and their potential impact on patients' A1C levels.

Conducted an educational session for providers, introducing the concept of diabetes support groups and providing education on their efficacy in enhancing patients' A1C levels. Ensured that providers were informed about the benefits and importance of incorporating diabetes support groups into the clinic's practices.

Administered a post-intervention survey to the providers to assess their perception and level of acceptance towards the idea of incorporating diabetes support groups into the clinic's practices.

October: Analyzed the collected data from the survey. Used appropriate qualitative and quantitative methods to draw inferences, identify patterns, and gain insights into providers' knowledge, perception, and acceptance of diabetes support groups.

November: Wrote sections 13-17 of the final paper. Compiled the findings, analyses, and conclusions into a coherent and comprehensive document. Organized and prepared the project's

findings and outcomes for dissemination. This included creating presentations, data analysis, and creating graphs to share the knowledge gained from the project.

December-March: Dedicated to further data analysis, refining the final paper, and presentation preparation.

Appendix D

IRB Approval

IRB MEMO

Research Integrity Office
3181 SW Sam Jackson Park Road - L106RI
Portland, OR 97239-3098
(503)494-7887 irb@ohsu.edu

NOT HUMAN RESEARCH

August 28, 2023

Dear Investigator:

On 8/28/2023, the IRB reviewed the following submission:

Title of Study:	Implementing a Diabetes Support Group Intervention in a Federally Qualified Health Center: Evaluating Provider Perceptions and Feasibility
Investigator:	Jacqueline Webb – Daniella Back
IRB ID:	STUDY00026232
Funding:	None

The IRB determined that the proposed activity is not research involving human subjects. IRB review and approval is not required.

Certain changes to the research plan may affect this determination. Contact the IRB Office if your project changes and you have questions regarding the need for IRB oversight.

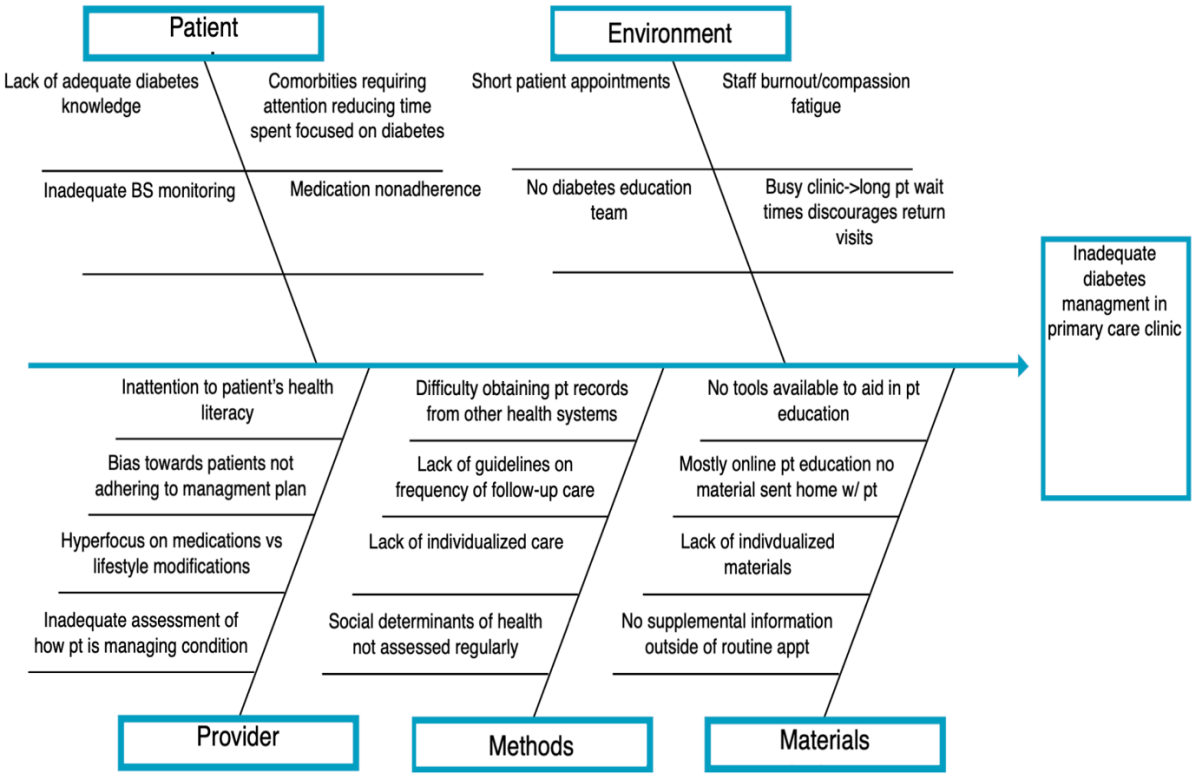
If this project involves the collection, use, or disclosure of Protected Health Information (PHI), you must comply with all applicable requirements under HIPAA. See the HIPAA and Research website and the Information Privacy and Security website for more information.

