Examining Delays in Follow-Up Care in Adult Patients with Type 2 Diabetes Mellitus at a Primary Care Clinic

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Abstract

Background: Timely follow-up care is necessary to ensure proper management and reduce adverse events in patients with type 2 diabetes mellitus (T2DM). Though the American Diabetes Association (ADA) has guidelines to direct care, patients do not always attend follow-up visits. The clinic where the QI project occurred has no data showing why patients do or do not come for regular follow-up care specifically for T2DM.

Aim: This project aims to assess facilitators and barriers to timely ADA guided follow-up care in adult patients with T2DM at a primary care clinic in a suburban county Washington (WA).

Methods: Eligible patients were identified and put in two groups: those seen <6 months and those not seen for ≥6 months. A survey with questions on demographics and barriers/facilitators to seeking diabetes follow-up care was emailed to eligible patients, with two reminder emails sent. The results of this survey were analyzed using comparative statistics.

Results: A total of 14 patients responded with nine from the <6 months group and five from the ≥6 months group. Though there was a lack of statistically significant differences in the responses, patients surveyed do not lack the knowledge of when to follow-up with care. Scheduling and communication with the clinic were found to be key barriers to patients.

Conclusion: This project initiated the process of understanding the facilitators and barriers patients face in seeking diabetes follow-up care. However, further research is needed to address the small response rate and guide the clinic to act towards meaningful change.

Examining Delays in Follow-Up Care in Adult Patients with Type 2 Diabetes Mellitus at a Primary Care Clinic

Problem Description

Diabetes mellitus (DM) is a chronic metabolic disease characterized by elevated blood glucose due to pancreatic beta cell disfunction (Yahaya et al., 2023). Type 2 diabetes mellitus (T2DM) makes up about 90% of all DM cases, is marked by decreased insulin secretion and resistance to insulin's glucose lowering effects, and is associated with genetics, obesity, and a sedentary lifestyle (Ong et al., 2023).

According to the Center for Disease Control and Prevention (CDC), approximately 29.7 million people, or 8.9% of the United States population had diagnosed DM in 2021 (CDC, 2023) of which about 27.7 million cases involved T2DM (American Diabetes Association [ADA], 2023). T2DM statistics in the state of Washington, where the quality improvement project was conducted, are near national average with 9% of adults having T2DM and another 11% with prediabetes that may develop into T2DM eventually (Sang et al., 2023). Disease rates increase with socio-demographic factors such as male sex, education status, elevated body mass index (BMI), family history of DM, hypertension, dyslipidemia, cardiovascular disease, and racial/ethnic minority status (Hill-Briggs et al., 2020, Ismail et al., 2021).

Complications of T2DM include retinopathy, lower extremity ulcers, renal insufficiency, cardio or cerebrovascular disease, peripheral neuropathy, and immunosuppression (Farmaki et al., 2020). Closely following patients with DM will help increase adherence to antidiabetic medications (Dobbins et al., 2019) and prevent DM-related complications such as blindness, amputation, chronic kidney disease, and vascular diseases (Rangel et al., 2019). The ADA recommends care every 3-6 months (ADA Professional Practice Committee, 2024). Frequent follow-up in poorly controlled diabetes shows greater improvement in medication adherence and quality of life compared to those with control (Xu et al., 2024). This review further emphasizes that the frequency of follow-up should be individualized for each patient. Since continuity of care, often seen through routine office visits, is likely linked with increased medication adherence and more stable hemoglobin A1c (HbA1c), ensuring that patients with T2DM are receiving guideline recommended follow-up may lead to better control of DM and its sequelae (Ahuja et al., 2022).

The root and cause analysis (see **Appendix A**) shows possible challenges with following up faced by the clinic where this QI project occurred. A few of these reasons include health literacy, time constraints from employment, language barriers, and misunderstanding of disease management. Based on anecdotal reports from clinic providers, patients at this clinic have been sent to the emergency department due to diabetic crisis from poor follow-up, and many others have presented to clinic with poor diabetic control due to lack of follow-ups and medication non-adherence. Without investigation on the reasons why these patients are not coming for regular follow-up, there is a gap in specific evidence to inform practice change. This project aims to determine the facilitators and barriers leading to guideline-specified follow-up in adult patients diagnosed with T2DM in a primary care clinic in a suburban county of WA.

Available Evidence

For patients with T2DM, the ADA recommended visits every 3-6 months to update interval medical history, assess HbA1c, hyper-/hypo-glycemia symptoms, lifestyle, medications adherence, and assess diabetes sequelae (ADA Professional Practice Committee, 2024). A critical aspect of follow-up visits is determining adherence to hypoglycemic medication (Presley et al., 2019). Poor medication adherence, which is influenced by inadequate education, cost or side effects, poor health literacy or family support, language barriers, priority to family/others over self, and lack of regular follow-up with medical care, contributes to emergency department visits for uncontrolled diabetes, worsening medical condition, comorbidities and death (Aremu et al., 2022; Baghikar et al., 2019; Fortmann et al., 2019; Garcia et al., 2019). Maintaining regular follow-up may enhance medication adherence, thereby improving diabetes outcomes (Aremu et al., 2022). Frequency of follow-up is influenced by provider availability and preference of how often to see patients, disease severity, sociodemographic factors, quality of clinic processes for DM care, inadequate education about disease management, smoking, missed prior appointments, and low educational status (Dobbins et al., 2019, Lee et al., 2019). Understanding the factors behind delays in T2DM care is essential for improving follow-up rates. This has been modeled by other systematic reviews as a way to decide the greatest opportunities for addressing quality gaps (Zaman et al., 2022). Identifying specific facilitators and barriers to regular follow-up in a particular clinic will help guide the implementation of changes needed to increase the regularity of care. In turn, this may enhance diabetes management and reduce disease sequelae.

Rationale

To improve the proportion of adult patients with T2DM receiving timely care, the clinic must understand the facilitators and barriers affecting these patients specifically, and if these differ based on certain risk factors such as sex, racial/ethnicity status and education level. Identifying the barriers to follow-up DM cares is essential for developing interventions. Given that the population at this clinic faces increased risks for complications of T2DM due to varying socioeconomic statuses and comorbid conditions, it is crucial to understand the barriers and facilitators affecting follow-up rates to improve diabetic management. This project was informed by the Model for Improvement (MFI) from the Institute for Healthcare Improvement (IHI) utilizing three questions “What are we trying to accomplish?”, “How will we know that a change is an improvement?” and “What change can we make that will result in improvement?” to guide and determine the aim and success of the project (How to Improve: Model for Improvement, n.d.). The questions posed by the MFI in addition to a Plan-Do-Study-Act (PDSA) cycle were not fully answered as this project was the initial step in improving follow-up adherence.

Specific Aims

The primary aim of this project is to assess patient-reported facilitators and barriers to timely, ADA guideline-specified follow-up in adult patients with T2DM. A secondary aim is to compare the barriers and facilitators noted by patients who have been seen in the last six months with those who have not been seen in greater than six months to note any similarities and differences in their responses.

Methods

Context

This project took place in a direct primary care clinic in a suburban county, WA that serves approximately 1,140 patients (800 adults and 340 children), of which 5.75% of adults have T2DM. The clinic sees around 13 patients per day. The clinic offers affordable monthly memberships with age-based ($25-$110). In return, patients can see providers whenever needed for no additional cost. Labs drawn and medications dispensed in clinic are available at wholesale pricing. This model of care has been shown to decrease costs for the patients, provide more patient access to care teams and time in each visit (Busch et al., 2020).

The clinic is staffed by one full time and one per diem physician, one full time and three part time nurse practitioners, three part-time and two per diem registered nurses (RN), 4 medical assistants (MA) and an office manager that staff the clinic. Some potential barriers to follow-up may include insufficient language services, limited available appointment hours and low health literacy. The clinic recently started using remote translation services for patients who do not speak English. The full-time physician has a conversational competence in Spanish and sees most Spanish speaking patients with the assistance of family members available for translation assistance. One per diem physician speaks fluent Spanish and is available on call to see Spanish speaking patients on an infrequent basis. In addition, the clinic is open 8:30am-5pm (closed 12:30-1:30pm), which interferes with patients' work schedules. Specifically in patients with lower socioeconomic status, as those who are at a higher risk of T2DM, the lost wages and challenge getting time off work increases the difficulty to have medical visits, both for patients with lower socioeconomic status at higher risk of T2DM, as well as those who do not have work schedule flexibility.

Interventions

This QI project was conducted in three phases. During August and September 2024, a web-based survey was developed consisting of multiple-choice and open-ended questions about demographics, education, understanding of follow-up timing, and things that help or prevent patients from coming for diabetes follow-up (see **Appendix C**). This survey was translated into Spanish by a per diem Spanish-speaking provider. Both English and Spanish versions of the survey were available for all patients and distributed to two groups. The first group consisted of adults with T2DM who had not had an appointment for diabetes care in the last 6 months (assumed to have lost timely follow-up care). The second group included patients who had received diabetes care at the clinic in the last six months.

Eligible patients were identified by a clinic data analyst with inclusion criteria consisting of adults over 18 years previously diagnosed with T2DM, resulting in 50 eligible patients. The surveys were administered anonymously through Qualtrics^{TM} (Qualtrics, 2024), sent out via email from the clinic to patients fitting inclusion criteria during a 30-day period in October 2024. No identifying patient health information was gathered. One patient who had not consented to non-secure communication did not receive an email. One patient received the survey via text as they had preferred private information sent via text. Reminder emails were sent twice in 10-day intervals to increase the uptake of survey.

Measures

The goal of this QI project was to improve or solidify clinic staff understanding of the reasons behind the lack of follow-up care among established adult patients with T2DM. To address this goal, the primary outcomes focused on the facilitators and barriers reported by patients. Process measures included the number of patients that responded to the surveys.

Analysis

Quantitative survey data were analyzed using comparative (e.g., Fisher's exact test) and descriptive statistics and presented in bar graphs (**Figures 1-4**). Demographic information for each group was compared in a table to determine significant differences. Qualitative data from open-ended responses were analyzed by searching for themes. Results from the two patient groups were compared to identify similarities and differences in the facilitators and barriers to follow-up care.

Ethical Considerations

Throughout the QI project, ethical considerations included concern for anonymity and privacy of patient information. No private health information was gathered in the survey, and anonymity was prioritized to ensure that participation or non-participation would not affect the care provided to individual patients. The survey was voluntary, a fact explicitly stated in the email containing the survey. With surveys sent electronically, there was a risk of communication with people other than the patient intended. Surveys were only sent to emails that patients have consented as use for non-secure communication with the clinic, except for one patient who had explicitly requested text communication instead of email. There is no inherent risk or benefit for patients to complete the survey. Efforts were made to provide materials in both Spanish and English, as Spanish is the primary language for most patients who do not speak English.

Results

The survey was sent out to a total of 49 patients, 14 who had not been seen for diabetes for ≥ 6 months and 35 who had a diabetes visit within <6 months. At the end of the collection period, there were 5 responses from the first group (≥6 months; ~36% response rate) and 9 responses from the second group (<6-month; ~26% response rate) including one response in Spanish. Of the respondents in the ≥6 months group, all were female and noted the follow-up range as "every 3-6 months" (n=5) (see **Figure 1 & 2**). In the group that had been seen in <6 months, 78% of respondents were male (n=9) (see **Figure 1**). For frequency of diabetes follow-up care, 78% noted "every 3-6 months" while 11% said "yearly" and "only when concerned" (n=9) (see **Figure 2**). In response to the "select all that apply" question about what prevents this group from diabetes follow-up visits, outside care (3/5), schedule conflicts (2/5) and lack of communication with the clinic (2/5) were the only responses given by the ≥6 months group. The <6 month group had a majority of respondents note other (but did not specify) (5/9), with all other options only having one two responses except outside care and lack of communication which had none (see **Figure 3**). In a question about what helps the patients come for diabetes follow-up visits, everyone in the ≥6 months group selected need (5/5) and good clinic experience (5/5), with a few selecting education (2/5), scheduling (3/5) and good communication (1/5) (see **Figure 4**). The <6 month group mostly noted need (5/9) and good clinic experience (7/9), with education (3/9), scheduling (4/9), good communication (3/9) as helpful for follow-up (see **Figure 4**).

In the open-ended question asking patients for suggestions of what would make them more likely to attend follow-up visits, the ≥6 months group had 60% of respondents wanted a reminder or pre-made appointment every 90 days (n=5). One respondent wanted group visits. In the <6 month group, six respondents said that they were satisfied with their care and/or communication, one had not been a patient long enough to give feedback, and one did not answer (n=9). The last patient noted that they needed more attention, observing that they had gotten foot exams earlier in their care, and now, they just had their glucose checked and medications given to them.

Discussion

Summary

This study aimed to assess the facilitators and barriers for follow-up DM care for patients with T2DM at a primary care clinic in a suburban county in WA. A secondary goal of this was to determine whether there were differences in the answers between two groups of patients: those who had been seen within the last six months and those who had not been seen for six months or longer. Conducting the QI project was a crucial step for the clinic to find out how to ensure that patients with T2DM receive appropriate follow-up care.

Interpretation

The results of this project suggest a few differences in the identified groups, even with a response rate of 29% (n=49). There was a meaningful difference between the sexes of those who responded in each group, with a significantly greater number of males responding in the "<6-month" group (n=9), whereas all respondents were female in the "≥6-month" group (n=5) (see **Table 1**). The specific demographics of the individuals who received the surveys were not recorded, but this notable difference could suggest that there is a higher proportion of females in the group that has not been seen in ≥6-month, or that the females in this group are more likely to answer an online survey.

There was a non-significant difference between barriers to follow-up visits, with scheduling conflicts being the highest chosen response (n=14, 29%) out of all respondents. Considering the clinic's speculation that their business hours may be a limitation for patients to attend visits, this finding should be used to inform change in clinic schedules. During this project, the clinic extended their hours one night each week to accommodate patients unable to come to appointments before 5pm. Following up on whether this change impacts DM follow-up visits would be beneficial.

Another notable finding is the difference in responses between the groups to those who receive outside care. Sixty percent of patients who had not been seen within six months noted that they received outside care, which would indicate to the clinic that these patients may be receiving ADA guideline directed care. To ensure that they are getting properly timed care at another location, it would be prudent for the clinic to take note in a patient's chart where and when they received outside diabetes care.

One response that should be looked at carefully is the difference between each group's concern about communication. No patients in the <6 months group noted a lack of communication as a barrier to follow-up, while 40% of those in the ≥ 6 months group did. Additionally, 60% of the former group suggested a reminder or pre-made appointment every 90 days. In noting facilitators, both groups were low in selecting good communication as a reason that helps them seek care. Currently, each provider schedules a text, call, or email to be sent to patients due for follow-up. Often the clinic reports that patients do not respond after multiple attempts, and this could be a reason that patients note a lack of communication. Further investigation is needed to understand what patients find lacking in communication.

Most respondents knew appropriate follow-up timing with 86% noting follow-up should occur every 3-6 months (n=14). This would suggest that patients' failure to seek follow-up care may not be due to a lack of knowledge about T2DM follow-up care intervals. A majority of patients noted need (71%)

and good clinic experience (86%) (n=14) as facilitators to follow-up. Education (36%) and good communication (29%) lag behind in both groups, possibly indicating a lack from the clinic's side.

Though the survey was sent out in both English and Spanish, there was only one respondent to the Spanish survey. This respondent noted that the language barrier prevented them from seeking care. Though the data do not exist for how many patients who received that survey are Spanish speaking, this response, when taken into the clinic context, may prove significant for patients with T2DM and potentially other patients who do not speak English or prefer to speak a language other than English. The free responses written should be looked at within a larger context, as the limited number of responses may not represent the larger population of patients. The clinic should evaluate their processes for diabetes care to determine if the services at each visit align with ADA guidelines.

Limitations

The low response rate (29%) limited the generalizability of data and statistical significance of the data. The response rate was likely due to the nature of the project aim as well as the method for surveying. Since the survey was focused on patients who may or may not come into the clinic regularly, an survey in clinic would have gotten a higher response rate, but a lower patient sample surveyed. The electronic survey was the most effective way to reach a varied population. If the timeframe for survey was longer than 30 days, in-office survey could have garnered more responses.

Language barrier was another limitation. Data on patients' preferred language were not available. The survey was sent in both English and Spanish, but with the English portion was chronologically first in the email, the Spanish-speaking patients may not have seen the Spanish version and not attempted the survey. Patients who speak but do not read could also face limitations to completing the survey. Significant effort was made to ensure that all written materials distributed to patients were available in both English and Spanish, as these are the primary languages spoken by the clinic's population.

During the beginning of the planning process, it was challenging to extract data about patient diagnoses and appointments addressing diabetes from the electronic health record system used at the clinic. With the help of the data analyst at the clinic, a specific code was written to identify both of these eligibility variables for the survey. For future projects, the difficulty of retrieving specific diagnosis codes presents a significant barrier to assessing the current state of specific clinical questions.

Conclusions

With a small pool of eligible patients and the challenge of survey recruitment, the results from this QI project should be interpreted with caution. Even so, the results gathered suggested that, across both groups, need and good clinic experience help patients come for follow-up, while scheduling and communication concerns prevent follow-up. Between the two groups, the group that had not been seen in six months or greater were more likely to be receiving diabetes care. This can inform multiple areas of improvement and continued investigation at the clinic where it was implemented. Future study on group demographics, scheduling conflicts and lack of communication would help with more informed practice changes.

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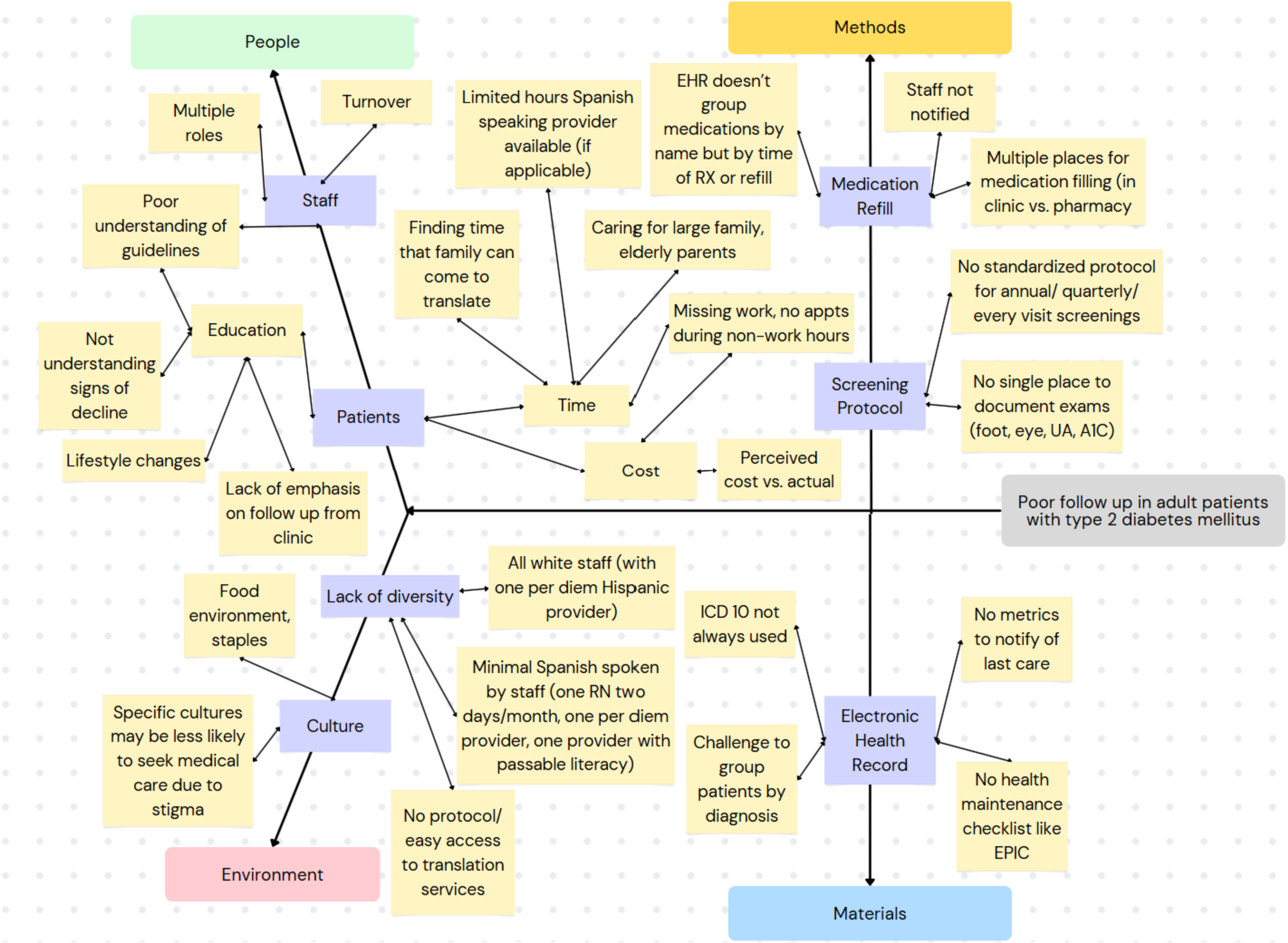
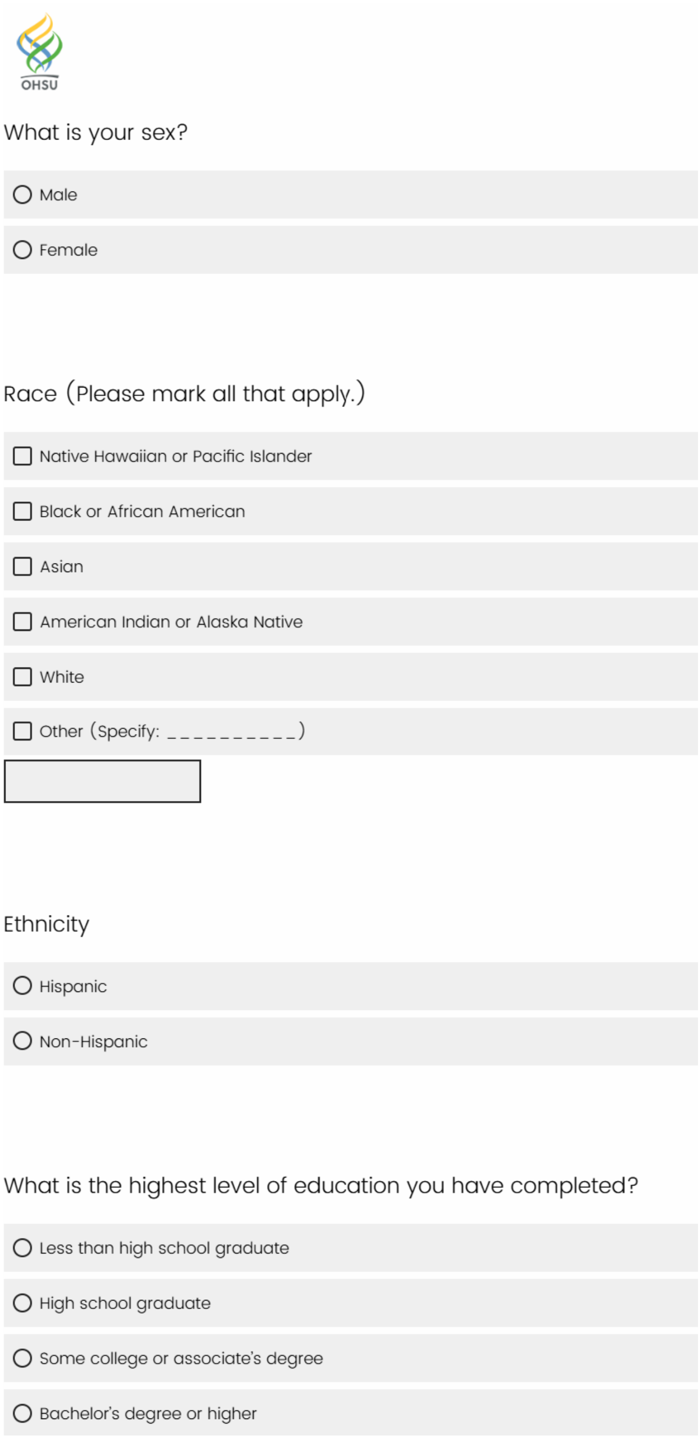
Appendix A: Project Timeline Example

	May 2024	Jun. 2024	Jul. 2024	Aug. 2024	Sep. 2024	Oct. 2024	Nov. 2024	Dec. 2024-Mar. 2025
Finalize project design and approach (703A)		X						
Complete IRB determination or approval (703A)			X					
Survey Development (703B)				X	X			
Survey Distribution (703B)						X		
Presentation to clinic (703B)						X		
Final data analysis (703B)							X	
Write sections 13-17 of final paper (703B)							X	
Prepare for project dissemination (703B)								X

Appendix B: Cause and Effect Diagram



Appendix C: Survey: Diabetes Follow-Up Care



What is your sex?

○ Male

○ Female

Race (Please mark all that apply.)

☐ Native Hawaiian or Pacific Islander

☐ Black or African American

☐ Asian

☐ American Indian or Alaska Native

☐ White

☐ Other (Specify: __________)

Ethnicity

○ Hispanic

○ Non-Hispanic

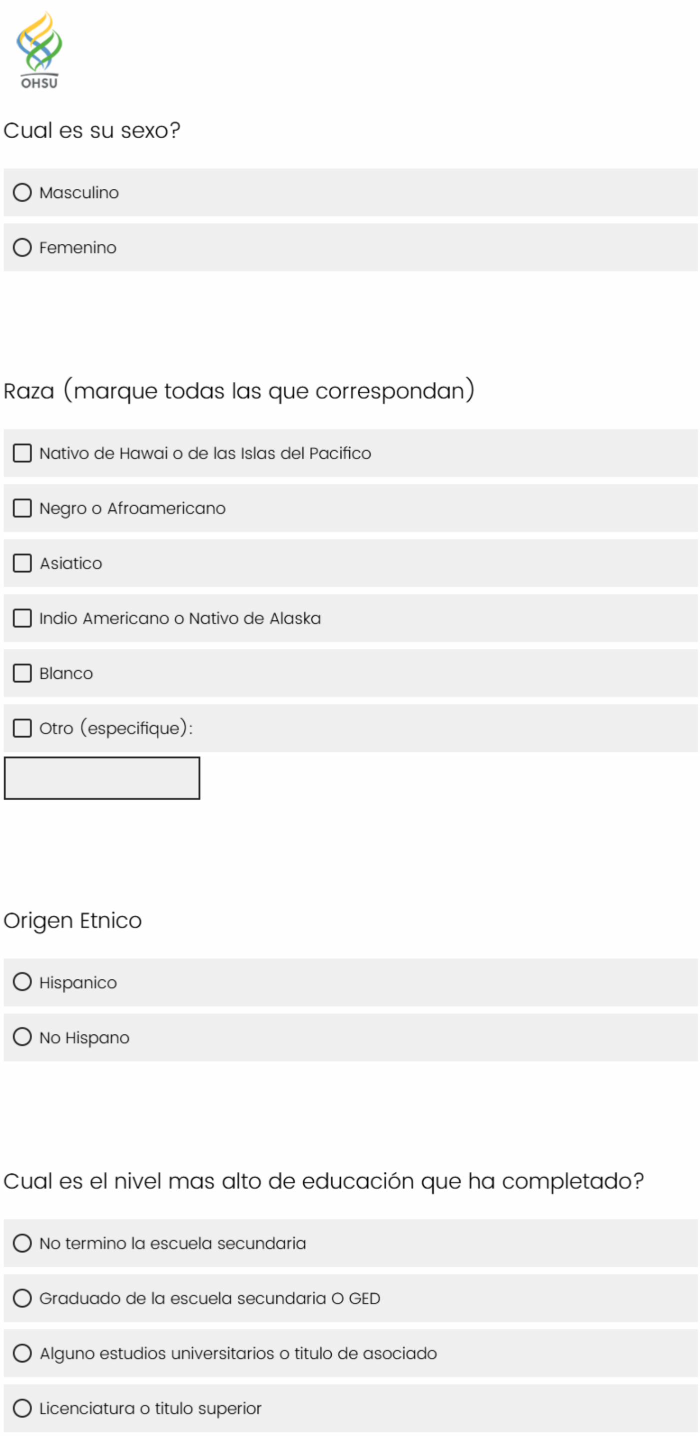
What is the highest level of education you have completed?

○ Less than high school graduate

○ High school graduate

○ Some college or associate's degree

○ Bachelor's degree or higher



Cual es su sexo?

○ Masculino

○ Femenino

Raza (marque todas las que correspondan)

☐ Nativo de Hawai o de las Islas del Pacifico

☐ Negro o Afroamericano

☐ Asiatico

☐ Indio Americano o Nativo de Alaska

☐ Blanco

☐ Otro (especifique):

Origen Etnico

○ Hispanico

○ No Hispano

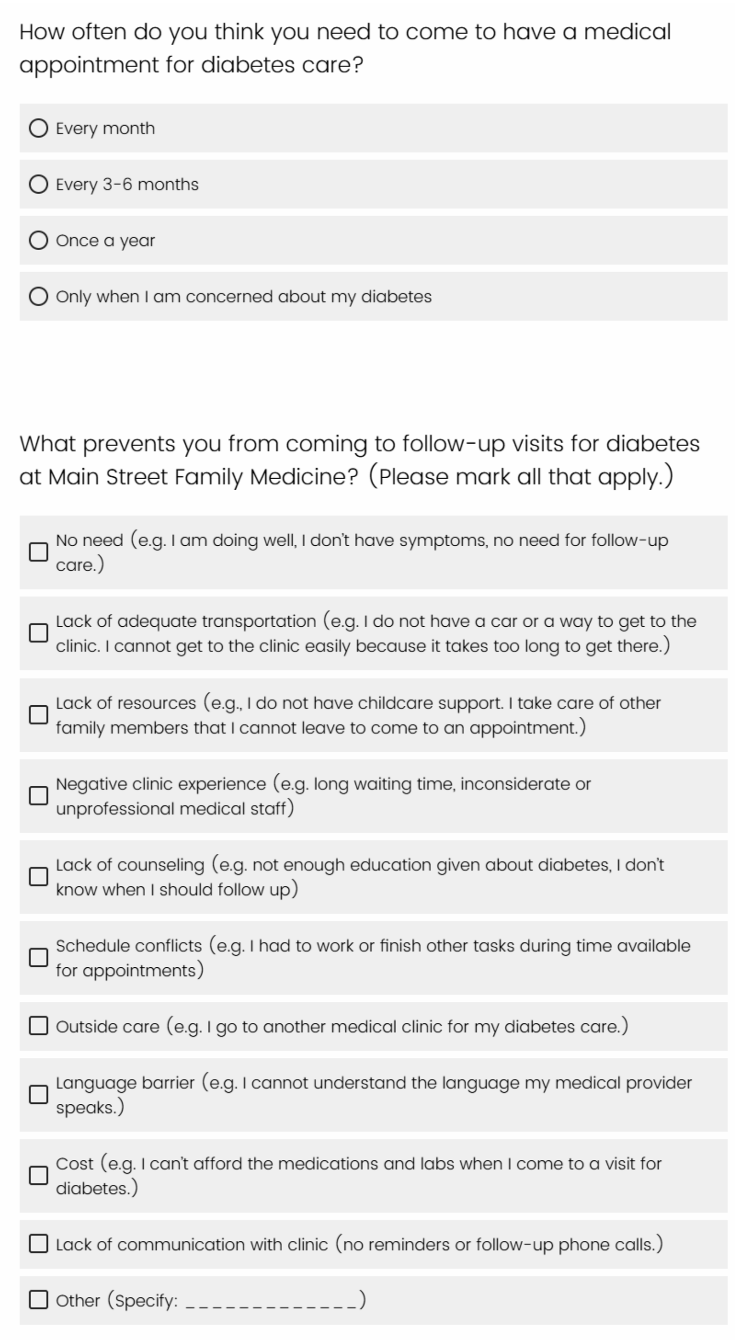
Cual es el nivel mas alto de educación que ha completado?

○ No termino la escuela secundaria

○ Graduado de la escuela secundaria O GED

○ Alguno estudios universitarios o titulo de asociado

○ Licenciatura o titulo superior



How often do you think you need to come to have a medical appointment for diabetes care?

○ Every month

○ Every 3-6 months

○ Once a year

○ Only when I am concerned about my diabetes

What prevents you from coming to follow-up visits for diabetes at Main Street Family Medicine? (Please mark all that apply.)

☐ No need (e.g. I am doing well, I don't have symptoms, no need for follow-up care.)

☐ Lack of adequate transportation (e.g. I do not have a car or a way to get to the clinic. I cannot get to the clinic easily because it takes too long to get there.)

☐ Lack of resources (e.g., I do not have childcare support. I take care of other family members that I cannot leave to come to an appointment.)

☐ Negative clinic experience (e.g. long waiting time, inconsiderate or unprofessional medical staff)

☐ Lack of counseling (e.g. not enough education given about diabetes, I don't know when I should follow up)

☐ Schedule conflicts (e.g. I had to work or finish other tasks during time available for appointments)

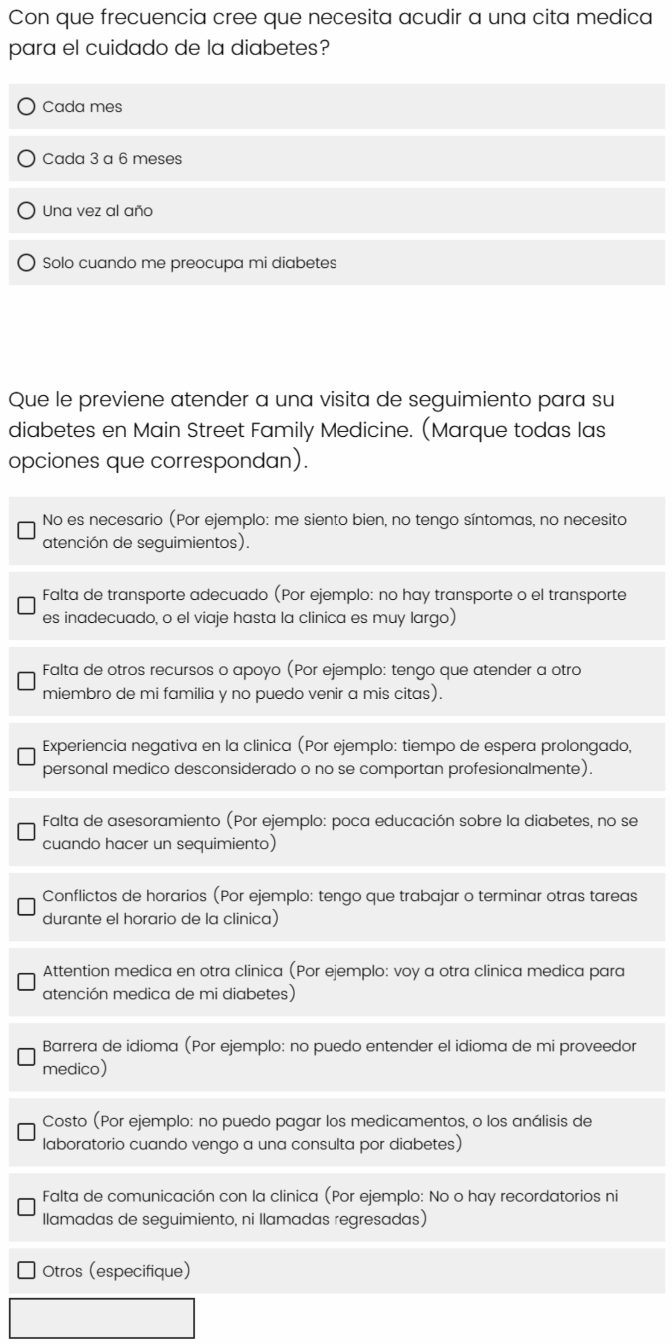
☐ Outside care (e.g. I go to another medical clinic for my diabetes care.)