Sincerely,

The OHSU IRB Office

Appendix E

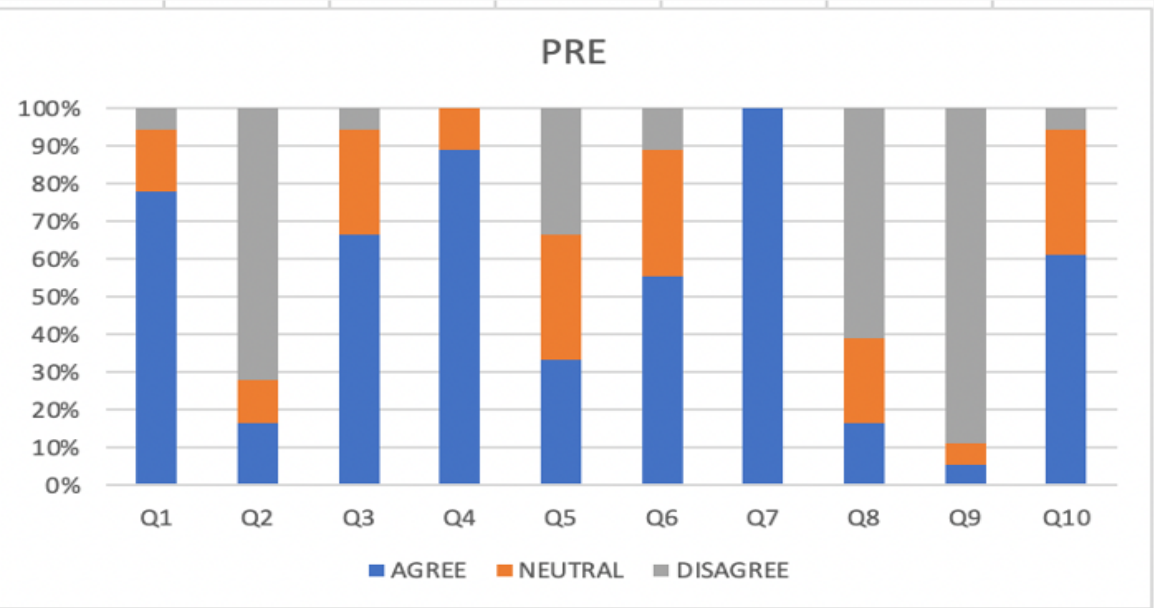
Cause and Effect Diagram