☐ Language barrier (e.g. I cannot understand the language my medical provider speaks.)

☐ Cost (e.g. I can't afford the medications and labs when I come to a visit for diabetes.)

☐ Lack of communication with clinic (no reminders or follow-up phone calls.)

☐ Other (Specify: _____________)



Con que frecuencia cree que necesita acudir a una cita medica para el cuidado de la diabetes?

○ Cada mes

○ Cada 3 a 6 meses

○ Una vez al año

○ Solo cuando me preocupa mi diabetes

Que le previene atender a una visita de seguimiento para su diabetes en Main Street Family Medicine. (Marque todas las opciones que correspondan).

☐ No es necesario (Por ejemplo: me siento bien, no tengo síntomas, no necesito atención de seguimientos).

☐ Falta de transporte adecuado (Por ejemplo: no hay transporte o el transporte es inadecuado, o el viaje hasta la clinica es muy largo)

☐ Falta de otros recursos o apoyo (Por ejemplo: tengo que atender a otro miembro de mi familia y no puedo venir a mis citas).

☐ Experiencia negativa en la clinica (Por ejemplo: tiempo de espera prolongado, personal medico desconsiderado o no se comportan profesionalmente).

☐ Falta de asesoramiento (Por ejemplo: poca educación sobre la diabetes, no se cuando hacer un sequimiento)

☐ Conflictos de horarios (Por ejemplo: tengo que trabajar o terminar otras tareas durante el horario de la clinica)

☐ Attention medica en otra clinica (Por ejemplo: voy a otra clinica medica para atención medica de mi diabetes)

☐ Barrera de idioma (Por ejemplo: no puedo entender el idioma de mi proveedor medico)

☐ Costo (Por ejemplo: no puedo pagar los medicamentos, o los análisis de laboratorio cuando vengo a una consulta por diabetes)

☐ Falta de comunicación con la clinica (Por ejemplo: No o hay recordatorios ni llamadas de seguimiento, ni llamadas regresadas)

☐ Otros (especifique)

What helps you to come to follow-up visits for diabetes at Main Street Family Medicine? (Please mark all that apply.)

☐ Need (e.g. I need to check on symptoms, refill medications, etc.)

☐ Good clinic experience (e.g. I have a pleasant experience at the clinic because of the way I am treated by staff.)

☐ Education and counseling (e.g. I was taught about diabetes and how often to follow up with my medical provider.)

☐ Scheduling (e.g. It is easy to get appointments that fit with my schedule)

☐ Translation services for language barrier (preferred language______)

☐ Good communication (e.g. reminders (text/call/email), follow-up phone calls when I missed an appointment)

☐ Other (Specify: __________)

Do you have any suggestions for what would make you more likely to attend follow-up visits for diabetes care? Please share your thoughts.

Que le ayuda a venir a las visitas de seguimiento por diabetes en Main Street Family Medicine. (Marque todas las opciones que correspondan)

☐ Necesidad (Por ejemplo: necesito controlar los niveles de azúcar en la sangre o los síntomas, o renovar mis recetas de medicamentos)

☐ Experiencia clinica positiva (Por ejemplo: tengo una experiencia agradable en la clinica debido a la forma en que me tratan)

☐ Educación y asesoramiento (Por ejemplo, me enseñaron sobre la diabetes y con que frecuencia debo hacer un seguimiento con mi proveedor medico

☐ Programación (Por ejemplo: es facil conseguir citas que se ajusten a mi horario)

☐ Servicios de traducción para mi idioma (idioma preferido __________)

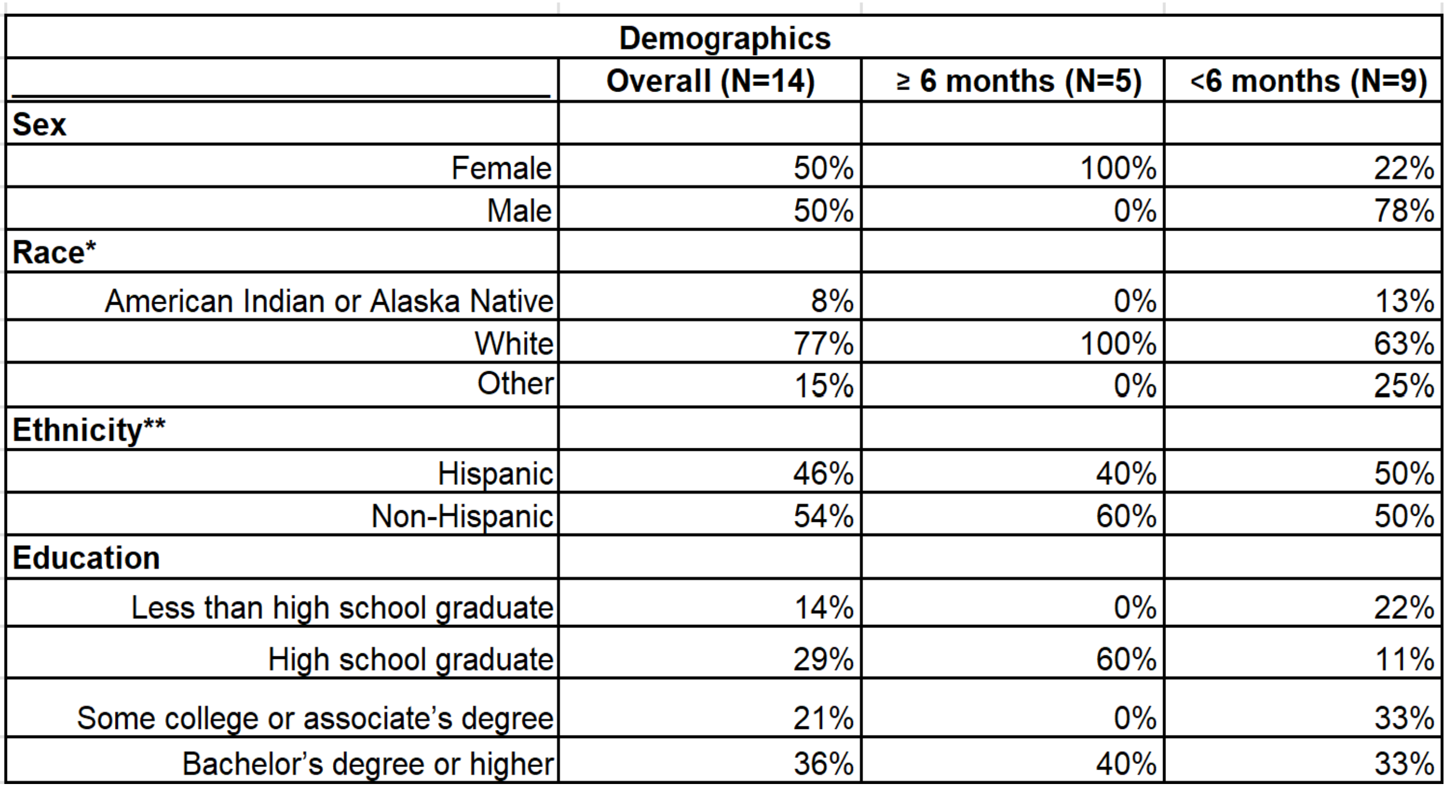
☐ Buena comunicación (Por ejemplo, recordatorios por medio de texto, llamada o correo electrónico, llamadas cuando se me pasa una cita)

☐ Otros (especifique)

Tiene usted alguna otra sugerencia que le ayudaría a usted a sus visitas de seguimiento para atención de su diabetes? Por favor comparta sus ideas:

Appendix D: Results

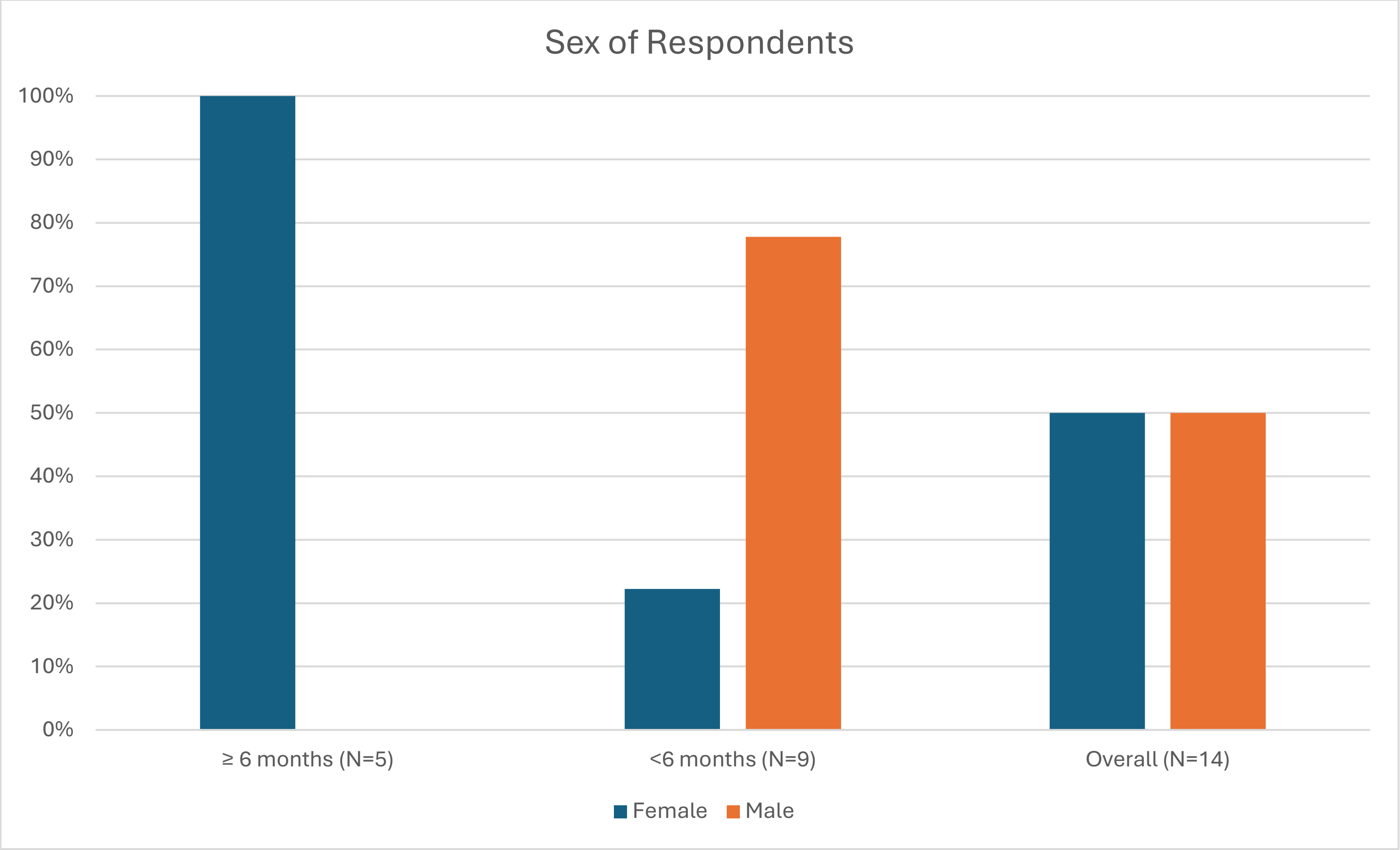
Table 1: Respondent Demographics



Demographics			
	Overall (N=14)	≥ 6 months (N=5)	<6 months (N=9)
Sex			
Female	50%	100%	22%
Male	50%	0%	78%
Race*			
American Indian or Alaska Native	8%	0%	13%
White	77%	100%	63%
Other	15%	0%	25%
Ethnicity**			
Hispanic	46%	40%	50%
Non-Hispanic	54%	60%	50%
Education			
Less than high school graduate	14%	0%	22%
High school graduate	29%	60%	11%
Some college or associate’s degree	21%	0%	33%
Bachelor’s degree or higher	36%	40%	33%

* One wrote in "Hispanic", one patient did not respond
** One patient did not respond.

Figure 1: Sex of Respondents



The Fisher exact test statistic value is 0.021. The difference in respondents' sex in each group is significant at $p < .05$.

Figure 2: Question 5 - Frequency of Follow-Up

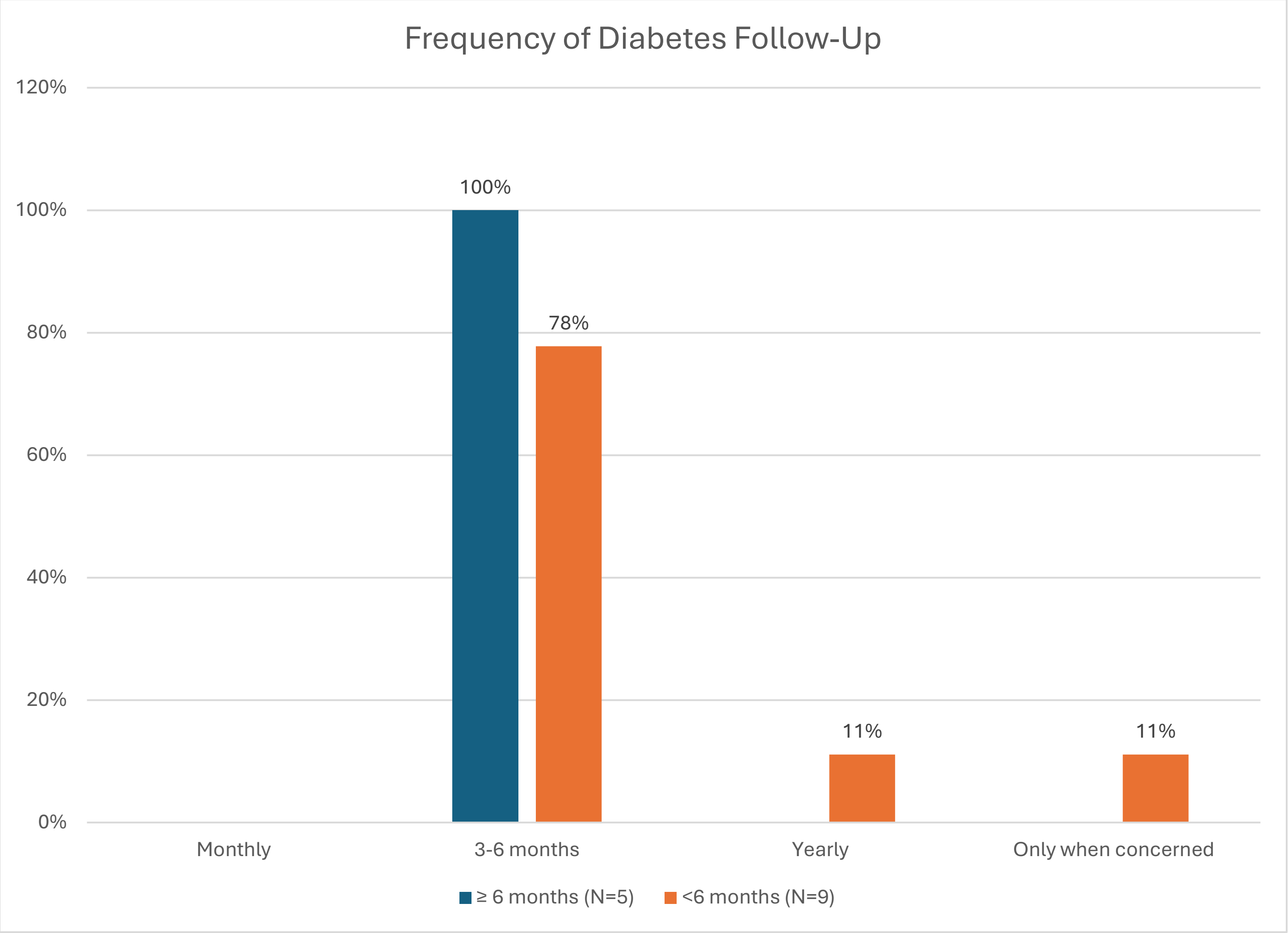


Figure 3: Question 6 - What prevents patients from follow-up?

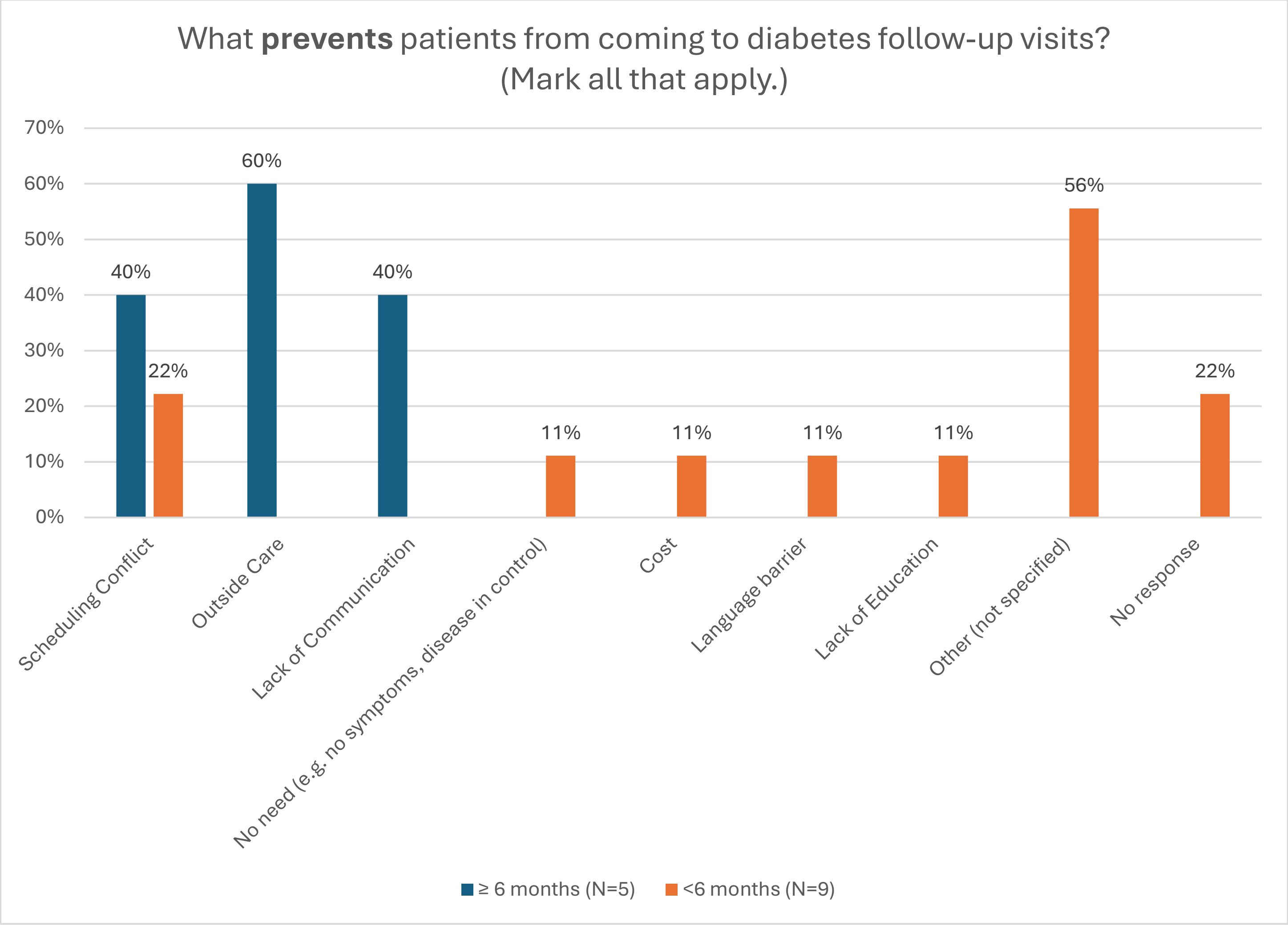


Figure 4: Question 7 - What helps patients follow-up?

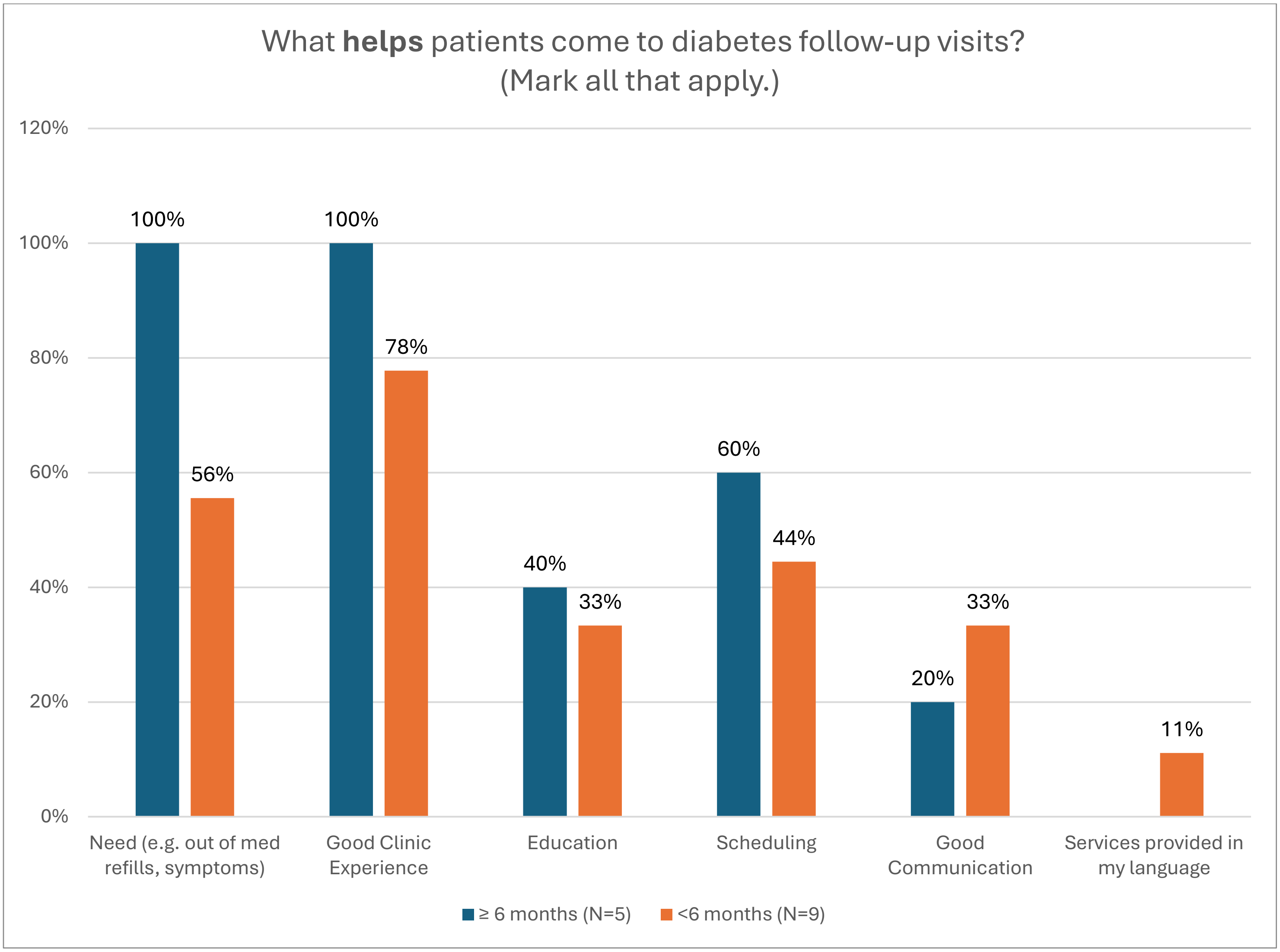
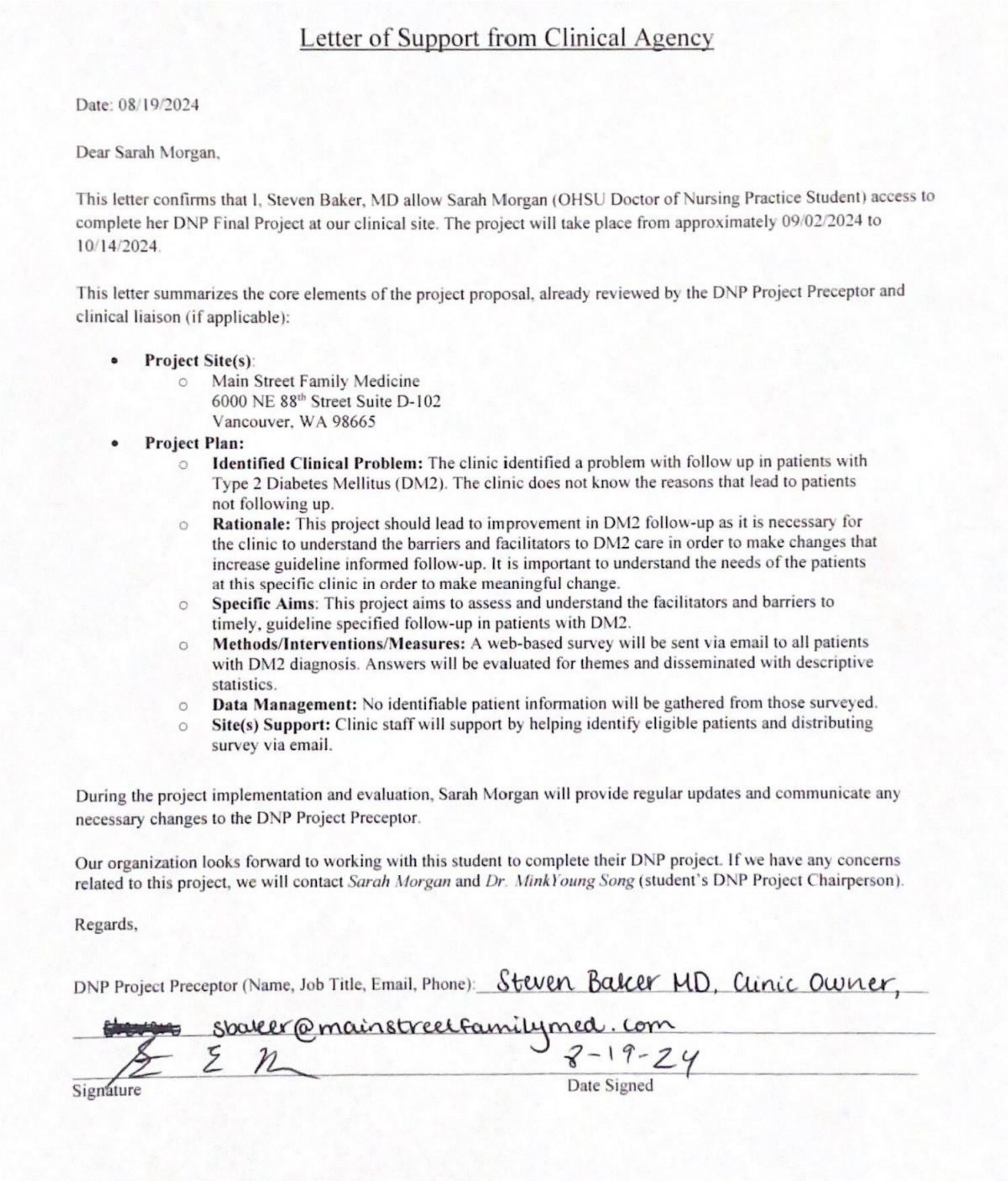


Table 2: Question 8 – Other suggestions to make diabetes follow-up more likely

Group	Theme	# of responses
≥6 months	Group Visits	1
	Pre-made appointments or 90 day reminders	3
	None	1
<6 months	Satisfied	7
	Wanting more routine screening exams (e.g. monofilament testing)	1

Appendix E



Letter of Support from Clinical Agency

Date: 08/19/2024

Dear Sarah Morgan,

This letter confirms that I, Steven Baker, MD allow Sarah Morgan (OHSU Doctor of Nursing Practice Student) access to complete her DNP Final Project at our clinical site. The project will take place from approximately 09/02/2024 to 10/14/2024.

This letter summarizes the core elements of the project proposal, already reviewed by the DNP Project Preceptor and clinical liaison (if applicable):

- **Project Site(s)**:
    - Main Street Family Medicine
      6000 NE 88th Street Suite D-102
      Vancouver, WA 98665
- **Project Plan:**
    - **Identified Clinical Problem:** The clinic identified a problem with follow up in patients with Type 2 Diabetes Mellitus (DM2). The clinic does not know the reasons that lead to patients not following up.
    - **Rationale:** This project should lead to improvement in DM2 follow-up as it is necessary for the clinic to understand the barriers and facilitators to DM2 care in order to make changes that increase guideline informed follow-up. It is important to understand the needs of the patients at this specific clinic in order to make meaningful change.
    - **Specific Aims**: This project aims to assess and understand the facilitators and barriers to timely, guideline specified follow-up in patients with DM2.
    - **Methods/Interventions/Measures:** A web-based survey will be sent via email to all patients with DM2 diagnosis. Answers will be evaluated for themes and disseminated with descriptive statistics.
    - **Data Management:** No identifiable patient information will be gathered from those surveyed.
    - **Site(s) Support:** Clinic staff will support by helping identify eligible patients and distributing survey via email.

During the project implementation and evaluation, Sarah Morgan will provide regular updates and communicate any necessary changes to the DNP Project Preceptor.

Our organization looks forward to working with this student to complete their DNP project. If we have any concerns related to this project, we will contact *Sarah Morgan* and *Dr. MinkYoung Song* (student's DNP Project Chairperson).

Regards,

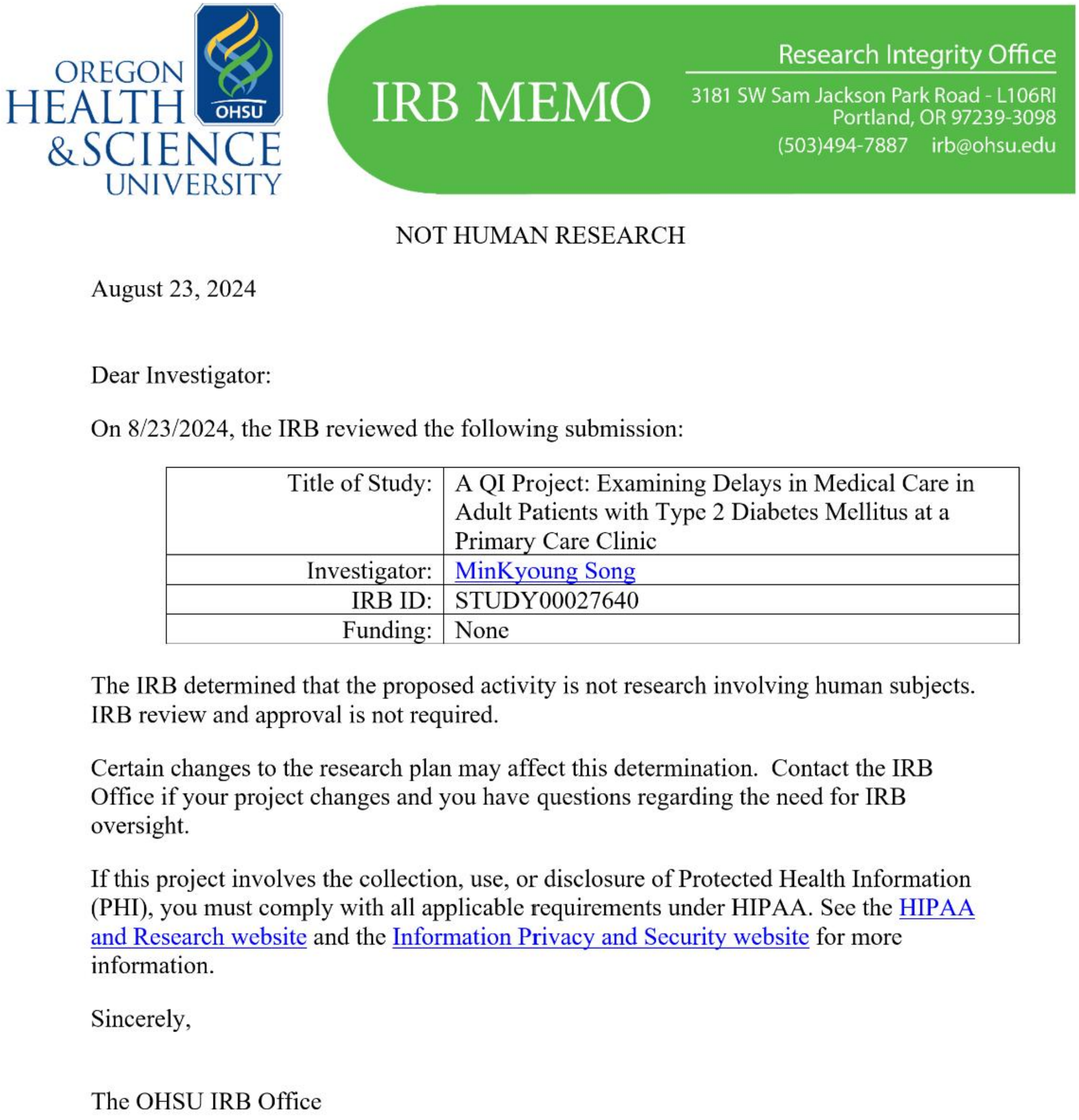
DNP Project Preceptor (Name, Job Title, Email, Phone): Steven Baker MD, Clinic Owner,

[redacted] sbaker@mainstreetfamilymed.com

8-19-24

Signature Date Signed

Appendix F: IRB Exemption



OREGON HEALTH & SCIENCE UNIVERSITY
OHSU

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 23, 2024

Dear Investigator:

On 8/23/2024, the IRB reviewed the following submission:

Title of Study:	A QI Project: Examining Delays in Medical Care in Adult Patients with Type 2 Diabetes Mellitus at a Primary Care Clinic
Investigator:	MinKyoung Song
IRB ID:	STUDY00027640
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