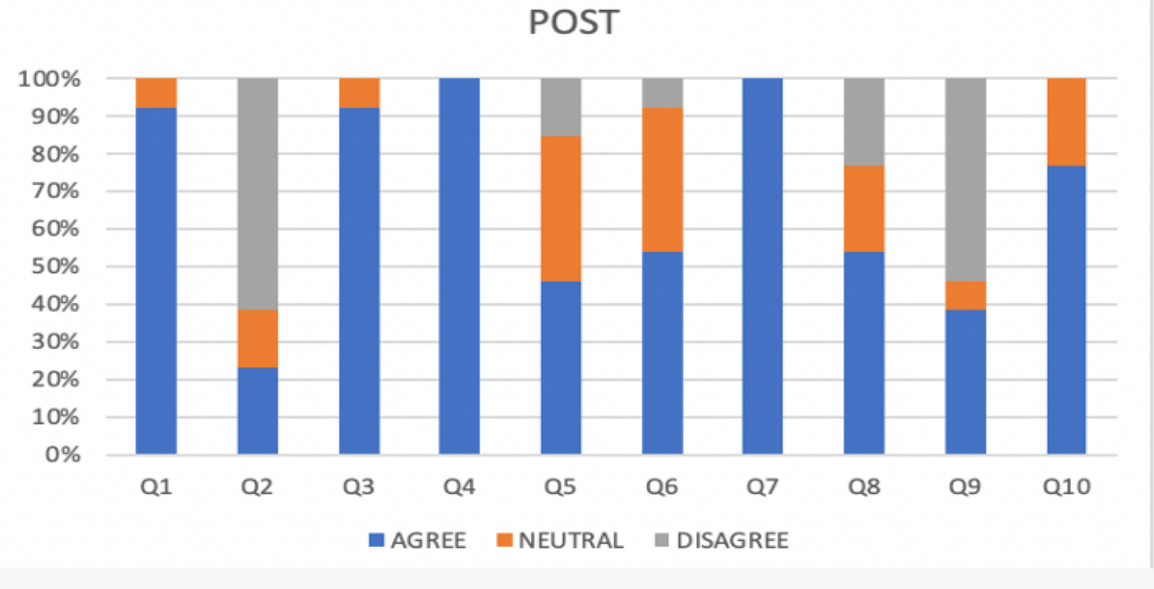


Appendix F

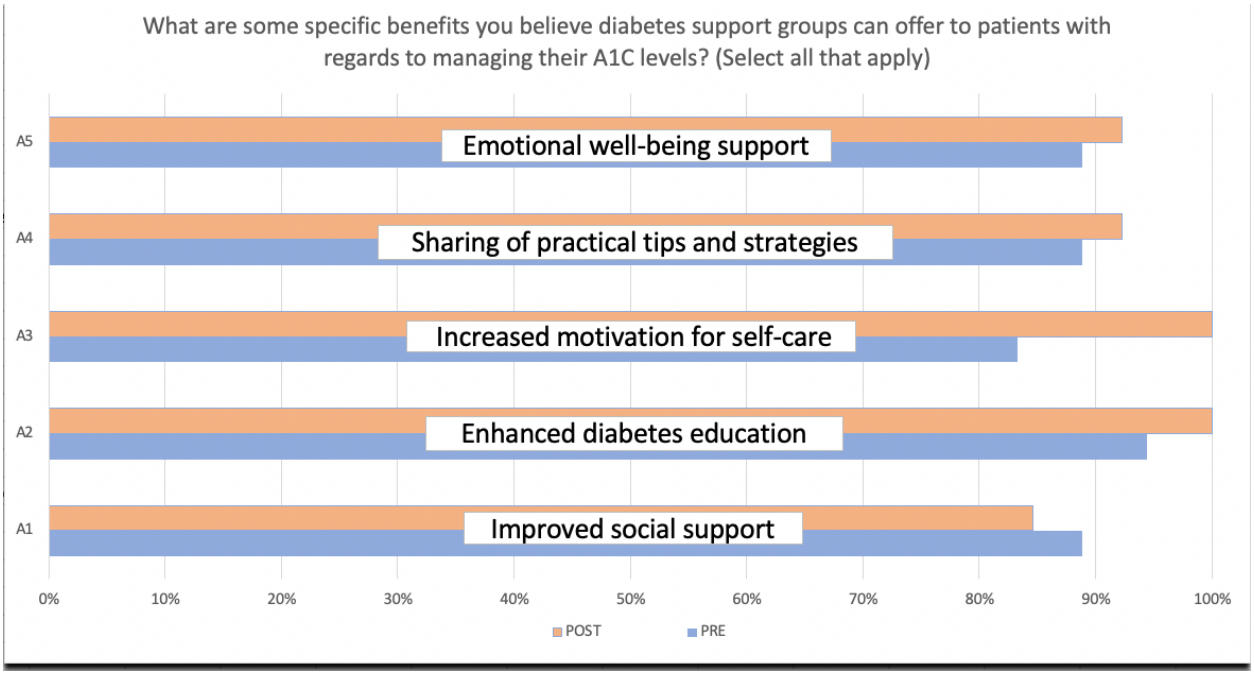
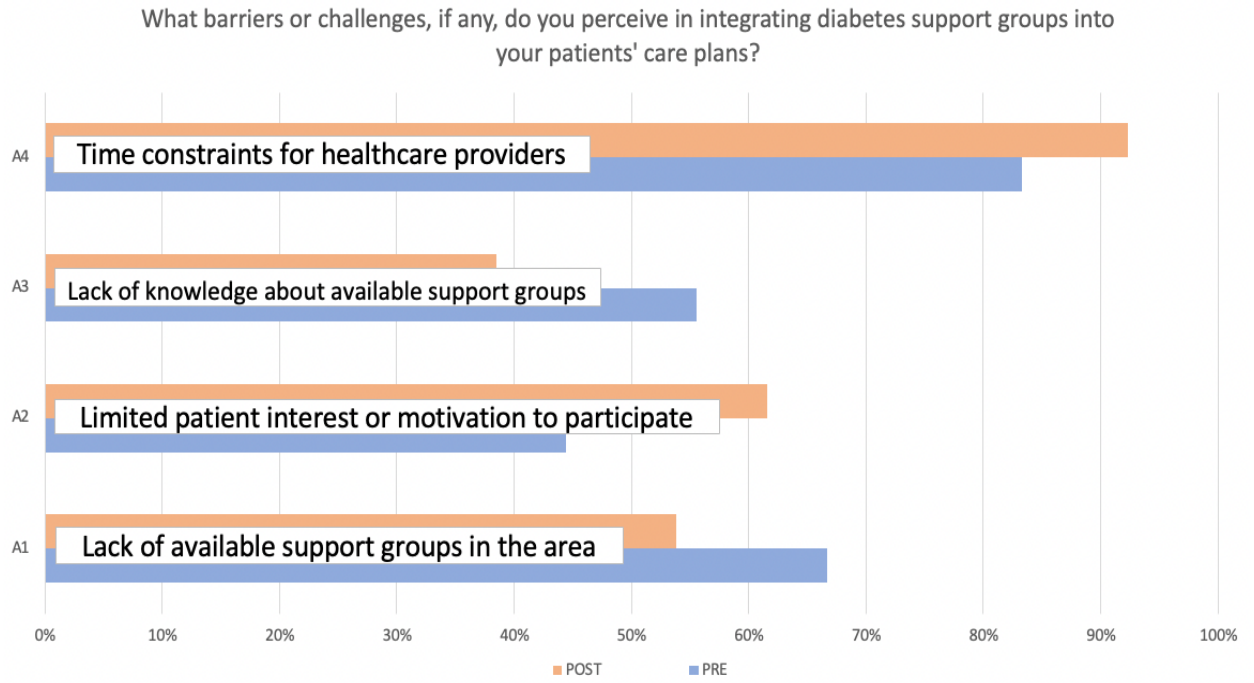
Pre-Intervention & Follow-Up Survey Results

Questions 1-10:





Question 11:



Question 12: