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Caitlin Farrell April 18, 2023

Barriers and facilitators to COVID-19 vaccination in people affected by diabetes in Georgia: A qualitative study applying the COM-B model

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ABSTRACT

Barriers and facilitators to COVID-19 vaccination in people affected by diabetes in Georgia: A qualitative study applying the COM-B model

By Caitlin Farrell

Background: People at risk for diabetes and people living with diabetes have been found to have severe outcomes in cases of COVID-19. The goal of this study was to understand the barriers and facilitators to COVID-19 vaccination among people affected by diabetes, including people living with diabetes, those at risk for diabetes, and caregivers for those living with diabetes in the state of Georgia, US - a state with one of the highest rates of diabetes in the country.

Methods: A theory of behavior change, the Capability, Opportunity, and Motivation determine Behavior (COM-B) model, was used to guide the study from the conceptualization of the project, development of interview guides and analysis of interview data, and presentation of results. The COM-B model includes three components that are theorized to influence behavior: (1) capability, which refers to the ability to perform an action and is comprised of two sub-components, physical opportunity and psychological capability (2) opportunity, defined as the environmental and social factors that contribute to the behavior and is comprised of two sub-components, physical opportunity and social opportunity and (3) motivation, defined as the internal process of decision making, which includes the subcomponents of reflective motivation and automatic motivation. A total of 53 interviews were conducted with 17 people at risk for diabetes, 6 caregivers, and 30 individuals living with diabetes to elicit information about the COM-B components. Rapid data analysis was conducted, which involved Rapid Assessment Procedure (RAP) sheets that summarized each interview transcript. Coding of barriers and facilitators was categorized using the COM-B sub-components. Thick descriptions were created that described the barriers and facilitators identified.

Results: Barriers and facilitators to COVID-19 vaccination were found across the COM-B sub-components and participant types. The most frequently discussed barriers and facilitators to vaccination were worries about the side effects of the vaccine, access to a vaccination sites, pressure of family and friends, knowledge on vaccine development, and the motivation to be and feel protected against COVID-19. The participants' feelings of trust were also notable as both a barrier and a facilitator to vaccination. Trust was also largely linked to participant knowledge on vaccine development, side effects, and what is in the vaccine. An additional barrier that participants mentioned was distrust in the vaccine due to untrustworthy people's involvement, such as the US government and Bill Gates.

Conclusions: The most notable barrier to COVID-19 vaccination found across participant types were knowledge-related barriers. A lack of knowledge as a barrier was found to influence other sub-components, especially reflective and automatic motivation. Further, misinformation on the safety, effectiveness, and development of the vaccine had a large impact on the extent to which participants trusted the vaccine. There is an opportunity to develop greater policy and health education initiatives to help increase uptake of the COVID-19 vaccines among people affected by diabetes. Further, as efforts to combat misinformation progress, there must simultaneously be strategies for engaging and building trust in the community.

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CHAPTER 1: INTRODUCTION

INTRODUCTION

The NIH RADx-UP funded project, Project PEACH (Promoting Engagement and COVID-19 Testing for Health) seeks to understand the attitudes, beliefs, and infrastructure associated with COVID-19 risk, testing, and preventative behaviors in the high-risk population of people affected by diabetes in Georgia. For this study, qualitative data collected as part of Project PEACH was analyzed to explore the barriers and facilitators to COVID-19 vaccination in people affected by diabetes in the state of Georgia. The Capability, Opportunity, and Motivation determine Behavior (COM-B) model was used for this study, guiding conceptualization, data collection, analysis, and presentation of findings.

PROBLEM STATEMENT

There were no studies found that examine barriers and facilitators to COVID-19 vaccination in the state of Georgia and within the high-risk population of people affected by diabetes. There is also a lack of focus in research in general on the barriers and facilitators to COVID-19 vaccination within the southern United States. There are several studies that have explored the barriers and facilitators to COVID-19 vaccination behaviors [1-5]. However, these studies have not looked at the high-risk populations of those affected by diabetes. People living with diabetes are at high risk for severe COVID-19 infections, leading to higher adverse health outcomes and death compared with those who are not living with diabetes [6-8]. People at risk for diabetes are also at elevated risk for severe COVID-19 infections compared with those who are not at risk for diabetes. As such, these populations are in high need of COVID-19

vaccination. The caregivers for people living with diabetes have a high need to be vaccinated to limit transmission to the people they care for [9 10].

SIGNIFICANCE

This research is important because the study population - those affected by diabetes - is a high-risk population group for a COVID-19 adverse health outcomes. There is a need to understand the reasoning and motivations for being vaccinated, or not being vaccinated, against COVID-19. This research will help inform future implementation science work with this high-risk population group in Georgia to encourage uptake of the COVID-19 vaccine. Understanding the barriers also provides a basis for researchers and project implementors to develop strategies to address these barriers. The facilitators found can be used as continued encouragement and to understand what previous messages have resonated with the participants.

GOAL

The goal of this study was to understand the barriers and facilitators to COVID-19 vaccination among people affected by diabetes, including people at risk for diabetes, caregivers for those with diabetes, and people living with diabetes, in the state of Georgia. This study used the COM-B model to guide data collection and analysis of barriers and facilitators to COVID-19 vaccination. Specifically, the interviews were designed to elicit information about the COM-B components of capability, opportunity, and motivation, and then the findings were then analyzed and mapped onto the COM-B components.

OVERVIEW OF CONTENTS

This thesis consists of five chapters, beginning with introduction to the study. The following chapter is a review of the literature on the problem of COVID-19, the health challenge of diabetes, and how people living with diabetes are affected by a COVID infection. The review also describes how Georgia has been affected by COVID-19 and the current case rates of diabetes in Georgia. The review moves to information on the SARS-CoV-2 vaccine development and brief synthesis on the existing literature on the barriers and facilitators to COVID-19 vaccination.

The methodology chapter (3) gives description on the study design, the study population, data collection, data analysis, and ethical approvals.

Chapter 4 is the results chapter. There is description of the qualitative results from participants asked about their beliefs and motivations for vaccination, identified as barriers and facilitators to COVID vaccination. These results are broken down by the COM-B model (psychological capability, physical opportunity, social opportunity, reflective motivation, and automatic motivation) and by participant type (at risk for diabetes, caregivers, and participants living with diabetes). These results are additionally viewed by showing the overlap of barriers and facilitators between the COM-B components and the participant types (Appendix A).

The final chapter (5) is a discussion of the results, how this relates to the existing literature, and recommendations. There is also discussion on the COM-B model in this study and for future research.

CHAPTER 2: LITERATURE REVIEW

INTRODUCTION

There is a need to understand the COVID-19 vaccination views and behaviors within the affected by diabetes population groups and the preventative behaviors that individuals and their families are taking to mitigate risk of infection or severe infection. Due to the elevated risk of severe COVID-19 infection in individuals with diabetes [6-8 11-13] , this population has a higher need of testing for COVID-19 infection, following guidance to reduce COVID-19 infection, and being vaccinated. There have been issues with COVID-19 testing and vaccination in other vulnerable communities due to distrust with health professionals, a lack of testing infrastructure being available, and community testing plans and messaging being inadequate [14 15].

DIABETES

DIABETES

Diabetes is a chronic disease that is characterized by the inability of the body to produce sufficient insulin to regulate blood sugar levels. The main source of energy from the food that is eaten becomes blood glucose. Insulin helps facilitate the transition of food to energy that the body can use. Insulin is a hormone made in the pancreas. The glucose remains within the bloodstream and is unable to reach the cells when the body is not able to make, make enough of, or use insulin [16].

There are approximately 37.3 million people in the United States with diabetes, making up 11.3% of the US population. There are likely 8.5 million adult people that are undiagnosed with diabetes, about 23% of adults. Along with this, there are 96 million people over the age of 18 that are at risk for diabetes, about 38% of the adult US population [17]. In the United States diabetes accounts for $237 billion per year in direct medical costs and $90 billion in indirect costs [18]. There are three forms of diabetes – type 1, type 2, and gestational diabetes.

Type 1 diabetes is when the patient is unable to make insulin. This is commonly recognized in adolescence and is called insulin-dependent diabetes. There are many different factors that affect the emergence of type 1 diabetes, including genetics and viruses [19]. It is commonly considered to be an autoimmune reaction where the pancreas cells - beta cells - that make insulin are destroyed. Symptoms manifestation may take months to years due to the slow process of cell degradation in the pancreas [20]. There is no cure for type-1 diabetes and treatment is focused on managing blood glucose levels with insulin and lifestyle choices [19].

Type 2 diabetes is the most common type of diabetes and is when a patient is unable to make insulin or does not utilize insulin well. This type of diabetes can develop at any age but is more commonly found in middle to older aged people [16]. Other factors that affect development of type 2 diabetes are having high blood pressure, being physically inactive, being overweight or obese, and having a family history of diabetes. Risk for diabetes is higher in people who are African American, Hispanic, or Latino, American Indian, Asian American, or Pacific Islander [21].

When diabetes is not regulated, there is increased risk of long periods of hyperglycemia, high blood sugar. Prolonged hyperglycemia puts the patient at risk for heart disease, stroke, and kidney disease [22]. Hyperglycemia can lead to complications including diabetic ketoacidosis.

This develops when the body does not have enough insulin to promote movement of blood glucose into the cells. The body then moves to break down fat stores for energy, leading to a buildup of ketones in the blood that lower the natural pH [20 23].

DIABETES IN GEORGIA

Compared to the rest of the United States, there is a disproportionate concentration of type 2 diabetes (hereafter referred to as diabetes) cases in the southeastern states. Through a county-by-county analysis, a defined "diabetes belt" was found. This includes parts of 15 states- Alabama, Arkansas, Florida, Georgia, Kentucky, Louisiana, North Carolina, Ohio, Pennsylvania, South Carolina, Tennessee, Texas, West Virginia- and all of Mississippi. The areas within the belt have a higher prevalence of diabetes cases than anywhere else in the United States, regardless of population age, race, ethnicity, and weight status [24]. It is interesting to note that the "diabetes belt" has also been found to overlap with the "stroke belt," first defined in the 1960s. This is not surprising given that there are shared risk factors for stroke and diabetes, overweight and obesity, with people living with diabetes being at higher risk for stroke as well [25].

Georgia currently has 1 million people diagnosed with diabetes, making up 12.3% of the population [26]. There are a further 230,000 people that are undiagnosed but estimated to have diabetes [27]. Additionally, another 2 million Georgians are considered to have pre-diabetes and are at risk of developing diabetes if there is not a change to lifestyle, weight loss, or improved nutrition [27]. Case rates of diabetes in Georgia have been steadily increasing over the past three decades. In 1995, the percentage of adults with diabetes was 3.7%, below that national

percentage of 4.4% that year. After 2000, Georgia has consistently ranked above the national percentage to reach 12.3% in Georgia, compared with 10.9% nationally [26].

Within Georgia, there are also differences in the prevalence of diabetes based on race, ethnicity, education level attained, income, and age. For example, in 2021, adults aged 18-44 years had the lowest prevalence at 3.9%, while the percentage of adults aged 65+ years old with diabetes was highest at 25.8% . Education level increase has also shown differences in cases, with college graduates having the lowest percentage at 8.8% with diabetes, while having less than high school sees the highest at 18.1% with diabetes. A breakdown by income level follows the same trend with making at least $75,000 a year being lowest at 9.3% with diabetes while making less than $25,000 a year highest at 19.4% with diabetes [26]. Race and ethnicity also have differences between the groups with racial and ethnic minorities such as African Americans and Hispanic/Latinos consistently having higher rates of obesity and diabetes cases compared with Whites. Race and ethnicity have also been found to be correlated with more severe COVID-19 symptoms, health outcomes, and risk of death [28-30].

COVID-19

COVID-19

The COVID-19 pandemic began in December of 2019 and is caused by the SAR-CoV-2 virus [31]. Due to the high basic reproduction number, R_0, estimated to be between 1.5 and 6.68, COVID-19 spread quickly, being declared a global pandemic by March 2020 [32]. As of March 2023, there have been 758,390,563 confirmed cases of COVID-19 with 6,859,093 deaths [33]. A total of 13,228,728,467 vaccine doses have been administered as of March 2023 [33]. These

numbers likely under report of the scope of COVID-19 on the world. This can be due to unreported cases and testing, unreported deaths, lingering symptoms and health complications, and the effect of COVID-19 on the progression of other pre-existing conditions [34 35].

COVID-19 is an infectious disease that mainly targets the respiratory system. This is described further as SARS- a disease causing severe acute respiratory syndrome. Symptoms have varied from mild and moderate, not requiring any treatment, to severe symptoms requiring medical attention [36]. It has been noted that there are patients experiencing symptoms that are lingering and re-emerging following an initial infection. This is being called "long COVID" and many previously infected people are reporting that they are experiencing symptoms [37]. Since the introduction of the original strain in 2019, COVID-19 has split to create many virus variants.

COVID-19 IN GEORGIA

From the beginning of the pandemic, there has been a total of 2,867,024 cases of COVID-19 reported in the state of Georgia. A total of 39,748 deaths from COVID-19 have been reported, making the proportion 1 death in 268 residents of Georgia [38].

Reported COVID cases in Georgia began slowly with reporting getting the first increase from in the beginning of April 2020. This slow case reporting is likely due to a lack of COVID-19 testing in the beginning of the pandemic rather than a lack of case presence in the state. A first spike occurred from the middle of June 2020 to the end of July 2020. A peak of 3490 new cases occurred on 29 July 2020. There was a case decrease from July to October 2020, but an increase in cases to another peak at 9694 new cases on 13 January 2021. Cases saw a steep decline to reach a low of case daily average at 320 on 29 June 2021 with 0 new cases. A sharp increase

began with a peak of cases on 30 August at 8996 daily average cases. A dip occurred after this until the steepest increase of cases over the shortest period began. Cases went from 874 on 30 November 2021 to a daily average of 20,567 cases and with additional new cases of 22,738 on 13 January 2022 [38].

Georgia has experienced a high case load of COVID-19 throughout the pandemic. In the Southeastern United States, there is a large concentration of diabetes cases [39 40]. The state of Georgia is also facing a high burden of COVID-19 cases along with complications from COVID-19 infection [41]. Within the population of Georgia, there is a higher concentration of diabetes rates in areas that are socioeconomically disadvantaged and in minority populations [41 42].

COVID-19 AND DIABETES

COVID-19 infection severity has been linked with several co-morbidities, including asthma, hypertension, chronic obstructive pulmonary disease (COPD), cardiovascular disease (CVD), and diabetes [11]. COVID-19 patients with diabetes mellitus, hypertension, and with severe obesity were also found to have elevated risk for death and complications associated with COVID infection [12]. This has been found previously for people with diabetes who had SARS and MERS infections. Many people with diabetes have co-morbidities of hypertension, CVD, and obesity. This makes it difficult to assess the direct impact of diabetes on COVID-19 infections. However, previous literature from SARS infections has used plasma glucose levels and person being diabetic as a predictor for mortality and morbidity [13]. It is thought that there are several mechanism-based changes in patients with diabetes that may increase the rate and risk of COVID-19 infection as well [43 44].

Researchers have linked the higher risk in people with diabetes to the already compromised immune system. People living with diabetes have a weakened innate and adaptive immune system. This is thought to be from hyperglycemia causing dysfunction in the immune response, leading to difficulty in infection control [45]. Further, having a high blood glucose level will lead to a natural inflammatory response. When high blood glucose is chronic, the insulin producing beta cells in the pancreas are further damaged, resulting in lowered insulin production and hyperglycemia [45]. An impaired immune system can contribute to the inability of a diabetic individual to fight COVID-19 infection and leading to more adverse outcomes [44].

Within the COVID-19 hospitalized patients with severe complications, upwards of 40% have been found to have diabetes as a co-morbidity. When this figure is adjusted for patients in the 50–64-year category, the percentage increases to 46.5%. COVID-19 patients with diabetes were found to be at risk for hospital re-admittance within 2 months of initial hospital stay [46 47]. Further, for the COVID-19 patients under 18 years old, they are 2.5 times more likely to have a diabetes diagnosis after having tested positive for COVID-19 [48].

It has been shown that diabetes leads to 2 times increased risk of death in COVID-19 cases [49]. Out of all COVID-19 deaths, about 30% of these deaths are in people with diabetes [50 51]. People with diabetes or hyperglycemia are also having more severe complications with a COVID-19 infection, including longer stays in the hospital and a higher rate of ICU admission due to symptom presentation [52 53].

COVID-19 VACCINATION

Vaccinations are an incredibly important factor to COVID-19 control and adverse health outcomes. The COVID-19 vaccines became available after the FDA gave emergency use authorization in December of 2020 to Pfizer-BioNTech and Moderna COVID-19 vaccines. Vaccination has been widely accepted in many areas across the United States after the FDA approval [54]. The emergency use authorization is an instrument to increase the availability of a medical intervention, like vaccines, during a public health emergency. With an EUA, the FDA is able to give approval to a medical product or use of a medical product in a way that has not been approved yet [55]. These vaccines were found to be safe and effective against the SARS-CoV-2 strain [56]. The COVID-19 vaccine is found to give a person protection against getting COVID-19, prevention of severe symptoms including hospitalization and death, and to limit the spread of COVID-19 to others in the community [57].

The development of these vaccines comes from decades of research and publications. The beginning of mRNA vaccines can be found in 1984 with Drs. Krieg, Melton, Maniatis, and Green out of Harvard University. This research team found a method to make biologically active mRNA from a synthesized RNA enzyme. In 1987, Robert Malone discovered while mixing mRNA and fat with human cells, that the cells will draw in mRNA and use it to create proteins. In the 1990s, testing began for mRNA treatment and vaccines for influenza and cancer, but due to high cost with this research, funding was not readily available. In 2005, Drs. Kariko and Weissman found that they could keep the immune system from attacking non-host, synthetic mRNA strands with some modification, allowing mRNA vaccine research to progress. By the 2010s, mRNA research was occurring around the world. In response to the COVID pandemic, researchers adapt the research on mRNA vaccines of SARS-CoV and MERS-CoV to create a

vaccine for SARS-CoV-2. By 2020 clinical trials are already beginning for several vaccine and drug treatment options. In 2022 the Moderna vaccine, called Spikevax, and Pfizer-BioNTech vaccine, Comirnaty, was approved for people at least 6 months old [56].

While vaccine hesitancy has been a concern before the COVID-19 pandemic, there is an increased focus on this issue from the public. There is also a notable movement of people who have not previously been against vaccinations being hesitant to get a COVID-19 vaccine [58].

COVID-19 VACCINATION IN GEORGIA

In Georgia, the rates of vaccination hesitancy remain high, especially in non-metropolitan areas. The CDC has used US Census Bureau data from the Household Pulse Survey to estimate out by county the levels of vaccine hesitancy. Most of Georgia is seen to be ranging from 8% to 12% of the population hesitant, with southeastern Georgia in the 12 to 14% range [59].

Georgia currently has 7,108,056 people that have received at least one vaccine dose, 5,950,85 people considered fully vaccinated, and 2,342,269 people with an additional booster dose. Following above, this is 67% of the state with one dose, 56% fully vaccinated, and 23% with an additional booster dose [60]. Georgia has one of the lowest rates of COVID-19 vaccination in the country, necessitating a need to further understand the reasons, beliefs, and challenges to getting Georgians vaccinated against COVID-19. Further, there is a specific need to focus research on socioeconomically disadvantaged and racial minorities who are facing higher rates of COVID-19 infections and are at greater risk for diabetes or pre-diabetes.

CHAPTER 3: METHODOLOGY

STUDY DESIGN

Project PEACH is a mixed methods study with longitudinal components. The study is funded as part of the NIH RADx-UP COVID Testing and Diabetes Studies with partners at Emory University Global Diabetes Research Center, Georgia Institute of Technology, and Morehouse School of Medicine. The study collected data on the experiences and perspectives on COVID-19 testing, preventive behaviors, healthcare access, and COVID-19 vaccination perspectives for those at risk for diabetes, caregivers for people with diabetes, and those living with diabetes. The survey team collected data from participants at baseline and follow-up. Survey components included the beliefs about COVID-19, testing and vaccination for COVID-19, health information to diabetes, risk factors for diabetes, health care access during the pandemic, feelings on personal ability to protect themselves from the COVID-19 virus, and changes in employment, income, and housing. In the follow-up survey, further questions are asked on changes from the first survey are gauged, changes in health or socioeconomic status, changes to testing behaviors, and vaccination beliefs.

During the survey consent process, participants were also given an option to participate in a qualitative interview. The interview guides were designed to gain greater information on the responses in the survey around challenges in seeking care, changes to health status in the pandemic, changes to economic status, which information sources for COVID-19 are trusted and not trusted, experiences and beliefs about COVID-19 testing, and experiences and beliefs about COVID-19 vaccination. A request for a follow-up interview to describe changes in experiences and views was sent twelve months later.

Participant type for interviews were people at risk for diabetes, caregivers of a person living with diabetes, and people living with diabetes. At risk for diabetes individuals were considered those having a diagnosis of pre-diabetes, a family history of diabetes, and/or risk factors associated with diabetes. The interview guides developed address specific concerns within participant types. Participants were allowed to be categorized into multiple participant type groups.

While the PEACH study had a specific focus on understanding the barriers and facilitators to COVID-19 testing, the guides were developed to also elicit information on COVID vaccination and other preventative behaviors. This allows a comparison across participants and time as the dynamic nature of the pandemic played out. Study materials were available in Spanish and English, with participants able to choose their preferred language for the interview.

COM-B MODEL

To guide the study, the Capability, Opportunity, and Motivation to determine Behavior (COM-B) model was used. Research has shown that behavioral theories can be used to create interventions that address barriers and simultaneously promote facilitators to health behaviors [61-63]. The COM-B model is linked to a framework for implementation, the Behavior Change Wheel (BCW). This model was developed from a systematic review of 19 behavior change theories and provides an approach to behavior analysis and implementation [64 65].

The COM-B model uses three universal components to explain behavior (B): Capability (C), Opportunity (O), and Motivation (M). These components are linked to nine intervention

functions in the BCW [65]. The COM-B and BCW specify that a behavior change will require interventions in several of the function areas.

Capability is defined as having the capacity to engage in a behavior through physical (strength, stamina, skill) or psychological (memory, knowledge) components. Opportunity refers to the environmental factors that affect being able to engage in the behavior, with physical (physical environment) and social (cultural norms, social cues, relationship influences) components. Motivation is defined by the internal process of thinking that leads to engaging in a behavior, split by reflective (beliefs, intentions) and automatic (wants, needs, impulses) components [64-66].

The definitions above can be understood by a person being psychologically and physically capable of doing the behavior (C), having the opportunities to perform the behavior within their social circle and physical landscape (O), and feeling a want from a reflective or emotional standpoint to perform the behavior (M) [64].

In application, the COM-B model helps identify barriers and facilitators to a behavior through the components. The BCW framework is used to then address the information gathered through systematic connection of COM-B components to BCW interventions [67].

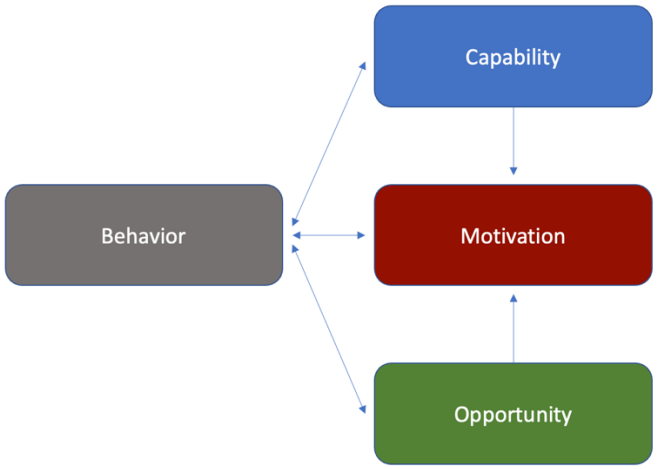

Figure 1: The COM-B Model of Behavior Change. Capability and motivation are theorized to influence motivation and all components are theorized to influence behavior [64 68].

STUDY PARTICIPANTS, RECRUITMENT, SAMPLING

ELIGIBILITY REQUIREMENTS

To participate in this study, participants must have been 18 years or more, live in Georgia, and be affected by diabetes. Being affected by diabetes includes individuals being at risk for diabetes due to health conditions (overweight and obesity, hypertension, cardiovascular or chronic kidney disease, gestational diabetes, and/or family history of diabetes), be a caregiver for someone living with diabetes, or having a diagnosis of pre-diabetes or diabetes.

Recruitment events were held at in-person health fairs, community center events, in collaboration with community partners at events, and through the study website. Participants had the option to take the survey on iPads provided at the events or on their personal device through

a QR link. Materials were also created with the QR code link to the survey that participants could take with them to share with people they know that qualifies. This is a use of the snowballing technique.

The sampling frame included participants who completed the survey, indicated that they were interested in an interview, and completed the interview.

DATA COLLECTION

The online survey included an informed consent component with the study's purpose, the risks and benefits, data management, confidentiality, and an eligibility screening. A participant that was eligible would receive a unique survey link through email to complete the baseline survey and follow up survey. A participant that indicated preference in continuing to the qualitative study would receive an email invitation for an interview, a link for a second informed consent form, and a brief intake survey. Participants received either a phone call or email to schedule the interview from a research assistant. Interviews were conducted in both Spanish and English, depending on the language choice of the participant. Interviews were scheduled with research assistants and conducted over zoom using the secure Emory account. Only the interview audio was recorded. Participant and research assistant cameras were turned off during the interview to limit exposure to facial expression bias.

Interviews were guided by interview guides and probing questions and topics. The COM-B model informed how the interview guides were developed, with questions seeking to understand the barriers and facilitators to participant capabilities, opportunities, and motivations. There was a different guide developed for each of the study participant types. These guides were

also created in Spanish. Topics in the interviews included access to health care before COVID-19, the impact of COVID-19 on access to care, sources of information on COVID-19, experience with COVID-19 testing and home testing, and perceptions about COVID-19 vaccination (see Appendix C-K). The caregiver participant interview guides also asked questions about the changes in care to the person that they provide care to, how their ability to provide support has changed, and their perception and concern for the person that they support.

The research assistant thanked the participant for their time at the end of the interview. They also provided space for the participant to ask any follow up questions about the interview, the study, or the use of the data from the interview. Next, the research assistant ended the recording and downloaded it to a secure Microsoft Teams folder. The audio recordings were then uploaded for transcription by a third party. The third party would do translation as well if the interview was in Spanish. The transcripts were thoroughly de-identified and quality checked prior to analysis.

Following the baseline interview, participants were contacted by the research assistant for a follow-up interview after 12 months. The COM-B model informed development of the follow-up interview guides. The follow-up interview guides were very similar to the baseline interview guides. The main differences with the questions were questions guiding comparison to the baseline interview, understanding of changes in behavior, and comfortability with testing and preventative behaviors to COVID-19. These questions were created with a focus on the barriers and facilitators across the COM-B components of capability, opportunity, and motivation.

A total of 39 participants took part in this study across participant types of being at risk for diabetes, caregivers for those with diabetes, and a person living with diabetes. Baseline interviews were conducted with an option for a follow-up interview. A total of 53 interviews

were conducted with 13 baseline and 4 follow-ups in the at risk for diabetes participants, 5 baseline and 1 follow-up interview in caregiver participants, and 21 baseline and 9 follow-up interviews in the participants living with diabetes.

Participant Type	Baseline	Follow-Up	Total
At Risk	13	4	17
Caregiver	5	1	6
Person Living With Diabetes	21	9	30
Total Interviews	39	14	53

Table 1: Overview of sample sizes for interviews by participant type and timepoint (baseline and follow-up)

RAPID DATA ANALYSIS

Rapid data analysis was chosen since the data collected was needed to inform the next phase of the study. After transcript creation, the analysis team created Rapid Assessment Procedures (RAP) sheets (see Appendix L-N). These were used to organize and summarize the participant responses. Training was provided to the study team to teach them to create RAP sheets and to build their data summary skills. RAP sheet templates were developed for the different participant types.

After the RAP sheet was developed for an interview, the RAP sheet was transferred to the qualitative analysis team for coding. Coding was completed using the MAXQDA software and using the COM-B model. The COM-B model was chosen as the best way to identify the barriers and facilitators that affect the motivations and ability to be vaccinated with the COVID-19 vaccine. Deductive codes were developed for each of the COM-B sub-components. The codes

were organized in a codebook with a definition of the code given (Appendix B). Each sub-component was created as a code with added facilitator or barrier.

Once coding was completed and reviewed, all coded segments were downloaded. The coded segments were used to create thick descriptions. Specifically, we reviewed all coded segments first to understand the information in the coded segments. We then stratified the coded segments into sections by participant type – at risk, caregiver, and person living with diabetes. From here the information found in the coded segments informed the identification of barrier and facilitator headings. Descriptions were written using each of the codes provided and with the most detail available in the RAP sheets. We went back to the transcripts if additional information and context was needed for a coded segment.

ETHICAL APPROVALS

This study went through approval by Emory University's Institutional Review Board (IRB#00001904). The participants were asked to read an informed consent form during the survey process and when the interview was scheduled. Protocol said that if the consent form was not read before the interview, the interviewer would read through the informed consent form with the participant prior to conducting the interview. The interviewer answered and addressed any questions and concerns prior to the interview. Verbal consent was obtained from all study participants to participate in the study and to have the interview audio recorded.

CHAPTER 4: RESULTS

INTRODUCTION

Based on the COM-B model, barriers and facilitators have been organized according to the three COM-B components: capability of performing the task; the opportunity to perform the task; and the motivation to perform the task. The COM-B components are further divided into sub-components. Capability includes two sub-components: physical capability and psychological capability. Opportunity is also comprised of two sub-components: physical opportunity and social opportunity. Motivation consists of two sub-components: reflective motivation and automatic motivation. Barriers and facilitators to the behavior of getting the COVID-19 vaccine were found in each of the participant types.

The most frequently discussed barriers and facilitators to vaccination across participant types and COM-B components were worries about side effects of the vaccine, accessibility to a vaccination sites, pressure of family and friends, knowledge on the development of the vaccine, and the motivation to feel protected against COVID-19 infection and potential death. There were several barriers and facilitators that only came up in some participant types or in certain COM-B components. These barriers and facilitators include worries over the vaccine having a chip in it, the effect of religious beliefs on motivation, the mental drain of talking about COVID, and the vaccine being promoted in the workplace. A full table of the barriers and facilitators found across the COM-B components can be found in Appendix A.

A. CAPABILITY

A.1 PSYCHOLOGICAL CAPABILITY

SUMMARY

Some participants did not want the vaccine because of the quick vaccine development timeline. To their knowledge, vaccines take years to develop and experiments to be conducted before knowing that it is safe. Participants worried about the side effects of the vaccine and whether the vaccine was effective. Several participants mentioned that their knowledge was influenced by the news, their community, and who they considered to be trusted sources of information. Many participants had the ability to book an appointment online and research their concerns.

Table 2: Overview of barriers and facilitators found in psychological capability COM-B component

Barriers and Facilitators	F	B
Length of vaccine development and safety	x	x
Understanding of eligibility requirements	x	x
Side effects of the vaccine		x
Unmotivated by fast vaccine development timelines		x
Information available on the vaccine and knowledge of the person		x
Information available on vaccine effectiveness	x	x
Information given by trusted sources	x	
Scheduling of vaccine appointments		x

B=barrier; F=facilitator

DETAILED DESCRIPTIONS

PARTICIPANTS AT RISK FOR DIABETES

Length of vaccine development and safety – facilitator and barrier

There were varying levels of confidence in the vaccine due to its development and safety. One participant was fine with getting the vaccine because of a safe history of vaccine development in the United States and a history of good outcomes from vaccination. Several participants mentioned that vaccine development and safety of the vaccines were major reasons why they did not want to be vaccinated. These participants were worried that the vaccine was developed too quickly and without enough research. One of these participants mentioned that to their knowledge vaccines take years to develop and experiment to be conducted before knowing that it is safe. A different participant added that a close family friend, a nurse, told them that the vaccine was *"rolled out too quick, it wasn't tested or research long enough."*

Understanding of eligibility requirements– barrier and facilitator

Two participants mentioned how their knowledge on the eligibility requirements for vaccination affected their scheduling of vaccination. One participant expressed hesitation with getting the second COVID vaccine because he was unsure if he was eligible. The participant was unsure about how vaccine roll-out was happening. Part of this was due to having his initial dose in North Carolina, where he was eligible, but was unsure about his eligibility in Georgia. A different participant mentioned that he was constantly checking the COVID websites to see when he was eligible to be vaccinated and where he could go.

Information available on vaccine effectiveness – barrier

Two participants mentioned that they do not understand why a person would be vaccinated when vaccine effectiveness is not known and that being vaccinated does not prevent a COVID-19 infection. One of these participants also believes that COVID is just like the flu and therefore does not see a need to get vaccinated. A third participant brought up there being a *"chip in vaccine"* as a misinformation about the vaccine. She heard this several times from people that she talked to, but did she not specify who these people were. She brought this up as a reason that people were not getting vaccinated.

Side effects of the vaccine - barrier

Several participants mentioned that hearing of side effects from the vaccine have impacted motivation to be vaccinated. Two of these participants further explained that they heard of people dying from the COVID treatments and from the COVID vaccines.

PARTICIPANT CAREGIVERS

Side effects of the vaccine - barrier

Two participants heard that people were dying from the vaccine and that the vaccine is not safe. One participant shared that this discouraged them from getting vaccinated.

Information available on vaccine effectiveness – facilitator

One participant had knowledge of how the vaccine will not prevent you from getting COVID-19 but can lessen the effects and symptoms of COVID-19 on the person. This helped the participant in understanding what the goal of the vaccine was. The participant thinks that some people think that the vaccine should prevent any infection with SARS-

CoV-2 and COVID-19. The participant states that this misunderstanding could be a barrier to some people getting the vaccine.

Scheduling of the vaccine appointments – barrier

One participant initially thought that getting vaccinated was easy but then found it was not easy when her sister couldn't get an appointment anywhere close by. The participant is a caregiver for her sister. The participant and sister had to travel to another county for her sister's vaccination. Many places, pharmacies, and stores, were booking up as well, making the scheduling process difficult. The participant was able to navigate the online systems for booking to get a vaccination appointment, but it was difficult.

Unmotivated by fast vaccine development timeline – barrier

One participant felt that the vaccine was rolled out too quickly and without proper testing. This participant mentioned that it was the fastest vaccine that they have ever seen made. They know from the past that it usually takes *"5, 10, 20 years to actually get a vaccine of get the testing and all of that done to make sure it's something that we could – it's safe to use in our bodies."*

PARTICIPANTS LIVING WITH DIABETES

Information available on vaccine effectiveness – facilitator and barrier

Several participants brought up that their understanding on the vaccine effectiveness was a facilitator. Several other participants did not trust the vaccine effectiveness.

Two participants brought up that their knowledge on vaccine effectiveness made them inclined to get vaccinated and promote vaccination. One participant said that the vaccine is needed for people to not be sick. They understand that the vaccine will not stop COVID-19 but will help with the infection rates. The second participant knows that the vaccine will reduce the symptoms and seriousness of the infection. This participant especially wanted to get vaccinated to protect their mother, a 70-year-old person living with diabetes and hypertension.

Three participants brought up that they have worries about the vaccine effectiveness. One participant said that they will not be getting the vaccine boosters. This is due to the participant reading that the vaccine is only 67% effective against the Omicron variant. They would potentially get the booster with more information on the boosters and if the research could change their mind on the booster working. The second participant has not been vaccinated since they heard that the vaccine does not actually prevent a COVID infection. They do not understand why anyone would get the vaccine is you won't stop a COVID infection. This participant did say that they knew the vaccine can lower the symptoms of COVID-19, causing them to be more encouraged to get vaccinated. The third participant believes that there is no reason to get the vaccine unless there is a reason and they currently do not have enough information. The participant says, *"unless you can show me that my immunity level or the current variations of COVID are no longer valid, are no longer there, then that might make sense, but I don't know if that happens annually or what have you."*

Information available on the vaccine and knowledge of the person - barrier

Several participants mention how they do not have enough education or information on the vaccine to decide. This is also seen to be tied to an emotional response to the vaccine with trusting the science or being worried about the vaccine effects. One participant also seems to be tired of the vaccines, information, and knowing what vaccine to get.

One participant believes that the community is not vaccinated enough because of a lack of education and knowledge in the community and greater US country - *"The fact that only 60 percent or 65 percent of the country is vaccinated, and you have these people out there who you would think would be educated enough to know that they should get vaccinated and are not doing it. It's reached the point now -- we're going to have what, a million people dead by spring time. If that's not enough evidence to go get vaccinated then -- these are adults making grown up decisions."*

Another participant's children are not *"COVID vaccine believers."* The participant has had her initial COVID vaccine and used to not listen to the information that they shared with her. However, she is starting to change her perspective on the vaccine. After speaking to her children more, she is now considering to not receive her booster dose. The participant has also found the inconsistency of the news on the vaccine concerning. He has been losing trust in the vaccine science.

A participant knows the information about the COVID-19 vaccine but doesn't feel comfortable with the information on the vaccine: *"I read the information on what it can do and how it can help prevent or protect you against COVID-19 or make the side effects less or symptoms less when you get it. But I just don't feel confident enough in what they're saying to go get it myself."*

Another participant is fully vaccinated but has not had the booster. He feels that the vaccine is never ending since there are so many versions of the vaccine and there are multiple versions of the vaccine now out.

Side effects of the vaccine - barrier

Several participants were concerned about the side effects of the vaccine. The participants did not give specifics on where they heard this information. One participant heard that the Johnson and Johnson vaccine caused heart issues and therefore is not willing to get that vaccine. This participant feels nervous about being vaccinated in general now. Another participant felt that there was not enough information out there on the side effects of the vaccine, especially on cancer survivors. If the participant was given more information on this research, then they might be willing to be vaccinated. One participant says that the vaccine has not been tested on animals like other vaccines and medicines, so they believe the vaccine is an experiment itself. Another participant had a severe reaction to a flu shot once and feels uncomfortable with the information on the COVID vaccine. The participant knows that the vaccine is approved by the FDA but still feels skeptical.

Information given by trusted sources – facilitator

A participant got information on the vaccine from her doctor. Her cardiologist also suggested that she get vaccinated. She trusted the information about COVID-19 from her health care provider. The provider was able to answer all the questions that the participant had. Having more information on the vaccine from the trusted source allowed the participant to feel comfortable with being vaccinated.

B. OPPORTUNITY

B1. PHYSICAL OPPORTUNITY

SUMMARY

Participants mentioned that they had several opportunities to be vaccinated through local vaccination sites, work provided opportunity, and through healthcare opportunities. However, participants also had mixed experiences with the vaccination sites. Some participants had straightforward and relatively easy processes while others had more difficulty with finding a time slot or location. An influential support to being vaccinated was the vaccine being promoted by their doctor, and the doctor facilitating a vaccine appointment.

Table 3: Overview of barriers and facilitators found in physical opportunity COM-B component

Barriers and Facilitators	B	F
Vaccine promotion in workplace		x
Local availability of vaccine		x
Types of vaccination sites and perception on vaccination sites	x	x
Influence of medical professional		x

B=barrier; F=facilitator

DETAILED DESCRIPTIONS

PARTICIPANTS AT RISK FOR DIABETES

Vaccine promotion in workplace – facilitator

A participant thought that he was eligible to get his vaccine because he was working a high-risk job at the time, either at a restaurant or a delivery driver. He was motivated through work to be vaccinated due to being in a high exposure position.

PARTICIPANT CAREGIVER

Local availability of vaccine - barrier

A participant brought up that her and her sister had difficulty getting vaccinated against COVID-19 because of the local access and appointments available. The participant was able to book an appointment for her sister for the vaccine, but it was two months out and an hour away in a different town. The participant said that they initially thought it would be easy to get vaccinated – "*And if you thought -- you were on the way home and you say, oh, I think I'm going to go ahead and get the COVID vaccination, I thought it was easy as just driving up and going into a public somewhere and tell them you want it."* However, this was not the case for her sister, and they had to travel to get the vaccine. The participant was able to help the sister with transportation for the first and second vaccine dose. This participant was concerned about the lack of access and availability of the appointments.

A participant's church ran vaccine drives and encouraged others to get vaccinated.

Vaccine promotion in workplace- facilitator

A participant has been vaccinated but has not gotten the booster. This participant was forced to be vaccinated because her job required it. She reported that if her job did not require it, she would not have gotten the vaccine. She shared that she would most likely not be going to get the booster, noting that her work is not requiring the booster.

PARTICIPANT LIVING WITH DIABETES

Types of vaccination sites and perception on vaccination sites – facilitators and barriers

Several participants mentioned where they were vaccinated and their perception on how the experience went. One participant got vaccinated at a mass vaccination site in the Mercedes Benz Stadium with a second dose at the doctor's office. Two participants received their vaccine doses at CVS. Another participant walked into Kroger and received their shot (Moderna) with no appointment required. One participant received her first two doses through the school system because she is a substitute teacher for the county schools. The school system partnered with a healthcare institution and did a vaccine clinic where she received her first two doses. One participant had a good experience with vaccination and went to the clinic he normally goes to. Another participant received their vaccine through Emory. The participant volunteered at Emory vaccination sites and at the end of the shift, if a volunteer was not vaccinated, they would provide the extra vaccine to the volunteers because they cannot put a bottle that they

already started back. These participants had a straightforward process with vaccination and did not have to travel far.

Influence of medical professional – facilitator

A participant said that her cardiologist suggested that she get the vaccine due to her congestive heart failure. The cardiologist worked with the participant to get vaccinated. This participant was concerned about her ability to get the vaccine with the rollout schedule. She did not like how the prioritization of the vaccine occurred. She had to wait through the essential workers and the second stage for 62 and older. She is thankful that she could go to her cardiologist and talk about the vaccine. Her cardiologist was an advocate in getting her an appointment since she is high risk for a severe case of COVID-19. The participant said that she would *"get online at 6:00 and wait for CVS to open up their line. And even staying online for a whole hour, I would have to drive to Augusta or somewhere far away in order to get the shot."*

B2. SOCIAL OPPORTUNITY

SUMMARY

Some participants experienced peer pressure from family and friends to get vaccinated. People around the participants were encouraged to be vaccinated as a measure of prevention from a COVID-19 case. Trust in the vaccine from the community is a considerable influence on participants. Some participants also did not trust the government's involvement in the vaccine. Others were concerned about potential side effects from the vaccine that they have seen in others.

Table 4: Overview of barriers and facilitators found in social opportunity COM-B component

Barriers and Facilitators	B	F
Trust in the government in the community	x	
Influence of friends, colleagues, and family	x	x
Motivation to get vaccinated to get back to normal		x
Motivated by travel and gatherings		x
Mental drain of trying to communicate about the vaccine	x	
Side effects of the vaccine	x	
Social circle being vaccinated		x
Influence of medical professional	x	
Influence of religion on vaccination		x
Active influence and communication with people to get vaccinated		x

B=barrier; F=facilitator

DETAILED DESCRIPTIONS

PARTICIPANT AT RISK FOR DIABETES

Influence of friends, colleagues, and family– facilitator and barrier

One participant spoke with her husband about how vaccines protected him from severe symptoms from COVID. Another participant when the vaccines first came out, found that the news distorted her view on the vaccines. She did not think that they were trustworthy due to the different variations, profit, and brands of the vaccine. However, her sister, a scientist in Mexico, convinced her to get the vaccine as the sister was the first one to get

the vaccine in Mexico, although her sister had complications with the vaccine and could not receive the second dose.

A participant spoke with coworkers at the property that she works with to get vaccinated and eventually escalated it up to speaking to her boss about getting vaccinated as well.

Several participants mentioned the influence, impact, and motivations from friends, family members, and their social circle on being vaccinated. For example, one participant said that he decided to get vaccinated to feel safe and because of peer pressure from family and friends. He described them as being *"pretty adamant"* on getting the vaccine and convincing him to join them. He decided to get vaccinated to *"go with the flow."* Another participant felt peer pressure to be vaccinated. He went with friends to get his first vaccines, and it felt easier: *"It just -- it's a mental thing where it becomes easier to get vaccinated when you know that your friends are standing behind you."* A different vaccinated participant used their social circle to encourage other people to get vaccinated because they want them to have another layer of prevention from COVID infection. Another participant got vaccinated because he wanted to make sure that he and his social community were as protected as possible.

For other participants, their social circle was a barrier to vaccination. One participant said that they were influenced by the concerns that the people around them had about the COVID vaccine. The participant heard that the vaccine was not good to get because the vaccine developers *"just put something together"* and they do not know what is in the vaccine. This participant mentioned that this is something that was heard a lot in their community and from many people.

Trust in the government in the community – barrier

One participant mentioned he felt there is a keen sense of skepticism in his community about the vaccines due to the government involvement. The community does not trust the government. The government involvement was specified as the vaccine development and the incentivization of the vaccines: *"I'm not a big theory person, but it's just the things that they promise you because of vaccines was kind of turn-offish for me, like, hey, get a vaccine, you get $100 gift card and things like that. That was -- that kind of made me question getting vaccine and [inaudible]."*

Social circle that is also vaccinated – facilitator

Participant and fiancé now only make plans with people who are vaccinated as well. This is especially true for the couple with the delta variant surge. They now longer go to indoor places, eat on patios, and are associating more with people that are also vaccinated as a level of greater protection.

Motivation to get vaccinated to get back to normal– facilitator

A participant mentioned that one of their social circles is in the church. This participant found that people in the church were motivated to get vaccinated because they wanted to go back to their normal way of living. The older members of the church *"wanted to get back into community and not feel that they were the problem with transmitting COVID-19 into their communities."* This participant also expressed strong feelings of wanting to be in the church family again.

PARTICIPANT CAREGIVER

Influence of friends, colleagues, and family – facilitator

Two participants mentioned that they had a lot of influence in their family with getting their parents vaccinated against COVID-19. One participant's father was very concerned about side effects in the vaccine and hearing that people were dying from the vaccine. The participant convinced her father through many conversations and mentioning that *"we've been getting vaccines all our life since we were little kids and we still alive."* The other participant convinced her mother to get vaccinated after her mother decided she was not going to get vaccinated. The participant asked her mother, *"now, you want to be back where you was a couple months ago?"* After this conversation, the mother asked the participant to make the appointment. The mother has since gotten vaccinated and boosted. The participant also had influence in their kids, grandkids, and aunt getting vaccinated. The participant is happy that their family is vaccinated now and that the conversations have become less wild: *"it was wild for a minute. I'm telling you; I've never heard so much foolishness in all my days."*

Motivated by travel and gatherings – facilitator

One participant reported that she was motivated to receive the COVID-19 vaccine because she wanted to begin going to events that require vaccination and seeing other people more.

Mental drain of trying to communicate about the vaccine – barrier

One participant felt burned out on promoting the vaccine in their community. The participant felt that encouraging people to get vaccinated was a losing battle because people already had their minds made up about whether they would get vaccinated.

PARTICIPANT LIVING WITH DIABETES

Influence of friends, colleagues, and family – facilitator and barrier

Eight different participants mentioned family while speaking about COVID-19 vaccination. There was a mix of family being a facilitating influence or a barrier to getting vaccinated. Most participants saw vaccination as a way of protecting their families and themselves from COVID-19.

One participant said that she was vaccinated to protect herself, her husband with chronic obstructive pulmonary disease (COPD) and her 4-year-old grandson who cannot be vaccinated. Another participant knows that their children and brother have been vaccinated. They also support their community by helping to make appointments and taking neighbors to get vaccinated. One participant explained that some of her family members are not vaccinated and some of them have previously been infected with COVID. They are using their relationship to continue having conversations about being vaccinated. One participant was clear that they understand that vaccines are not 100% effective, but they see it as extra protection especially due to their high-risk status. They want to protect themselves and their family by being vaccinated.

A participant said that they knew there were people in their social circle who do not believe in the vaccines and have stopped vaccinating their kids. This is referring to

vaccines beyond the COVID-19 vaccines. The participant seemed shocked by their friends making this choice. Another participant said that she has not previously listened to what her children have said about COVID because they have not been vaccinated. However, she has recently started to listen more to them, began agreeing with their stance on the vaccine, and is considering not getting the booster shots. She says that her change is agreeing with her children about the inconsistency of the news and the vaccine not being as effective against the Omicron variant: *"With the Omicron version, now, our vaccines are only 30 percent effective. And so, they just don't trust it. They don't trust the science. They don't feel like we know enough and which I'm starting to agree with them."* One participant said that their parents, both living with diabetes and the father having high blood pressure, have been vaccinated against COVID and are trying to convince the participant to be vaccinated. The participant feels that their parents have been pushing the vaccine, but they do not fully agree with the vaccine yet. They are waiting to see "*how it goes first."*

Social circle being all vaccinated - facilitator

Three participants brought up that their social circle is vaccinated and that they spend more time around these people that are vaccinated. One participant mentions that their friends *"wouldn't be in our circle of friends if they were out there saying they weren't going to get vaccinated or something."* These participants have friends who believe in the vaccine, and they feel more comfortable around vaccinated people. Another participant says that most people they know are vaccinated and boosted. Knowing this helps with feeling safe from COVID.

Side effects of the vaccine - barrier

A participant has seen many people become sick after getting the COVID vaccine. They have also heard of people dying and being diagnosed with cancers. The participant believes that their family members, friends of family, and people in their network and community are becoming ill from the vaccine. They have *"seen a lot of people that have a lot of joint issue now; a lot of severe rheumatoid arthritis or just pain in the muscles and the joints and stuff that have had the Covid vaccines."* The participant acknowledges that these conditions could have been present before the vaccines without a diagnosis and are now emerging. The participant thinks that the vaccine has caused these conditions to come to the forefront or have caused them to be worse. This is impacting how the participant views the COVID vaccine.

Influence of medical professional – barrier

The participant felt that her kidney specialist doctor was forceful in his language trying to convince her to get the vaccine. As a result, it made her less likely to get the vaccine: *"He was very pushy. He just kept asking me if I wanted to die and it just made me even more terrified to get the shot."*

Active influence and communication with people to get vaccinated - facilitator

The participant expressed frustration that her family member had to put off an elective procedure because the hospital would not do it with the pandemic still ongoing. They wish that everyone else can get vaccinated. The participant said that they are trying to convince everyone to get the vaccine because then everyone would be better off. They believe that people are being selfish and need to worry more about the group and public

health for all: *"Oh. Everybody, go get a vaccine. If we could all get everybody vaccinated, that would be so lovely."*

Influence of religion on vaccination - facilitator

A participant mentioned the role their faith played in their decision to vaccinate and in the lives of their church family. The participant believes that there is nothing in their faith that says that they should or should not get vaccinated: *"the father never said yes, vaccinate or don't vaccinate, right? Our priest left it up to each one of us to decide, and each one took it differently, …"* The participant does feel that the church family and community should get vaccinated because it is how you show love for your brother and take care of people. The participant has been sharing this in the community and hears opposing viewpoints from others.

C. MOTIVATION

C1. REFLECTIVE MOTIVATION

SUMMARY

Some participants felt the vaccine was brought out too quickly, without enough testing and research. Other participants felt that the vaccine is a way of returning to their normal daily events, church, and seeing people out again. Participants felt unmotivated and skeptical about the vaccine due to the government having a large presence in vaccine production and rollout.

Table 5: Overview of barriers and facilitators found in reflective motivation COM-B component

Barriers and Facilitators	B	F
Trust in the vaccine	x	x
Motivated by protection provided by the vaccine	x	x
Motivation for booster shots	x	
Motivated by travel and gatherings		x
Motivation from other people's COVID infections		x
Vaccines are an irreversible commitment	x	
Vaccine does not prevent COVID	x	
Motivation based on other people being sick		x
Unmotivated by information on social media	x	
Side effects of the vaccine	x	
Motivated based on limiting exposure to other people		x

Rates of infections	x	
Motivation to be vaccinated in order to go see family		x
Motivation for vaccination due to monetary benefits	x	x
Motivation for vaccination based on untrustworthy sources involvement in the vaccine	x	

DETAILED DESCRIPTIONS

PARTICIPANT AT RISK FOR DIABETES

Trust in the vaccine – facilitator and barrier

Several participants brought up their trust in the vaccine as a motivating factor in wanting to get vaccinated. One participant was the only person in her family to get vaccinated and did so because she trusted the science of the vaccine. She believes that the COVID vaccine is just like other vaccines for diseases like chicken pox and measles. Another participant trusted the COVID vaccine because they have trusted all other vaccines. One participant was unsure about getting the vaccine but was motivated after getting more information on the vaccine from healthcare providers. Another participant was against getting the vaccine after having a conversation with a friend's mother who is a nurse. The nurse does not trust the vaccine and felt that the vaccine was brought out too quickly, without testing and research. The participant listened to this and decided to not get vaccinated.

Motivated by protection provided by the vaccine – facilitator

Several participants decided to get vaccinated to have greater protection against a COVID-19 infection. Six different participants stated that they wanted greater protection against a case of COVID-19 if they were to be infected. Three of the participants also stated that they wanted to get vaccinated to protect the others around them. One participant stated that they are motivated by having a greater protection over having a more severe COVID-19 infection. Another participant knows that the risk of a COVID-19 infection is less with the vaccine but is still concerned that the virus will continue to spread. Two participants also mentioned that they use other preventative behaviors like limiting going to crowded space and masking, which help these participants feel comfortable.

Motivation for booster shots – barrier

Two participants mentioned that they are more hesitant about getting the COVID-19 vaccine booster. One participant said that they are not as motivated because of the decreasing cases of COVID-19. The other participant said that they might get more boosters if needed but did not specify what would motivate them more.

Motivated by travel and gatherings – facilitator

Two participants expressed that they were motivated to get vaccinated by wanting to go out places and travel more. One participant said that they have had an easier time seeing her doctor after being vaccinated. Another participant and their church community are motivated by wanting to get back to a normal way of living. They explained that the normal way of life is having daily events, church, and seeing people out again. They

further did not want to feel that they were going to be problems with transmission of COVID in the community or at these events.

Motivation from other people's COVID infections - facilitator

A participant was motivated to get vaccinated due to her sister passing from COVID-19 infection complications. The participant says that her sister passed away right before the vaccines came out and she went to get vaccinated as soon as they had approval.

Vaccines are an irreversible commitment – barrier

A participant felt unmotivated to get the vaccine as it is a full commitment and there is no reverse. He shared that he did not like that he has to fully commit to the vaccine.

Vaccine does not prevent COVID – barrier

A participant is unmotivated by the fact that the vaccine does not prevent a COVID infection.

PARTICIPANT CAREGIVER

Trust in the vaccine – facilitator and barrier

Several participants stated that they were either motivated or unmotivated to get vaccinated based on their belief or trust in the vaccine. One participant stated that they had belief in the vaccine which made being vaccinated easy: *"I did not take my vaccination just to be taking it. I believed in it. I believed in it when I when I took it. I really did."* A different participant's mother is a nurse who trusts in the vaccine, so both the mother and participant got vaccinated. While another participant stated that they did

not trust the vaccine because they felt that it was rolled out too quickly and without enough proper testing on the effects. They stated that it was the fastest vaccine they have seen made and did not believe it would be safe.

Motivated by protection provided by the vaccine - facilitator

Two participants stated that they were motivated by having more protection with the COVID vaccine. One participant has gotten two main shots of the COVID vaccine, two booster shots, and is in the process of scheduling the third booster. They always planned to get vaccinated for safety and has not been swayed by anyone around them who are apprehensive. Another participant's mother is vaccinated against COVID and has always planned to get the vaccine for greater safety.

Motivation based on other people being sick – facilitator

A participant is motivated by knowing that the vaccine will lessen the effects of a COVID infection. Has seen that an infection in a person with the vaccine was *"not as straining on the body."*

Unmotivated by information on social media – barrier

A participant's father looks at a lot of COVID information through social media. The participant saw information about the vaccine on social media that swayed the father to not want to get vaccinated. The father was also told that he was high risk for a severe infection due to multiple health factors and conditions but was still very reluctant to get vaccinated. The participant was able to convince him to receive the vaccine through further conversation.

PARTICIPANT LIVING WITH DIABETES

Motivated by protection provided by the vaccine – facilitator and barrier

Many participants mentioned wanting protection against COVID-19. Some said that they wanted the vaccine for greater protection while others stated that they did not need the vaccine for protection.

One participant living with chronic illness was motivated to be vaccinated because he heard that there is a lowered risk for COVID complications in those who are vaccinated. Another participant stated that they wanted to be vaccinated to lower their risk of death from COVID-19. One participant said that they heard that the COVID vaccine was helping people and therefore felt motivated to get vaccinated.

Several other participants had more complicated motivation with having protection from COVID. One participant believed that if she had the booster then she would have less symptoms from the infection. She believed that the vaccine is 50% effective but with the booster it goes up to 75% effective. Another participant felt that the vaccine made the effects of COVID-19 less severe than when he had COVID-19 before being vaccinated. He used to not have confidence in the vaccine, but since experiencing less effects of COVID after vaccination, he was a believer in the vaccine. He also recommended it to others and did not fully understand why others had not gotten the vaccine. This participant stated that he would continue to believe in the vaccine and any further vaccines related to COVID.

Another participant believed that you can never know what your COVID status is without constant checking. This convinced them to get vaccinated to stay protected against a COVID infection. The participant wanted to protect against any new variants that are emerging. The participant therefore was vaccinated and has been boosted. This participant stated they will continue to be confident in getting future vaccines if needed. Further, the participant was trying to limit the possibility of getting infected by being around people who are also *"serious enough to be vaccinated."*

Some of the participants did not feel that they needed protection from a vaccine. One participant did not get the vaccine right away because he did not think he needed the protection from the COVID vaccine. This participant did not think that he would have COVID-19.

Another participant chose to not get vaccinated as the vaccine does not actually protect the person fully against being infected with SARS-Cov-2. The participant did not understand why anyone would get vaccinated when this was the messaging. However, the participant was vaccinated against COVID-19 because of some different messaging that came out about people with chronic illness having a greater risk for more severe COVID-19 symptoms and outcomes. This participant found the messaging convincing about how the vaccine can decrease the complications of COVID-19.

Side effects of the vaccine – barrier

Several participants brought up that the side effects of the vaccine have been a motivating factor to not get vaccinated against COVID.

A participant was not going to get vaccinated as they had heard that after vaccination people were being diagnosed with cancer and becoming critically ill. The participant acknowledged that these conditions may have been present before the vaccine but stated that they think the vaccine has either made it worse, brought the sickness from dormancy, or fully caused the sickness. One participant had been putting off getting their second booster shot because she did not want to experience any side effects and mild symptoms from the vaccine. She also did not want the potential symptoms to interfere with her plans. She felt this way due to having experienced body aches and fatigue after the initial vaccine and the booster. Another participant was hesitant to get vaccinated because of not having enough information about the side effects and feeling comfortable with the vaccine. She was waiting to see how more people reacted to the vaccine. She felt large pressure from her parents to get vaccinated but did not feel she had enough information at time of interview.

One participant was struggling with getting his mother vaccinated and was encouraging her. He found that it was difficult to get her to voice her concerns. He did not want to push her away with speaking too much about vaccination. He mentioned that his mother was specifically concerned about the side effects of the vaccine: *"But I don't understand why 2022, 2021 after everyone's had these vaccines, now so many people are dying and being diagnosed with these cancers."*

Motivation for vaccination based on untrustworthy sources involvement in the vaccine – barrier

Two participants specifically brought up that their motivation to be vaccinated was influenced by untrustworthy sources.

One participant used to not trust what her children said about COVID-19 because they had not been vaccinated, but at the time of the interview she was starting to agree with them. She was not feeling motivated to be vaccinated. This change was due to the *"inconsistency of the news"* across all the news stations. The participant felt that the news stations were untrustworthy. She was hearing that the vaccine was only 30% effective against the Omicron variant. This caused her to not trust of the vaccine and the science. These several untrustworthy influences moved her perspective towards agreeing with her family on not being vaccinated. The participant said that the only way to convince her to get the booster would be to have information on vaccine development and vaccine effectiveness.

Motivation for booster shots – facilitator

Two participants mentioned that they were motivated to get vaccinated by the emerging COVID variants. One participant was open to getting boosters if needed as new variants come out. If there were not more variants or case numbers do not increase, then he saw no need to be boosted. He mentioned that he believed COVID is like the flu and would get an annual shot because the flu also mutates every year. Another participant does not *"want a shot just to have a shot if there's no reason for it."* This participant was waiting to see if there was a *"need"* to get a booster shot. He specified that *"need"* was if the vaccine did not provide enough protection against the variants. He was not uninterested in the vaccine boosters but waiting to learn more before making an appointment.

Motivated based on limiting exposure to other people - facilitator

A participant chose to get vaccinated after having COVID-19 and experiencing the symptoms. She was also motivated to get vaccinated to not pass the virus on to other people around her. She believed that the vaccine mitigates the movement of the virus.

Rates of infections – barrier

A participant saw the cases of COVID-19 go down and back up again. She felt that the virus movement and infections were never ending. The participant saw that the vaccine was not fully stopping the spread and continuation of infection. Therefore, the participant was not motivated to get vaccinated.

Motivation to be vaccinated in order to go see family – facilitator

A participant's father was diagnosed with pancreatic cancer and was now living in a nursing facility. The participant was vaccinated to visit him. The participant wanted to have the greatest protection for self and the father.

Motivation for vaccination due to monetary benefits – facilitator and barrier

A participant and her eldest child were vaccinated. Her two younger children are not vaccinated. They were waiting for the youngest two children because they were wanting to be compensated. However, the participant was having doubts about waiting because the incentives were coming out slowly and there had been talk about getting rid of mask mandates. She therefore was thinking she will have the younger children vaccinated sooner than later to have better protection.

C2. AUTOMATIC MOTIVATION

SUMMARY

Participants felt more comfortable, safe, and protected against COVID-19 with now being vaccinated. They felt less stressed and concerned about COVID knowing that they are vaccinated. There was resistance in some participants' family due to misinformation on the COVID vaccine. They are not trusting of the government in general and believe that the vaccine has caused health problems in people.

Table 6: Overview of barriers and facilitators found in automatic motivation COM-B component

Barriers and Facilitators	B	F
Motivated by protection provided by the vaccine		x
Distrust in the government	x	
Influence of friends, colleagues, and family	x	x
Stress and concern of a COVID infection		x
Side effects of the vaccine	x	
Effects of misinformation on comfortability getting vaccinated	x	
Unmotivated by fast vaccine development timeline	x	
Motivation to be boosted against COVID-19	x	x
Contradicting information about the vaccine	x	
Movement from social isolation		x

DETAILED DESCRIPTIONS

PARTICIPANT AT RISK FOR DIABETES

Motivated by protection provided by the vaccine – facilitator

Many participants brought up that the protection against COVID was a strong influence in getting vaccinated with the COVID vaccine. Three participants mentioned that they wanted to feel safe against COVID. They felt that getting vaccinated would give them enough protection that they would feel safe to engage more in society. In contrast with these three participants, one participant said that he does not use many preventative behaviors now, including masking, while another participant said that he still takes precautionary measures to feel even more safe. Two other participants also wanted to have greater protection against COVID, with one stating that he was *"pumped"* that the vaccine was available and was constantly checking for his open window to get vaccinated. The other participant said that he also feels more confident with having another level of protection against COVID with the vaccine.

Distrust in the government – barrier

Many participants mentioned that a distrust in the government had led them to not be vaccinated and feel strongly against the COVID vaccine. One participant raised skepticism in the government involvement in the vaccine development, especially the incentives that the government pushed out to get vaccinated. The incentives mentioned are $100 gift cards for getting vaccinated. This made him question why the government was pushing so hard to get vaccinated.

A different participant explained that she was raised with distrust of the government especially around the health sector. She gave the example of the Tuskegee Syphilis Experiment and explained that people are hesitant because of what has happened in the past - *"I think if they would've had people from different backgrounds, not just the African American community, but different people with different beliefs, whether they're religious or people that don't believe in vaccines at all or just people from different backgrounds of life."*

A final participant brought up that the level of involvement from the government in the vaccine has caused them to not trust the vaccine development and implementation process. They are not trusting of the government in general and believe that the vaccine has caused health problems in people, including themselves. Mentions specifically that - *"A lot of people died also because of – well, they didn't die because they got the vaccine, I mean they died because of the treatments that were done. Because they said they couldn't, at the beginning a lot of people died, if the studies had been different, they wouldn't have had so many people there, and the treatment was different. And that could have saved a lot of people. And after the vaccine – after the vaccine thing, as far as I noticed, very healthy people started to get sick. At least, I didn't have any problem with blood sugar, and now, I don't know if it's because of that. But you can see all the people that have had strokes, heart attacks, and many things. Many, "See, but I didn't have any pain before, and now everything hurts." That's it."*

Influence of friends, colleagues, and family – facilitator and barrier

Other people seem to have had a large effect on the comfort and motivation for a person being vaccinated. Two participants mentioned that their trust in the judgement of their

friends and family helped make it an easy decision to follow along with getting vaccinated. Having the others be vaccinated too and not worried made the participants feel comfortable and motivated to be vaccinated. Another participant mentioned the element of peer pressure from the family and friends. He wanted to feel safe against a COVID infection and trusted the people around him who were getting vaccinated. He decided to allow the pressure and got vaccinated when they pushed him to make an appointment. A different participant was impacted by the death of their sister from COVID- *"Like when the vaccine did become available, it happened right after my sister passed and we were already going to -- [inaudible] get vaccinated as soon as they approved it [inaudible] just definitely yes you have to get it."*

Another participant found that other people made the decision to get vaccinated a barrier. The participant had some hesitation with getting vaccinated because he did not want to take a shot away from someone else who needed it more than he did. He also didn't know the difference between being in Georgia versus in North Carolina where he got his first dose of the vaccine.

Stress and concern of a COVID infection - facilitator

Three participants mentioned the impact of stress of a bad COVID infection on their decision and vaccination would protect them. One of these participants said that her level of concern for COVID and nervousness with a COVID infection has gone since the vaccine came out. She says that she was so nervous at the beginning of COVID because she did not know who would take care of her son if she were to get sick or pass. She still wears a mask now, after being vaccinated, but the vaccine has caused some of her

concern to go down. Another participant called themselves *"overly concerned about COVID"* but has felt immense relief after being vaccinated.

Side effects of the vaccine – barrier

Three participants stated that the potential side effects of the vaccine were a large worry and barrier to them getting vaccinated. Two participants stated that they had seen other people have side effects and that made them worried, anxious, and unmotivated to be vaccinated. One of these participants was also influenced by not knowing how effective the vaccine was. However, despite side effects being a large barrier to getting vaccinated, each participant did get vaccinated. One participant said that he did not end up getting any side effects from the vaccine and now feels more confident in further vaccines. Another participant changed her mind after being scared by the high numbers of people passing away from COVID, stating that she would rather take the side effects of the vaccine than die from a COVID infection. The last participant stated that they do not trust the vaccine since they have seen the health issues of others and suspects that their elevated blood sugars are due to the vaccine.

Effects of misinformation on comfortability getting vaccinated - barrier

Two participants mentioned how misinformation has affected the comfort with being vaccinated. One participant said that there is resistance in the participant's family due to misinformation on the COVID vaccine. She believes that this misinformation has made the family uncomfortable and nervous about getting vaccinated. Her brother ended up not getting the vaccine because of this. He ended up passing from COVID complications. The participant believes his passing could have been prevented if he were vaccinated

since he had the COVID infection with pre-existing conditions. The other participant knows several people who have been impacted by incorrect sources and misinformation on social media posts on the covid vaccine and has caused them to not want to get vaccinated.

Unmotivated by fast vaccine development timeline – barrier

A participant was nervous about getting vaccinated because of the quick development of the vaccine. To their knowledge, the vaccine development would take years to fully develop and run the appropriate tests on before knowing that it was safe. The participant did eventually get vaccinated because of the travel requirements. They feel thankful to have the protection of the vaccine prior to getting an infection. They still however are worried about the vaccine development timeline.

PARTICIPANT CAREGIVER

Side effects of the vaccine - barrier

Two participants mentioned that fear of side effects and hearing about the stories of people dying from the COVID-19 vaccine have caused them to be afraid and have anxiety about getting the COVID-19 vaccine. One participant is discouraged from the vaccines because of hearing instances of people possibly dying from the vaccine. This makes the participant nervous and unwilling to get vaccinated. Mentioned that he heard of an 18-year-old who was getting ready to graduate from high school, either in Tennessee or Mississippi, that died three weeks after being vaccinated against COVID-19. Another story the participant heard was about a doctor that died in Miami, Florida,

who died three weeks after being vaccinated. Another participant's father had heard on social media that the COVID vaccine were causing people to die and was extremely reluctant to get vaccinated because of this information. The participant pushed for vaccination and had conversations with their father. The father eventually did get vaccinated and did not have complications.

Motivated by protection provided by the vaccine – facilitator

The participant mentions that getting vaccinated for her and her sister have helped with her sister's paranoia and overwhelming anxiety about getting infected with COVID.

Distrust of the government - barrier

The participant's mother and aunt did not originally want to get vaccinated because they did not trust the government and felt worried about the vaccine.

PARTICIPANT LIVING WITH DIABETES

Motivated by protection provided by the vaccine – facilitator

Many participants mentioned wanting to feel safer and more secure against a possible COVID-19 infection, motivating them to get a COVID-19 vaccine. Several participants also mentioned that they had no fear or concerns about the COVID-19 vaccine. One participant mentioned that she now feels safer about returning to the workplace. Three participants mentioned that being vaccinated against COVID-19 has lowered their paranoia and anxiety about having a severe case of COVID-19. Another participant specifically mentioned that they are less stressed and afraid of dying from a COVID-19

infection. One participant had been worried about her body being weakened already from having diabetes and health issues. After being vaccinated, the participant feels less worried. A different participant mentioned that she has not already been vaccinated but is considering being vaccinated due to her worry about the rising variants of COVID-19.

Side effects of COVID Vaccine – barrier

Many participants mentioned that the side effects of the COVID vaccine were very concerning and worrisome. Participants were unsure about how they would react to the vaccine. Several participants stated that they would wait to see how other people reacted to the vaccine and more research was done before considering to be vaccinated. Participants specifically mentioned that they hate feeling sick and did not want to get sick. Other participants were worried and had anxiety about the potential of long-term consequences or the vaccine causing severe complications to their health. One participant specifically mentioned that they know people that are being diagnoses with cancer and becoming critically ill after getting the COVID vaccine. The participant shared that this scares her and believes that the COVID vaccine has made the people they know sick.

Motivation for booster shots – facilitator and barrier

Three participants mentioned the booster shots for COVID-19 in their interviews. One participant initially did not have confidence in the vaccine effectiveness which hindered their motivation to get vaccinated. However, she has more confidence now after getting COVID and experiencing limited symptoms. She feels more confident in the vaccines and would be looking to get a booster in the future. Another participant has been vaccinated against COVID but is less inclined to get the new booster shots as they

already feel comfortable. The last participant is not motivated to get the booster shots as she feels burnout with the COVID pandemic and vaccines. The participant feels like this vaccine is never ending since there are multiple versions of the vaccines and multiple versions of the virus.

Influence of friends, colleagues, and family – facilitator

Four participants mentioned that they have been motivated to be vaccinated based on the people around them. One participant's father was diagnosed with pancreatic cancer and went into a nursing facility during the pandemic. The participant was vaccinated so she could visit him. Another participant wanted to give the most protection to himself but also his 90-year-old mother who he is very concerned about. Another participant was very worried about being a carrier for COVID-19 and got vaccinated to take precautions against passing the virus to other people. The last participant stated that early in the pandemic their mother and brother had COVID with concerning symptoms and aftereffects. After this experience the whole family decided that they would get vaccinated. Interestingly, this participant also associated people that were anti-vax with COVID denial. Since the participant had seen the effects of COVID, she could not be anti-vax or choose to not get vaccinated.

Distrust of the government - barrier

Two participants mentioned that the role of the government in vaccine development and vaccine rollout has made them suspicious and cautious about being vaccinated against COVID-19. Participants feel that the current administration is pressuring people to get the vaccine, and this contributes to their distrust in the government as a source of

information. One participant said that pressuring people to be vaccinated is wrong because people have a range of complex reasons not to get vaccinated.

Contradicting information about the vaccine – barrier

Two participants mentioned the role that contradicting information on not being vaccinated. They feel uncertain and distrustful of the vaccine due to contradicting information about the vaccines and the effectiveness of the vaccines and boosters. One participant added that they also feel there is not a trusted person in their life that they can talk to about the COVID vaccine.

Movement from social isolation – facilitator

A participant said that they felt more comfortable and safer leaving the house now that they have been vaccinated against COVID-19.

CHAPTER 5: DISCUSSION, CONCLUSION, AND RECOMMENDATIONS

KEY RESULTS

The most common barriers to COVID-19 vaccination found across participant types were knowledge-based barriers. Similarly, facilitators were also commonly found as knowledge based, with participants stating that they had adequate information on the vaccine to be comfortable being vaccinated. A lack of knowledge as a barrier was found to influence other sub-components, especially reflective and automatic motivation. Further, misinformation on the safety, effectiveness, and development of the vaccine had a large impact on how participants trusted the vaccine. Trust as a barrier and facilitator was a notable finding. Participants mentioned that their lack of knowledge and feelings about people involved in vaccine development had a large influence in not trusting the vaccine. There is an opportunity to develop greater policy and health education for the COVID-19 vaccines. Further, as we combat misinformation, there must simultaneously be exercises of engaging and building trust in the community.

DISCUSSION OF STUDY FINDINGS

INTRODUCTION

We could not find any published studies that examined the barriers and facilitators to COVID-19 vaccination among people affected by diabetes in the state of Georgia. There is a great need to understand the barriers and facilitators to COVID-19 vaccination within the

southern United States and within the population affected by diabetes, who have faced a large burden of COVID-19 severe cases and death.

There are barriers and facilitators found within this study that are very specific to the people affected by diabetes in the south. Many other studies have not explained fully the facilitators to vaccine uptake, instead focusing on the barriers that are contributing to hesitancy. This has, however, left a gap in our understanding of what is contributing to vaccine uptake. Such information is important for leveraging already existing vaccine messaging and programs. Addressing the barriers to COVID-19 vaccination is still of high priority, and vaccination could be promoted with the existing messaging that is already trusted.

KNOWLEDGE AS BARRIERS AND FACILITATORS TO VACCINATION

When exploring the barriers and facilitators all together, there is an interesting pattern of how knowledge affects participants' willingness and motivation to be vaccinated. Previous studies have found that the success of a vaccination plan in a population is dependent on the knowledge and level of access that the population has [3]. Further, the acceptance and hesitancy levels of a population are tied to the level of success that a vaccination program will have [2].

Knowledge as a barrier and facilitator to COVID-19 vaccination has been found as a key finding in this study. This is seen in knowledge on vaccine development and side effects of the vaccine, which show knowledge as a barrier and facilitator. As a barrier, participants felt that they did not have enough adequate information on how the vaccine was developed, what is in the vaccine, and who made the vaccine. This knowledge gap has been said to come from not having access to understand the vaccine, not having a trusted source of information, or having trust

issues with the partners involved. On the other hand, having knowledge, such as understanding vaccine effectiveness, was a facilitator. This is also tied to participants having gained this knowledge through information given by trusted sources. These participants mentioned how they have spoken with people about the vaccine, feel comfortable with the research, and were motivated for vaccination by the knowledge they have.

One factor that has been considered when looking at knowledge is the level of education and socio-economic status of the person. A study of the general population in India, found that people in urban areas with a middle and above socio-economic status had higher means of health knowledge, but were still lacking in knowledge on the eligibility of vaccines [3]. Another study looking at Japan, found that the Japanese population had willingness for vaccination tied to the cost of the vaccine and the socio-economic status of the individual. It was found that populations in the lower income and in rural areas had lower rates of vaccine acceptance [4]. These factors from the other studies can be used to understand participants in this study.

While participants were not specifically asked about their socio-economic status, many participants were recruited from low-income areas. A future direction of this work is to do a comparison of the qualitative results to the survey results from the beginning of the PEACH study. I would specifically want to map the areas of Georgia that participants are from to the knowledge barriers and facilitators. This would provide an overview of the state of Georgia and help target specific areas.

In the short term and immediate actions that can be taken, we would look to the Behavior Change Wheel (BCW) framework that accompanies the COM-B model for targeted interventions [64]. Since knowledge as a barrier is first found under psychological capability, by the BCW, these interventions are linked to modeling, environmental restructuring, and policy

level fiscal measures [64]. Psychological capability can also be increased through education, training, and enablement [64].

KNOWLEDGE IMPACTS REFELCTIVE AND AUTOMATIC MOTIVATION

This overview of knowledge is also being seen across the COM-B components. The first component of psychological capability is well adapted to look at the knowledge base of a participant, leading to or not to vaccination. However, these barriers and facilitators become present again in the reflective motivation and automatic motivation. Participants comment on how their knowledge base is impacting how they reflect on decision making or their emotional connection to a decision.

For reflective Motivation, this is seen especially in trust in the vaccine, protection provided by the vaccine, side effects of the vaccine, and the untrustworthy sources involvement in the vaccine. If a participant has knowledge on how the vaccine was developed and the effectiveness of the vaccine in the community, they have greater trust that the vaccine will work for them and provide them with protection against a COVID-19 infection. However, if a participant is exposed to a lot of information on bad outcomes of the vaccine or the potential side effects, they are less motivated to be vaccinated. There is existing literature on the influence of knowledge on side effects as well [69]. One study predicted nocebo side effects on the population following the release of the COVID-19 vaccine [70]. Nocebo side effects are seen with how people interpret side effects from a clinical standpoint and produce psychosomatic effects on themselves [71]. Another article has shown that positive framing of possible mild adverse effects of the COVID-19 vaccine are necessary to counteract the fear, worry, and stress that people may have [72].

Further, the article speaks on how the amount of information on adverse outcomes, misinformation, or negative media information on vaccines and side effects leads to greater concern [73].

This motivation further declines when they have heard of someone in their social circle having side effects or have heard from them of side effects. The social opportunity and social impact had a large influence on motivation as well. Participants mentioned facilitators to vaccination, such as wanting greater protection from infection when seeing their friends and family, not wanting to spread the vaccine, and the vaccination rates in their social circle. There is overlap between social opportunity and automatic motivation especially, with participants mentioning that the rates of vaccination in their friend group helped facilitate getting vaccinated with also feeling peer pressure from the group. Opposing this, some participants mentioned how the lack of motivation in their friend group was a barrier to vaccination and caused them to question getting vaccinated. The impact of the social group on vaccination has been seen in other studies, with personal vaccination associated with the participant's perception on vaccine uptake in their social circle, the vaccination social norms of an area, and the social circle's trust in the vaccine [74-76].

KNOWLEDGE AND MISINFORMATION IMPACT ON TRUST

The impact that knowledge has is found in psychological capability barriers and facilitators but is shown to impact reflective and automatic motivation as well. However, the barriers and facilitators in the Motivation component are specifically identified as trust. This is a notable and important finding and is highly tied to misinformation. Participants mentioned that

their knowledge was within several specific areas - knowing where and how to get the COVID vaccinated, knowledge on the COVID vaccine development, and knowledge on COVID vaccine side effects. When knowledge is a facilitator, the participants reported that they had adequate knowledge on the importance of being vaccinated, they were not concerned about the vaccine development timeline, and felt trust in the vaccine. However, when knowledge was a barrier, most participants also felt uncomfortable about the vaccine effectiveness, they were concerned about the timeline of vaccine development, and had heard of stories of the vaccine leading to severe side effects. When probed for more information, the participants provided stories of the vaccine leading to death, causing cancer, having a "chip" in it, and having ingredients that could cause mind control. This caused participants to say that they did not trust the vaccine and did not trust the people involved in vaccine development or roll out.

To further confirm trust as a factor, a scoping study performed using the social ecological approach to identifying the barriers and facilitators to COVID-19 vaccination acceptance, found that hesitancy rates are tied to feelings of trust in the vaccine and socio-economic factors [77]. What is difficult about the vaccine hesitancy in these participants that lack trust, is that their lack of trust built upon what they consider to be relevant knowledge. This is highlighting a larger issue of misinformation. Many participants here felt that they had adequate knowledge on the vaccine to make an informed decision to not be vaccinated. However, when misinformation is the large impact on knowledge, the trust in the vaccine and providers decreases significantly.

A Greek study has also found that social media has a large role on the spread of general vaccine information, with misinformation having a strong barrier effect on vaccination [5]. This study is notable for understanding the role of social media in the spread of information. There seems to be a tendency to speak on the dangers of social media in information exchange without

providing relevant ways to combat the spread of misinformation or to find ways to engage with spreading correct information on social media. Social media is the largest community and mode of information release in the world. New strategies are needed to engage users in the places that they are trafficking online. There needs to be information coming from new kinds of messengers and research into what are the ways to build trust in the public health system, healthcare providers, and vaccines.

A rapid systematic review found that the level of vaccine hesitancy of a person was tied to their susceptibility to misinformation, education level, perceived effectiveness of a COVID-19 vaccine, the source of COVID-19 related information people trust in, and COVID-19 related conspiracy theories [78]. The study found that information and knowledge had a large impact on the participant being vaccinated. An interesting perspective found in this study, which relates to our study participants, is that Black race was found to impact the vaccine hesitancy levels, with Black participants being consistently more hesitant to be vaccinated[78 79]. The Wang and Liu study explained hesitancy to greater medical mistrust, higher prevalence of COVID-19 conspiracy theories, and the current socio-political climate in the United States with police brutality [78-80].

As mentioned above, distrust in the US government was specifically mentioned as having a large impact as a barrier to vaccination. Trusting the government was not mentioned as a facilitator. Participants mentioned distrust in the US government involvement in the vaccine development and vaccine roll out. One participant also mentioned how previous studies like Tuskegee Syphilis Study still impact the trust in her community [81]. When probed further on the reasons for not trusting the government, some participants have an overall distrust that was

present before the COVID pandemic, but some participants felt less trusting in the government since the COVID pandemic.

The politization and role of the government with the COVID-19 vaccine in the United States is a barrier that has not been seen as prevalently in other countries. It has also not fully been seen with other vaccines. For a global perspective, one study conducted a review on the COME-HERE survey that was implemented across France, Germany, Italy, Luxembourg, Spain, and Sweden. They found that participants had a 3% to 6% higher change of vaccine hesitancy if the participant had conservative leaning politics or a one standard deviation lower degree of confidence in the government [82]. A comprehensive review from Los Angeles (LA) County, California, found that there are barriers to vaccination from unclear information, historical mistrust in unethical research studies, barriers in access to vaccination sites, a fear of the political influence, having medical autonomy, and lack of knowledge on vaccine development [1]. Our PEACH study adds to the LA study with more details of the reasoning and context of participant views. Further, the political and population landscape of Georgia differs from the western United States, and yet similar barriers are emerging in both areas. Another study examined political views within the United States by county. This study found that counties in the United States with a higher percentage of Republican voters had lower vaccination rates and had higher per 100,000 residents COVID-19 cases and deaths [83].

What is also concerning about trust in the COVID vaccine is whether this has had an impact on the trust of other vaccines. The intense politicization and focus on the COVID vaccine may be having repercussions outside of the focus of COVID. Research into vaccine hesitancy and programs tackling this will need to consider how the COVID pandemic has impacted people's trust, overall feelings on healthcare, and feelings on the government. Also, a focus on population

groups that have not previously been vaccine hesitant may be necessary to fully understand changes in perspective.

Many programs have been made to address vaccine hesitancy, especially in populations that have shown low vaccine coverage, higher rates of hesitancy, or are estimated based on demographic factors to have lower confidence in vaccines. The Organization for Economic Co-operation and Development (OECD) has said that there must be an increased effort for government and COVID-19 vaccine stakeholders to successfully develop confident messaging on vaccine safety and effectiveness, since the rapid development of the COVID-19 vaccine has made the public nervous [84]. Another study investigated the vaccine rollout across the world and noted that programs or policies that pushed for vaccine mandates or financial incentives for the COVID-19 vaccine were met with pushback and limited acceptance [85]. Previous literature has shown that these programs and mandates have worked in the seasonal flu, but the public does not have societal trust built for the COVID-19 vaccine. Further, the decision-making process has been influenced by a mistrust in the political leaders that are promoting the vaccine [86-88], public confusion due to readability and health literacy of the public [89 90], and people's perceptions of their individual responsibility to be vaccinated [91-93]. Therefore, programs have a need to focus on having a tailored multifaceted approach to the population group, social-political factors, and using new mechanisms of building trust in the community [84]. A program that has taken this into account is the Center for Disease Control and Prevention (CDC) program, "Partnering for Vaccine Equity" (P4VE) [94]. The P4VE program has an innovative approach to vaccine hesitancy by engaging the Conference of National Black Churches (CNBC) through the "Mobilizing the African-American Community to Overcome Vaccine Hesitancy: Trust Voices, Trust Content, Trusted Spaces" initiative [94]. This collaboration is important in leveraging pre-

existing trusted leaders in the community to reach populations that have lower vaccine confidence and uptake. Another program has seen successful in rural areas by partnering with the local public health departments to engage relevant population groups and provide education, and by improving overall health care coverage in the area to increase support in the community for health care workers [95]. An analysis of different programs found that programs that are focused on education or addressing a lack in knowledge, without population considerations and tailoring, may have led to an uptake in vaccination but ultimately did not address underlying vaccine hesitancy [96]. An interesting finding in this study for the next steps in the PEACH study, is that these researchers found clear increase in vaccination through behavioral nudges [97 98]. However, research that explores how nudges impact vaccine hesitancy is limited [96]. A future direction of the PEACH study would be to follow-up with our participants as they receive behavioral nudges to encourage vaccination and testing for COVID-19.

While participants did mention the barrier of trust in the government and good information was collected on the context of trust, coding and meaning saturation were not fully reached on this topic. The interview guides did not specifically question on trust, the role of the government, or on the role of politics in the vaccine. The participants naturally brought this up in their responses. It is notable that participants did mention this as an issue, meaning that the trust of the government was a large influence on the forefront of their mind. A recommendation for this topic would be inclusion in other studies looking at vaccine hesitancy and the impacts that the COVID pandemic has had on people. The topic of trust in the government and government agencies should also be a focus for intervention strategies.

BARRIERS AND FACILITATORS EMERGING IN MULTIPLE PARTICIPANT TYPES

There are also some differences between the participant groups on the opportunities available and motivations to be vaccinated. The Caregiver participants mentioned how they are motivated to be vaccinated by the people around them, being the people they are providing care for, their family members, and people in their social circle. They also mention how they have a motivation to limit their possibility of spreading the COVID-19 virus to others and using vaccination as protection for others as well. This could be due to having more opportunities to consider how their actions have impacted direct people in their family or circle by being a caregiver.

This could be compared to the Participants Living With Diabetes results, which had greater focus on personal stress, concern, and motivated by protection against a person COVID-19 infection. Some of the PLWD stated how they had overwhelming stress, paranoia, or concern about the potential for severe COVID-19 infection and potential death. Vaccination has helped relieve some of their emotional response, allowing for more comfortability to attend events, gatherings, meet with friends, or leave social isolation. These participants have knowledge also on the research that have been finding more adverse COVID-19 outcomes in PLWD. Being vaccinated has supported changes to their lifestyle since the beginning of the COVID pandemic or motivation to begin returning to their normal before COVID.

Participants also stated how they experienced multiple barriers and facilitators all at once. Understanding how participants reacted to the multiple barriers and facilitators is important for the creation of intervention programs, messages, or policy changes. In multiple instances, participants mentioned how they were influenced by many barriers, but chose to be vaccinated due to the facilitators outweighing the barriers. An example is of a participant hearing that there were severe side effects emerging from the vaccine and that their family was against being vaccinated. However, the knowledge of the participant on the rising case rates of COVID and the

protection that vaccination gives to severe outcomes from COVID-19 facilitated the participant in choosing to be vaccinated. Similarly, some participants mentioned that they were influenced more by the barriers to vaccination than by the facilitators in their life. Interesting to note, most of the participants that mentioned that were not vaccinated felt that they could be influenced to be vaccinated. Most said that they wanted more information on the vaccine side effects before they were vaccinated. Participants said that they either did not have enough knowledge to make an informed decision or that they need more information on what the vaccine side effects were because the stories of severe side effects made them anxious, uncomfortable, and nervous. This is important for future program implementation to understand and use a multifaceted approach to address barriers and encourage facilitators.

PHYSICAL CAPABILITY

Notably, participants did not report barriers and facilitators to vaccination that related to the physical capability component of the COM-B model.

THOUGHTS ON COM-B MODEL

The COM-B model has been a great way to give structure to the qualitative analysis process and identify barriers and facilitators to COVID-19 vaccination. During the process of analysis and review, I have developed some concerns with how this model separates out the barriers and facilitators. As written above, there is quite a lot of overlap between the COM-B components and with an opportunity or motivation impacting each other. I noticed this especially with how the knowledge coded in psychological capability and social opportunity impacted the

reflective motivation process or automatic motivation emotional response. This created some difficulty with how to code each piece of data without losing the context that the participant has given. I believe that these concerns on the model are based in how we understand the real-world dynamics of relationships and knowledge. We know that there is large overlap between how a person takes in knowledge and then leading that to application. This explains the overlap in how psychological capability is being seen with reflective motivation. The participant knowledge or lack of knowledge is causing reflective and critical thinking towards a vaccination choice. However, when participants present this to the interviewer, there is not a clear distinction between these on the participant perspective. The struggle for the coder and in analysis is how to ensure that the participant's thoughts are presented fully while also staying structured to the COM-B model.

Another component that was difficult to parse out was automatic motivation. This study showed that vaccine hesitancy has been tied to lots of knowledge based and emotional processes. This is seen in the results from this study as well. We found difficulty with separating a purely emotional response is that these are usually coinciding with a reflective response, social response, physical response, or knowledge response. Participants mentioned this above with having access to a vaccination location. While some participants felt "pumped" with having a close clinic site and that allowed ease, others were frustrated by having to travel long distances or not being able to get a scheduled time. By separating this coding out, there is a risk of losing the context of how the participant responded to the test site. For example, in coding for physical opportunity, the description would say that some participants had a close vaccination site while others had a site further away. However, if we lose the emotional response, we cannot fully say whether that close site is a facilitator. That participant may have felt a lack of trust in the clinic

from previous interaction or feel “pumped” about being so close. Similarly, the far away location may be a barrier with travel or a facilitator for a participant that trusted that clinic more because it was in their hometown with medical professionals that they know.

I understand that qualitative research is a very complex process, matching the multi-faceted decision-making process that is being asked about in this study. The COM-B Model provides a way to organize barriers and facilitators. This structure is productive for categorization and the development of future interventions that target these component focused processes. However, I would recommend greater clarity in the definitions to enable a clear understanding of the distinctions between the components, as well as further guidance on how to handle the overlap of information across the components. Additional guidance – and perhaps examples – on coding these complex knowledge, motivation, and emotional response would be useful for researchers and help ensure consistency in how the COM-B model is being applied across studies.

STRENGTHS AND LIMITATIONS

LIMITATIONS

A potential limitation in this study is the small sample size of caregiver participants. There are many barriers and facilitators that have been found within these participants. Caregiver interviews have also provided a greater perspective of caring for others. However, there are several areas where full code and meaning saturation have not been reached. Several of the barriers and facilitators identified were only brought up by one individual caregiver. Several barriers and facilitators found across the at-risk participants and the participants living with

diabetes were also not brought up by the caregiver participants. There are potentially missed barriers and facilitators, meaning code saturation may not have been reached. Another potential limitation of this study is the use of rapid analysis. A limitation of using rapid analysis is that we are analyzing summaries of the transcripts and not analyzing issues participants brought up in their own words. To help minimize any loss of key issues and ensure validity of the findings, the Research Assistants in charge of writing the transcript summaries were trained and the RAP sheets were quality checked. Additionally, due to the complex nature of the PEACH study, putting together an overview of demographic information to include in this thesis was not feasible at this stage of the research with existing capacity among study team members.

STRENGTHS

A strength of this study is that three participant types were recruited and interviewed. This has given the study a wide range of perspectives on issues that affect people affected by diabetes. Having comparisons across the participant types of at risk for diabetes, caregivers for those with diabetes, and people living with diabetes is a study perspective not seen in many studies. Further, the perspective of caregivers for people living with diabetes is a specific participant type that has not been included in most previous studies, resulting in limited information available to understand their perspective. Another strength of this study is using rapid analysis. This analytic method allowed for generating valid findings in a timely manner, which was important given that the results will be used for the next steps in the project (i.e., for nudge development).

CONCLUDING THOUGHTS AND RECOMMENDATIONS

Vaccine hesitancy is not a new concept or issue in the United States.[99-101] However, the past three years of the COVID-19 pandemic has brought vaccine hesitancy more forward into the spotlight as an issue with widespread health consequences. The COVID-19 vaccine hesitancy has also shown that there are many people who are not fully against vaccination, but now are hesitant due to a multitude of factors.

There is a need to have future research continue to study the difference in COVID vaccine hesitancy and overall vaccine hesitancy. Specifically, research is needed to expand our understanding of vaccine hesitancy now that people have gone through the mass politicization, hyper focused news cycle, and COVID-19 vaccine rollout. It will be necessary for future vaccination rollouts and for understanding health behaviors to study if people are showing greater vaccine hesitancy for other vaccines.

This study has also shown that knowledge on the COVID-19 vaccine has been the greatest barrier and facilitator to people being motivated to be vaccinated. Knowing this, there is an opportunity to develop greater policy and health education for the COVID-19 vaccines. People have responded that they are wanting protection against COVID, but are largely influenced by understanding the vaccine effectiveness, the vaccine development, and the vaccine side effects. These results can be used to create better marketing for the COVID vaccine and in how we discuss vaccination.

Another implication that this study has shown in the role of health literacy and health learning capacity. It has been seen throughout the COVID-19 pandemic that the ability of a person to understand the health messaging being pushed out about COVID has influenced their

willingness to be tested, uptake of preventative behaviors, and eventual COVID vaccination [102].

Additionally, this study and others could develop a mapping procedure with the Social Ecological Model to understand the levels of intervention. This study showed that the social influencers around a person had a great effect on being vaccinated or not being vaccinated. Looking at this through a Social Ecological Model for mapping the larger influences could have great implications on developing messaging at different social levels. These messages should be not only geared towards the barriers, but also solidifying the facilitators that are mentioned.

Several participants in this study mentioned that even though they were hesitant about vaccination for a variety of reasons, there were other facilitators that outweighed these barriers, leading to the participant being vaccinated. This includes how to address structural barriers or providing more education to try to change participant minds. However, these approaches are largely overlooking the emotional aspect of vaccination, seen in automatic motivation. This emotional side can largely overlook the knowledge a person has. This has been seen in emergency responses and when under distress. Vaccination messaging needs to not only try to change minds but lean into what has caused people to be comfortable with being vaccinated in the past and currently.

APPENDIX

APPENDIX A: OVERVIEW OF BARRIERS AND FACILITATORS BY THE COM-B COMPONENTS

Barriers and Facilitators	PSYCH CAP	PHY OPP	SOC OPP	REF MOT	AUT MOT
Length of vaccine development and safety	x				
Scheduling of the vaccine appointments	x				
Understanding of the vaccine effectiveness	x				
Effect of misinformation on the COVID vaccine having a chip in it	x				x
Side effects of the vaccine	x		x	x	x
Unmotivated by fast vaccine development timelines	x				x
Information available and impact on vaccine effectiveness	x				
Information given by trusted sources	x				
Vaccine promotion in workplace		x	x		
High availability of booster		x			
Local availability of vaccine		x			
Church as a vaccination site		x			
Vaccination Sites and Perception on vaccination sites		x			
Influence of medical professional		x	x		
Trust in the government in the community			x	x	x
Influence of family, friends, and social circle			x		x
Social circle being all vaccinated			x		

Motivation to get vaccinated to get back to normal			x		
Motivation in family for COVID vaccination			x		x
Motivated by travel and gatherings			x	x	
Mental drain of trying to communicate about the vaccine			x		
Influence of religion on vaccination			x		
Active influence and communication with people to get vaccinated			x		
Motivation from other people's COVID infections				x	
Trust in the vaccine				x	
Motivated by protection provided by the vaccine				x	x
Vaccines are an irreversible commitment				x	
Vaccine does not prevent COVID				x	
Motivation based on other people being sick				x	
Unmotivated by information on social media				x	
Motivation for booster shots				x	x
Motivated based on limiting exposure to other people				x	
Rates of infections				x	
Motivation to be vaccinated in order to go see family				x	
Motivation for vaccination due to monetary benefits				x	
Influence of religion on vaccination					

Motivation for vaccination based on untrustworthy sources involvement in the vaccine				x	
Stress and concern of a COVID infection					x
Contradicting information about the vaccine					x
Movement from social isolation					x

APPENDIX B: CODEBOOK

COM-B Component	Code	Definition
Physical capability **(PHY CAP)**	PHY CAP- FAC PHY CAP- BAR	Physical skill, strength or stamina
Psychological capability **(PSYCH CAP)**	PSYCH CAP- FAC PSYCH CAP-BAR	Knowledge or psychological skills, strength or stamina to engage in the necessary mental processes
Physical opportunity (**PHY OPP)**	PHY OPP- FAC PHY OPP-BAR	Opportunity afforded by the environment involving time, resources, locations, cues, physical 'affordance'
Social opportunity **(SOC OPP)**	SOC OPP-FAC SOC OPP-BAR	Opportunity afforded by interpersonal influences, social cues and cultural norms that influence the way that we think about things, e.g., the words and concepts that make up our language
Reflective motivation **(REF MOT)**	REF MOT-FAC REF MOT-BAR	Reflective processes involving plans (self-conscious intentions) and evaluations (beliefs about what is good and bad)
Automatic motivation **(AUT MOT)**	AUT MOT-FAC AUT MOT-BAR	Automatic processes involving emotional reactions, desires (wants and needs), impulses, inhibitions, drive states and reflex responses

APPENDIX C: At Risk IDI Guide Baseline

RADx-UP Diabetes In-Depth Interview Guide: People At-Risk for Diabetes

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in this interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. As a member of a high-risk community, you provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

For the record, do you agree to participate in this research study?

Do I have your permission to record this interview?

Interviewer Note: *Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic. We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present.*

Introduction (2-5 mins)

Could you briefly tell me a little bit about yourself?

How are you feeling about COVID-19 these days?

Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

Access to Care BEFORE COVID-19

Thank you for sharing that with me.

Now, I'd like you to think back to the time before the COVID-19 Pandemic, or the shutdown, which I will just call COVID-19. I'd like to get some information about your health before the start of the pandemic, around March of 2020.

1. Did you have any health concerns before COVID-19? If so, would you share with me what those concerns were?
    a. Probe on how were they addressing them. (If several, ask which were a priority)?
    b. Probe on any difficulties they had getting care before COVID (e.g. transportation, cost, etc.)

Impact of COVID-19 on Access to Care

I am also interested in hearing about how COVID-19 may have changed your healthcare experiences.

1. In what ways has COVID-19 changed how you get the health care you need?
   Probe: the type of care sought, when, where, examples. Probe on any difficulties they had getting care because of COVID (e.g. transportation, cost, etc.).

   Probe on whether these difficulties were NEW or DIFFERENT than previous difficulties, or if they were the same.

2. How has COVID-19 impacted your ability to get the medical care you need?
    a. Can you share an example of how you have met your healthcare needs during COVID-19?
3. Can you list some examples of how your medical care has changed during the first two years of the COVID-19 pandemic?
    a. In what ways did your ability to get to see your doctors change?

b. How did your experiences at your doctor visits change?
c. Has your patient care changed since COVID began?

4. Have things gone back to the way they were before COVID, or back to "normal"?
    a. *If not:* What is different? Probe on what "normal" is for them.

COVID-19 and COVID-19 Testing Trusted Sources of Information

Thank you for telling me about that. Now I'd like to hear about where you get information about COVID-19.

2. What are your sources of information about COVID-19?
    a. Probe: TV news, radio, social media outlets, WhatsApp, Nextdoor, friends, family, doctors, community leaders, local colleges and universities, etc.
        i. confirm name of tv, newspaper, radio stations, academic institutions, etc.

3. What are the sources you trust to give you correct information about COVID19?
    a. What sources do you think have the most reliable information about testing? *Probe on why they trust each source*
    b. If you see information from [*name of source they trust*], what do you think about that information?
        i. Why do you think that?
    c. What have you heard from these sources you trust that *motivates* you to get tested for COVID? To get vaccinated? To get a booster?
    d. What have you heard from these sources you trust that discourages you from getting tested for COVID? To get vaccinated? To get a booster?

4. Are there certain people or groups who you do NOT trust to give you correct information about COVID-19?
    e. Can you explain why you do NOT trust [*insert source*]?
    f. What is it about the information that you don't trust?

5. If you see that [*untrusted source*] has published the same information as [*trusted source*] does it change how you feel about the information published by [*trusted source*]?
    c. What about [*untrusted source]?* Why or why not?

6. Have your preferred sources of information about COVID changed since the pandemic started?
    d. Probe on **why** they changed their sources of information
    If their opinions of trusted/not trusted sources have or have not changed over time, probe on why they have or haven't changed.

7. Which organizations or news sources would you prefer to get information from on COVID-19 testing?
    e. What about for vaccinations and boosters?
    Probe on trust of information branded by CDC, NIH, MSM, Emory, local academic institution, department of public health, other sources they mentioned previously

8. Now I'd like to talk about how you connect with your friends and family.
    f. You said you liked to use [SM platform], do you use any other social media platforms?
    g. Do you belong to any particular SM groups?
    h. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    i. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    j. To what extent do you trust the information on SM?
    k. What do you do when you see information on SM that you DON'T trust or don't think is correct?
    Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    l. What do you do with things you see online about COVID-19?
        i. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        ii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iii. Probe on kinds of things they post, share or comment on and why
        iv. Probe on what they do if they see information about COVID they don't trust or think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)

Perceptions of Risk Related to COVID-19

Now I'd like for you to again think back to the time when COVID was just starting, about two years ago.

9. What were your main concerns about getting COVID-19 at that time?
    Probe: diabetes, lack of access to healthcare, time off work, family]

10. How concerned are you about [family member] getting COVID-19?

11. How have your concerns about getting COVID-19 changed?
    a. *If they have already had it*, Do you worry about getting it again? Why or why not?
12. What have you heard about how COVID-19 can affect people at risk for diabetes?

a. Probe on how what they heard has changed (e.g. people with diabetes are at greater risk, etc).

13. What actions did you take at the start of the pandemic to keep from getting COVID-19? How has that changed since then? What prompted those changes?

    Sample follow-up questions:
    a. *Was there a point in time where you stopped doing any of those things?*
    b. *Why did you stop?*
    c. *When did you stop?*
    d. *What information made you feel comfortable in stopping?*
    e. *Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)*
    f. *Have you thought about what you might do going forward in terms of taking steps to protect yourself?*

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing.

14. Have you been tested for COVID-19?
    If no – Why not? (probe on reasons)
    If yes—How did you get tested? (e.g. clinic/test site or home test)
    Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

IF THEY *HAVE NOT* USED A HOME TEST

15. Have you thought about getting a COVID-19 home testing kit?
16. Why have you not used a COVID-19 home test?
17. In what situation would you use a COVID-19 home test?
18. Where can you get COVID-19 self-test kits?

If THEY *HAVE* USED A HOME TEST

19. Where did you get it?
20. What kind did you get and why?
    If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.
    If they bought it at a pharmacy: probe on ease/difficulty of finding them.

21. Why did you decide to test yourself at home?
    If for a specific purpose: What kind did you need to get for [*purpose*]?

i. How many times have you used a home test kit?
ii. Can you describe for me what testing yourself was like?
Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?

iii. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]?
iv. What were the results of the test?
v. *If positive:* What did you do with the results?
(did they call their doctor, inform the public health department, stay home, etc.)

22. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

23. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

24. What information would you need to trust both kinds of testing equally?

25. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

26. How would you like to receive it? (probe on: social media, which platforms, etc.)
27. What are the best ways to get messages about testing out to the public?

28. What kind of information would you like to have about home testing?

29. Would you be willing to receive text or other forms of messages to remind you to get tested? If so, what frequency?

Perceptions about Vaccinations

30. Have you been vaccinated for COVID-19?

If yes: Probe on if they got a booster; if they plan on getting a second booster.

If no: Probe on why they decided not to get a vaccination and what kind of information would make them change their mind

31. Did you always plan on getting a COVID vaccination? **If no:** What made you change your mind to get a vaccine? (Probe on source of information, content, motivations, etc.)

32. What do you think about the possibility of there being an annual COVID-19 shot?
    a. Probe on whether they would get an annual COVID vaccine; and why or why not?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX D: At Risk IDI Guide Follow-up

RADx-UP Diabetes In-Depth Interview Guide: People At-Risk for Diabetes

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in a second interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. As a member of a high-risk community, you provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason and it will not impact the care you receive.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

For the record, do you agree to participate in this research study?

Do I have your permission to record this interview?

Interviewer Note: We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present. Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic.

Introduction (2-5 minutes)

The last time we talked was (date).

1. How have you been since the last time we talked?

2. How are you feeling about COVID-19 these days?
   Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

Health Concerns

The last time we talked, you told us you had [*list of health concerns from 1st interview*].

3. Since then, have you had any changes in your health?
   a. E.g. new diagnoses, improvements, etc.

4. Have you made any changes in how you are managing your health conditions?

   m. Probe on why changes were made (e.g. new difficulties getting care; prioritization of health conditions; to address previous difficulties such as transportation and cost.)

Impact of COVID-19 on Access to Care

Interviewer Note: Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm the example you shared was during X point in time during the pandemic.

5. How has your medical care changed since we last spoke? You mentioned [*insert what participant told us here*], has anything changed?

   Sample follow-up questions:

   Have things gone back to the way they were before COVID, or back to 'normal'?

   a. *Probe on what "normal" is for them.*
   b. *If not:* What is different?
   a. In what ways has your ability to get to see your doctors changed?
   b. How did your experiences at your doctor visits change?

COVID-19 and COVID-19 Testing Trusted Sources of Information

Now I'd like to ask you a few questions about your preferred sources of information about COVID-19 and testing. You previously mentioned that you trusted information from [*name sources*].

6. Have your preferred sources of information about COVID changed since we last talked?
    a. *If yes*, **why?**
    b. *If no*, probe on why they haven't changed
    c. *Probe on new sources of information*
    d. Probe on ways their perception or trust of their preferred sources of info may have changed.

7. Now I'd like to talk about how you connect with your friends and family.
    n. You said you liked to use [SM platform], do you use any other social media platforms?
    o. Do you belong to any particular SM groups?
    p. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    q. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    r. To what extent do you trust the information on SM?
    s. What do you do when you see information on SM that you DON'T trust or don't think is correct?
    Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    t. What do you do with things you see online about COVID-19?
        i. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        ii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iii. Probe on kinds of things they post, share or comment on and why
        iv. Probe on what they do if they see information about COVID they don't trust or think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)

Perceptions of Risk Related to COVID-19

8. What are your main concerns about getting COVID-19 now?
    a. Probe on changes to concerns over course of the pandemic

(e.g. diabetes, lack of access to healthcare, time off work, family)

a. If they have already had COVID-19, do they worry about getting it again? Why or why not?

9. You mentioned that you were doing [e.g. masking] to keep from getting COVID-19. What are you doing now? (Compare to notes from transcript of interview 1 and probe on any differences)

Sample follow-up questions:

a. Was there a point in time where you stopped doing any of those things?
b. Why did you stop?
c. When did you stop?
d. What information made you feel comfortable in stopping?
e. Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)
f. Have you thought about what you might do going forward in terms of taking steps to protect yourself?

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing. Since the last time we talked:

10. Have you been tested for COVID-19?
If no – Why not?
If yes—How did you get tested? (e.g. clinic/test site or home test)
Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

IF THEY HAVE NOT USED A HOME TEST

11. Have you thought about getting a COVID-19 home testing kit?
12. Why have you not used a COVID-19 home test?
13. In what situation would you use a COVID-19 home test?
14. Where can you get COVID-19 self-test kits?

If THEY HAVE USED A HOME TEST

15. Where did you get it?
16. What kind did you get and why?
If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.

If they bought it at a pharmacy: probe on ease/difficulty of finding them.

17. Why did you decide to test yourself at home?
    If for a specific purpose: What kind did you need to get for [*purpose*]?

    i. How many times have you used a home test kit?
    ii. Can you describe for me what testing yourself was like?
    Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?

    iii. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]?
    iv. What were the results of the test?
    v. *If positive:* What did you do with the results?
    (did they call their doctor, inform the public health department, stay home, etc.)

18. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

19. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

20. What information would you need to trust both kinds of testing equally?

21. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

22. How would you like to receive it? (probe on: social media, which platforms, etc.)
23. What are the best ways to get messages about testing out to the public?

24. What kind of information would you like to have about home testing?

25. Would you be willing to receive text or other forms of messages to remind you to get tested? If so, what frequency?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX E: Caregiver IDI Guide Baseline

RADx-UP Diabetes In-Depth Interview Guide: Family Caregivers

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in this interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. You provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason and it will not impact the care you receive.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

We are now recording. For the record, do you agree to participate in this research study? Do I have your permission to record this interview?

Interviewer Note: *Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic. We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present.*

Introduction (5 minutes)

I'd like to begin by asking you a few questions about your family and the people in your household who you care for.

33. Could you briefly describe what a typical day in your household looks like?
    a. Probe: number of people in household, which family members have diabetes, how many work outside the home, what they do (e.g., essential work), who is responsible for food preparation, shopping, etc.

34. How long have you been a caregiver for someone living with diabetes?
    a. What is their relation to you? (spouse, parent, etc.)

35. How are you all feeling about COVID-19 these days?
Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

36. How do you think these feelings about COVID have affected how you care for your family member?

Access to Care BEFORE COVID-19

Thank you for telling me about that.

Now, I'd like you to think back to the time before the COVID-19 Pandemic, or the shutdown, which I will just call COVID-19. I'd like to get some information about what it was like to care for someone living with diabetes before the start of the pandemic, around March of 2020.

37. How did your [relation] manage their diabetes before COVID-19? And by "manage" I mean arranging doctor's visits (e.g., scheduling, transportation), getting medications, or following recommendations for diet and exercise.
    Probe on any difficulties they had getting care before COVID (e.g. transportation, cost, etc.)

38. Did they have any other health concerns before COVID-19?
    Probe on how participant was addressing it/them? (If several, ask which were a priority)?

39. What was your role in their diabetes management before COVID-19?
    Probe for any challenges they encountered providing or assisting with care prior to COVID.

40. Did you have any health concerns before COVID-19? If so, would you share with me what they were?
    a. *Probe on how participant addressed health concerns before COVID? (If several, ask which were a priority)?*
    b. *Probe on any difficulties they had getting care before COVID (e.g. transportation, cost, etc.)*

Impact of COVID-19 on Access to Care / Providing Diabetes Management Support

I am also interested in hearing about how COVID-19 may have changed how you provide support to your [relative] as well as your own healthcare experiences.

Interviewer Note: Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm the example you shared was during X point in time during the pandemic.

41. In what ways has your role as caregiver changed because of COVID-19?

    a. Probe on any difficulties they had getting care for their [relative] because of COVID (e.g. transportation, cost, etc.). Were these difficulties NEW or DIFFERENT than previous difficulties, or were they the same?

    b. Probe on changes in responsibilities, and changes in behavior to prevent self or household member from getting COVID-19.

    c. Probe on other challenges related to the caregiver's identities (parent of unvaccinated child, essential worker) that could affect how they provide care.

42. How has COVID-19 impacted your [relative's] ability to get the medical care they need?
    a. Can you share an example of how you have helped them to meet their healthcare needs during COVID-19?

43. Can you list some examples of how your [relative's] medical care has changed during the first two years of the COVID-19 pandemic?
    a. In what ways did their ability to get to see their doctors change?
    b. How did their experiences at their doctor visits change?
    c. Has their patient care changed since COVID began?

44. What about for you? Can you list some examples of how your medical care has changed during the first two years of the COVID-19 pandemic?
    a. Can you share an example of how you have met your healthcare needs during COVID-19?

45. Have things gone back to the way they were before COVID, or back to "normal"?

    a. *If not:* What is different? Probe on what "normal" is for them.

COVID-19 and COVID-19 Testing Trusted Sources of Information

Thank you for telling me about that. Now I'd like to hear about where you get information about COVID-19.

46. What are your sources of information about COVID-19?
    a. Probe: TV news, radio, social media outlets, WhatsApp, Nextdoor, friends, family, doctors, community leaders, local colleges and universities, etc.
        i. confirm name of tv, newspaper, radio stations, academic institutions, etc.

47. What are the sources you trust to give you correct information about COVID19?
    g. What sources do you think have the most reliable information about testing? *Probe on why they trust each source*
    h. If you see information from [*name of source they trust*], what do you think about that information?
        i. Why do you think that?
    i. What have you heard from these sources you trust that *motivates* you to get tested for COVID? To get vaccinated? To get a booster?
    j. What have you heard from these sources you trust that discourages you from getting tested for COVID? To get vaccinated? To get a booster?

48. Are there certain people or groups who you do NOT trust to give you correct information about COVID-19?
    k. Can you explain why you do NOT trust [*insert source*]?
    l. What is it about the information that you don't trust?

49. If you see that [*untrusted source*] has published the same information as [*trusted source*] does it change how you feel about the information published by [*trusted source*]?
    u. What about [*untrusted source]?* Why or why not?

50. Have your preferred sources of information about COVID changed since the pandemic started?
    v. Probe on **wh**y they changed their sources of information
    If their opinions of trusted/not trusted sources have changed or not changed over time, probe on why they have or haven't changed.

51. Does the person you care for also trust the same sources?
    w. If not, why not?

x. What sources do they trust?
y. How do you manage that?

52. Which organizations or news sources would you prefer to get information from on COVID-19 testing?
    z. What about for vaccinations and boosters?
    Probe on trust of information branded by CDC, NIH, MSM, Emory, local academic institution, department of public health, other sources they mentioned previously

53. Now I'd like to talk about how you connect with your friends and family.
    aa. Do you use any social media platforms?
    bb. Do you belong to any particular SM groups?
    cc. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    dd. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    ee. To what extent do you trust the information on SM?
    ff. What do you do when you see information on SM that you DON'T trust or don't think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)
    Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    gg. What do you do with things you see online about COVID-19?
        i. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        ii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iii. Probe on kinds of things they post, share or comment on and why

Perceptions of Risk Related to COVID-19

Now I'd like for you to again think back to the time when COVID was just starting, about two years ago.

54. What were your main concerns about getting COVID-19 at that time?
    Probe: diabetes, lack of access to healthcare, time off work, family: concern about the person they care for [who would take care of them if caregiver got sick; how caregiver would care for family member that got sick, etc.]

55. How concerned are you about [person they care for] getting COVID-19?

56. How have your concerns about getting COVID-19 changed?

hh. What about if the person you care for were to get sick?
ii. *If they have already had it*, Do you worry about getting it again? Why or why not?

57. What have you heard about how COVID-19 can affect people with diabetes?
    a. Probe on how what they heard has changed (e.g. people with diabetes are at greater risk, etc).

58. What actions did you take at the start of the pandemic to keep from getting COVID-19? How has that changed since then? What prompted those changes?
    a. What about the person you care for? What did they do?
    b. Do they do the same things you do? Why or why not?

    Sample follow-up questions:
    g. Was there a point in time where you stopped doing any of those things?
    h. Why did you stop?
    i. When did you stop?
    j. What information made you feel comfortable in stopping?
    k. Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)
    l. Have you thought about what you might do going forward in terms of taking steps to protect yourself?

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing.

59. Have you been tested for COVID-19?
    If no – Why not? (probe on reasons)
    If yes—How did you get tested? (e.g. clinic/test site or home test)
    Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

60. Have you ever used a home test?

IF THEY *HAVE NOT* USED A HOME TEST

61. Have you thought about getting a COVID-19 home testing kit?
62. Why have you not used a COVID-19 home test?
63. In what situation would you use a COVID-19 home test?
64. Where can you get COVID-19 self-test kits?

If THEY *HAVE* USED A HOME TEST

65. Where did you get it?

66. What kind did you get and why?
    If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.
    If they bought it at a pharmacy: probe on ease/difficulty of finding them.

67. Why did you decide to test yourself at home?
    If for a specific purpose: What kind did you need to get for [*purpose*]?

    i. How many times have you used a home test kit?
    ii. Can you describe for me what testing yourself was like?
    Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?

    iii. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]?
    iv. What were the results of the test?
    v. *If positive:* What did you do with the results?
    (did they call their doctor, inform the public health department, stay home, etc.)

68. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

69. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

70. What information would you need to trust both kinds of testing equally?

71. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

72. How would you like to receive it? (probe on: social media, which platforms, etc.)
73. What are the best ways to get messages about testing out to the public?

74. What kind of information would you like to have about home testing?

75. Would you be willing to receive text or other forms of messages to remind you to get tested? If so, what frequency?

Perceptions about Vaccinations

76. Have you been vaccinated for COVID-19?

If yes: Probe on if they got a booster; if they plan on getting a second booster.

If no: Probe on why they decided not to get a vaccination and what kind of information would make them change their mind

77. Has the person you care for gotten vaccinated? Why or why not?

78. Did you always plan on getting a COVID vaccination? What about the person you care for?

    If no: What made you change your mind to get a vaccine? (Probe on source of information, content, motivations, etc.)

79. What do you think about the possibility of there being an annual COVID-19 shot?
    b. Probe on whether they would get an annual COVID vaccine; and why or why not?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX F: Caregiver IDI Guide Follow-up

RADx-UP Diabetes In-Depth Interview Guide: Family Caregivers

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in a second interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. As someone who cares for a family member of a high-risk community, you provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason and it will not impact the care you receive.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

We are now recording.

For the record, do you agree to participate in this research study?

Do I have your permission to record this interview?

Interviewer Note: *We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present. Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic.*

Introduction (2-5 minutes)

The last time we talked was (date). You were providing care for [person caring for and what illnesses/concerns they had].

80. How have you been since the last time we talked?
    If not mentioned, clarify if they are still taking care of the family member.

81. How are you all feeling about COVID-19 these days?
    Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

82. How have these feelings affected how you care for [family member]?

Health Concerns

The last time we talked, you told us you were taking care of [*person and list of health concerns from 1st interview*].

83. Since then, has [your person] had any changes in their health?
    a. E.g. new diagnoses, improvements, etc.

84. Has [your person] made any changes in how they are managing their diabetes [and/or other health conditions]? And by "manage" I mean arranging doctor's visits (e.g., scheduling, transportation), getting medications, or following recommendations for diet and exercise.
    Probe on why changes were made (to address any difficulties they had getting care during COVID or new difficulties (e.g. transportation, cost, etc.)

85. In what ways has your role in their diabetes management changed since we last talked?

If participant had health issues that they mentioned in previous interview:

86. How about you, have you had any changes in your health?
    b. E.g. new diagnoses, improvements, etc.

87. Have you made any changes in how you are managing your [diabetes and/or other health conditions]?
    jj. Probe on why they made changes (e.g. new difficulties getting care; prioritization of health conditions; to address previous difficulties such as transportation and cost.)

Impact of COVID-19 on Access to Care / Providing Diabetes Management Support

Interviewer Note: Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm the example you shared was during X point in time during the pandemic.

88. When we last spoke, you mentioned that because of COVID-19 your role as caregiver had changed. [Briefly describe what they had said]

    a. Probe on any CHANGES or NEW difficulties they had getting care for their [relative] because of COVID (e.g. transportation, cost, etc.). Were these difficulties NEW or DIFFERENT than previous difficulties, or were they the same?

    b. Mention any changes in responsibilities and changes in behavior they said they had made to prevent self or household member from getting COVID-19.

    The last time we talked, you said you had started doing [X] to prevent your self or the person you care for from getting COVID-19. Are you still doing those things? Why or why not? Probe on what doing differently and why.

    c. *Mention other challenges they had talked about related to the caregiver's identities (parent of unvaccinated child, essential worker) that could affect how they provided care.* Probe to see if those things are still a challenge; in what way; how have they changed; what they are doing differently.

89. How has your [relative's] ability to get the medical care they need changed since we last spoke?
    a. Can you share an example of how you have helped them to meet their healthcare needs since we last spoke?

    E.g.:

    c. Have things gone back to the way they were before COVID?
        i. *If not:* What is different?
    d. In what ways has their ability to get to see their doctors changed?
    e. How did their experiences at their doctor visits change?

90. What about for you? Can you list some examples of how your medical care has changed during the first two years of the COVID-19 pandemic?
    a. Can you share an example of how you have met your healthcare needs during COVID-19?

91. Have things gone back to the way they were before COVID, or back to "normal"?

a. *If not:* What is different? Probe on what "normal" is for them.

COVID-19 and COVID-19 Testing Trusted Sources of Information

Now I'd like to ask you a few questions about your preferred sources of information about COVID-19 and testing. You previously mentioned that you trusted information from [*name sources*].

92. Have your preferred sources of information about COVID changed since we last talked?
    a. *If yes*, **why?**
    b. *If no*, probe on why they haven't changed
    c. *Probe on new sources of information*
    d. Probe on ways their perception or trust of their preferred sources of info may have changed.

93. Now I'd like to talk about how you connect with your friends and family.
    a. You said you liked to use [SM platform], do you use any other social media platforms?
    b. Do you belong to any particular SM groups?
    c. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    d. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    e. To what extent do you trust the information on SM?
    f. What do you do when you see information on SM that you DON'T trust or don't think is correct?
    Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    g. What do you do with things you see online about COVID-19?
        ii. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        iii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iv. Probe on kinds of things they post, share or comment on and why
        v. Probe on what they do if they see information about COVID they don't trust or think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)

94. Does the person you care for also trust the same sources of information?
    a. If not, why do they say they don't trust your sources?
    b. What sources do they trust?
    c. How do you manage that?

Perceptions of Risk Related to COVID-19

When we last spoke, you said your main concerns about getting COVID were [x].

95. What are your main concerns about getting COVID-19 now?
    a. Probe on changes to concerns over course of the pandemic since you last spoke.
    b. (e.g. diabetes, lack of access to healthcare, time off work, who would care for the person they care for; family)
    c. Probe on how what they hear about COVID has changed (e.g. people with diabetes are at greater risk, etc).

96. *If they have already had COVID-19,* Do you worry about getting it again? Why or why not?

97. What about the person they care for? Have they had COVID? What do they worry about and why?

98. You mentioned that you were doing [e.g. masking] to keep from getting COVID-19. What are you doing now? (Compare to notes from transcript of interview 1 and probe on any differences)

    Sample follow-up questions:
    a. Was there a point in time where you stopped doing any of those things?
    b. Why did you stop?
    c. When did you stop?
    d. What information made you feel comfortable in stopping?
    e. Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)
    f. Have you thought about what you might do going forward in terms of taking steps to protect yourself?

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing. Since the last time we talked:

99. Have you been tested for COVID-19? What about the person you care for?
    If no – Why not?
    If yes—Where did you get tested? (e.g. clinic/test site or home test)
    Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

IF THEY HAVE NOT GOTTEN TESTED OR USED A HOME TEST

100. Have you thought about getting a COVID-19 home testing kit?
101. Why have you not used a COVID-19 home test?
102. In what situation would you use a COVID-19 home test?
103. Where can you get COVID-19 self-test kits?

If THEY HAVE USED A HOME TEST

104. Where did you get it?
105. What kind did you get and why?
If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.
If they bought it at a pharmacy: probe on ease/difficulty of finding them.

106. Why did you decide to test yourself at home?
If for a specific purpose: What kind did you need to get for [*purpose*]?

a. How many times have you used a home test kit?
b. Can you describe for me what testing yourself was like?
Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?

c. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]? Which do they prefer and why?
d. What were the results of the test?
e. *If positive:* What did you do with the results? (did they call their doctor, inform the public health department, stay home, etc.)

107. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

108. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

109. What information would you need to trust both kinds of testing equally?

110. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

111. How would you like to receive it? (probe on: social media, which platforms, etc.)

112. What are the best ways to get messages about testing out to the public?

113. What kind of information would you like to have about home testing?

114. Would you be willing to receive text or other forms of messages to remind you to get tested? If so, what frequency?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX G: People Living With Diabetes IDI Guide Baseline

RADx-UP Diabetes In-Depth Interview Guide: Living with Diabetes

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in this interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. As a member of a high-risk community, you provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason and it will not impact the care you receive.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

For the record, do you agree to participate in this research study?

Do I have your permission to record this interview?

Interviewer Note: *Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic. We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present.*

Introduction (2-5 minutes)

Could you briefly tell me a little bit about yourself?

How are you feeling about COVID-19 these days?

Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

Access to Care BEFORE COVID-19

Thank you for telling me about that.

Now, I'd like you to think back to the time before the COVID-19 Pandemic, or the shutdown, which I will just call COVID-19. I'd like to get some information about your health before the start of the pandemic, around March of 2020.

2. Did you have any health concerns before COVID-19? If so, would you share with me what they were?
    a. Probe: on how participant was addressing it/them? (If several, ask which were a priority)?
    b. Probe on any difficulties they had getting care before COVID (e.g. transportation, cost, etc.)

Impact of COVID-19 on Access to Care

I am also interested in hearing about how COVID-19 may have changed your healthcare experiences.

3. In what ways has COVID-19 changed how you get the health care you need?
   Probe: the type of care sought, when, where, examples. Probe on any difficulties they had getting care because of COVID (e.g. transportation, cost, etc.).

   Probe on whether these difficulties were NEW or DIFFERENT than previous difficulties, or if they were the same.

4. How has COVID-19 impacted your ability to get the medical care you need?
    a. Can you share an example of how you have met your healthcare needs during COVID-19?
5. Can you list some examples of how your medical care has changed during the first two years of the COVID-19 pandemic?

a. In what ways did your ability to get to see your doctors change?
b. How did your experiences at your doctor visits change?
c. Has your patient care changed since COVID began?

6. Have things gone back to the way they were before COVID, or back to "normal"?
    a. *If not:* What is different? Probe on what "normal" is for them.

COVID-19 and COVID-19 Testing Trusted Sources of Information

Thank you for telling me about that. Now I'd like to I'd like to hear about where you get information about COVID-19.

7. Can you tell me what are your sources of information about COVID-19?
    b. Probe: TV news, radio, social media outlets, WhatsApp, Nextdoor, friends, family, doctors, community leaders, local colleges and universities, etc.
        i. confirm name of tv, newspaper, radio stations, academic institutions, etc.

8. What are the sources you trust to give you correct information about COVID19?
    m. What sources do you think have the most reliable information about testing? *Probe on **why** they trust each source*
    n. If you see information from [*name of source they trust*], what do you think about that information?
        i. Why do you think that?
    o. What have you heard from these sources you trust that *motivates* you to get tested for COVID? To get vaccinated? To get a booster?
    p. What have you heard from these sources you trust that discourages you from getting tested for COVID? To get vaccinated? To get a booster?

9. Are there certain people or groups who you do NOT trust to give you correct information about COVID-19?
    q. Can you explain why you do NOT trust [*insert source*]?
    r. What is it about the information that you don't trust?

10. If you see that [*untrusted source*] has published the same information as [*trusted source*] does it change how you feel about the information published by [*trusted source*]?
    a. What about [*untrusted source*]? Why or why not?

11. Have your preferred sources of information about COVID changed since the pandemic started?
    a. Probe on **why** they changed their sources of information
    If their opinions of trusted/not trusted sources have changed or not changed over time, probe on why they have or haven't changed

12. Which organizations or news sources would you prefer to get information from on COVID-19 testing?
    a. What about for vaccinations and boosters?
       Probe on trust of information branded by CDC, NIH, MSM, Emory, local academic institution, department of public health, other sources they mentioned previously

13. Now I'd like to talk about how you connect with your friends and family.
    a. You said you liked to use [SM platform], do you use any other social media platforms?
    b. Do you belong to any particular SM groups?
    c. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    d. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    e. To what extent do you trust the information on SM?
    f. What do you do when you see information on SM that you DON'T trust or don't think is correct?
       Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    g. What do you do with things you see online about COVID-19?
        i. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        ii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iii. Probe on kinds of things they post, share or comment on and why
        iv. Probe on what they do if they see information about COVID they don't trust or think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)

Perceptions of Risk Related to COVID-19

Now I'd like for you think back to the time when COVID was just starting, about two years ago.

14. When COVID first came out, how concerned were you about getting COVID-19?
    a. What about now?

15. What were your main concerns about getting COVID-19 at that time?
    Probe on: diabetes, lack of access to healthcare, time off work, family
    a. What about now?

16. How have your concerns about getting COVID-19 changed?

b. If they have already had it, do they worry about getting it again? Why or why not?

17. What have you heard about how COVID-19 can affect people living with diabetes?
    c. Probe on how what they heard has changed.

18. What actions did you take at the start of the pandemic to keep from getting COVID-19? How has that changed since then? What prompted those changes?

Sample follow-up questions:

19. *Was there a point in time where you stopped doing any of those things?*
20. *Why did you stop?*
21. *When did you stop?*
22. *What information made you feel comfortable in stopping?*
23. *Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)*
24. *Have you thought about what you might do going forward in terms of taking steps to protect yourself?*

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing.

25. Have you ever been tested for COVID-19?
    If no – Why not? (probe on reasons)
    If yes—How did you get tested? (e.g. clinic/test site or home test)
    Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

IF THEY *HAVE NOT* USED A HOME TEST

26. Have you thought about getting a COVID-19 home testing kit?
27. Why have you not used a COVID-19 home test?
28. In what situation would you use a COVID-19 home test?
29. Where can you get COVID-19 self-test kits?

If THEY *HAVE* USED A HOME TEST

30. Where did you get it?
31. What kind did you get and why?
    If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.
    If they bought it at a pharmacy: probe on ease/difficulty of finding them.

32. Why did you decide to test yourself at home?

If for a specific purpose: What kind did you need to get for [*purpose*]?

i. How many times have you used a home test kit?
ii. Can you describe for me what testing yourself was like?
Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?
iii. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]?
iv. What were the results of the test?
v. *If positive:* What did you do with the results?
(did they call their doctor, inform the public health department, stay home, etc.)

33. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

34. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

35. What information would you need to trust both kinds of testing equally?

36. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

37. How would you like to receive it? (probe on: social media, which platforms, etc.)
38. What are the best ways to get messages about testing out to the public?

39. What kind of information would you like to have about home testing?

40. Would you be willing to receive text or other forms of messages to remind you to get tested? If so, what frequency?

Perceptions about Vaccinations

41. Have you been vaccinated for COVID-19?
If yes: Probe on if they got a booster; if they plan on getting a second booster.

If no: Probe on why they decided not to get a vaccination and what kind of information would make them change their mind

42. Did you always plan on getting a COVID vaccination? **If no:** What made you change your mind to get a vaccine? (Probe on source of information, content, motivations, etc.)

43. What do you think about the possibility of there being an annual COVID-19 shot?
    c. Probe on whether they would get an annual COVID vaccine; and why or why not?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX H: People Living With Diabetes IDI Guide Follow-up

RADx-UP Diabetes In-Depth Interview Guide: Living With Diabetes

Hello, my name is _____. I am a [title] at [institution]. Thank you for agreeing to participate in this interview as part of a study to understand perceptions of COVID-19 testing in communities most affected by the virus. As a member of a high-risk community, you provide a valuable perspective that I hope to capture in today's interview. There are no right or wrong answers as this is about your experience.

This interview will take approximately one hour. We would like to record the interview, with your permission, to be sure that we have correctly and completely captured your responses. The recording will be destroyed once your responses are transcribed. You are one of several people who will share their experiences with us. All identifying information, including your name, will be removed from the interview transcripts, notes, or any other information about today's discussion. If you prefer, you can choose for us to call you a different name during the interview. Your interview data will remain confidential and secure throughout the entire project.

Your participation is completely voluntary. You may choose not to answer some of the questions or to discontinue the interview at any time for any reason and it will not impact the care you receive.

Do you have any questions before we begin the interview?

[*Answer any questions they may have and then begin.*]

[Start recording]

For the record, do you agree to participate in this research study?

Do I have your permission to record this interview?

Interviewer Note: We need to be able to distinguish between before the pandemic, different points of the pandemic, and the present. Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm, the example you shared was during "X" point in time during the pandemic.

Introduction (2-5 minutes)

The last time we talked was (date).

26. How have you been since the last time we talked?

27. How are you feeling about COVID-19 these days?
    Probe on mention of things like: "being over it"; "tired of it", "getting back to normal" (e.g. would you please describe for me how [x] feels to you?)

Health Concerns

The last time we talked, you told us you had [*list of health concerns from 1st interview*].

28. Since then, have you had any changes in your health?
    c. E.g. new diagnoses, improvements, etc.

29. Have you made any changes in how you are managing your diabetes and other health conditions?
    a. Probe on why changes were made (e.g. new difficulties getting care; prioritization of health conditions; to address previous difficulties such as transportation and cost.

Impact of COVID-19 on Access to Care

Interviewer Note: Make sure it is clear what point in time the individual is talking about. Use a confirmation such as: To confirm the example you shared was during X point in time during the pandemic.

30. How has your medical care changed since we last spoke? You mentioned [*insert what participant told us here*], has anything changed?

    Sample follow-up questions:

    Have things gone back to the way they were before COVID, or back to 'normal'? *Probe on what "normal" means for them.*

    c. *If not:* What is different?
    f. In what ways has your ability to get to see your doctors changed?
    g. How did your experiences at your doctor visits change?

COVID-19 and COVID-19 Testing Trusted Sources of Information

Now I'd like to ask you a few questions about your preferred sources of information about COVID-19 and testing. You previously mentioned that you trusted information from [*name sources*].

31. Have your preferred sources of information about COVID changed since we last talked?
    a. *If yes*, **why?**
    b. *If no*, probe on why they haven't changed
    c. *Probe on new sources of information*
    d. Probe on ways their perception or trust of their preferred sources of info may have changed.

32. Now I'd like to talk about how you connect with your friends and family.
    a. You said you liked to use [SM platform], do you use any other social media platforms?
    b. Do you belong to any particular SM groups?
    c. Have you been seeing COVID-related content on SM lately?
        i. Probe on kinds of information they are seeing and where they are seeing it (groups they belong to, friends, etc.)
    d. Do you ever post/comment about COVID-19 on [*SM platforms mentioned*]?
    e. To what extent do you trust the information on SM?
    f. What do you do when you see information on SM that you DON'T trust or don't think is correct?
    Probe on if/how they respond (e.g. like/dislike; try to correct it; comment; ignore it? report it?)

    g. What do you do with things you see online about COVID-19?
        i. Probe on what they do: read, share, link to, comment on, "like" i.e. react to the post (like, heart, care, etc.), do they act on it in any way?
        ii. Probe on kinds of kinds of posts or links they read or respond to (Get them to be specific about the things that "speak to them", e.g. special interest stories on who got better, etc.)
        iii. Probe on kinds of things they post, share or comment on and why
        iv. Probe on what they do if they see information about COVID they don't trust or think is correct? (e.g. do they look it up elsewhere? Ignore it? Reply back?, etc.)

Perceptions of Risk Related to COVID-19

33. What are your main concerns about getting COVID-19 now?
    a. Probe on changes to concerns over course of the pandemic

(e.g. diabetes, lack of access to healthcare, time off work, family)

d. If they have already had COVID-19, do they worry about getting it again? Why or why not?

34. You mentioned that you were doing [e.g. masking] to keep from getting COVID-19. What are you doing now? (Compare to notes from transcript of interview 1 and probe on any differences)

Sample follow-up questions:

a. Was there a point in time where you stopped doing any of those things?
b. Why did you stop?
c. When did you stop?
d. What information made you feel comfortable in stopping?
e. Have you restarted at any point, or are you still taking those same actions? (masking, hand-washing, social distancing, etc.)
f. Have you thought about what you might do going forward in terms of taking steps to protect yourself?

Perceptions and Experiences with COVID-19 Testing

Now I'd like to ask you some questions about your feelings about and experiences with COVID-19 testing. Since the last time we talked:

35. Have you been tested for COVID-19?
If no – Why not?
If yes—How did you get tested? (e.g. clinic/test site or home test)
Ask them to describe the experience of the process: e.g. starting with scheduling the appointment to receiving their results, OR the process of taking the home test and how they felt about it.

IF THEY HAVE NOT USED A HOME TEST

36. Have you thought about getting a COVID-19 home testing kit?
37. Why have you not used a COVID-19 home test?
38. In what situation would you use a COVID-19 home test?
39. Where can you get COVID-19 self-test kits?

If THEY HAVE USED A HOME TEST

40. Where did you get it?
41. What kind did you get and why?
If they got them through the govt program: probe on how they found out about it (news, social media, friends), what the process of ordering them was like, etc.

If they bought it at a pharmacy: probe on ease/difficulty of finding them.

42. Why did you decide to test yourself at home?
    If for a specific purpose: What kind did you need to get for [*purpose*]?

    i. How many times have you used a home test kit?
    ii. Can you describe for me what testing yourself was like?
    Probe on the experience: how did they find the instructions, e.g. ease of use, clarity, was it easy/hard/weird, information they would have liked to have about how to test. How did they feel about swabbing themselves?

    iii. *If they had gotten tested at a point of care before:* How did it compare to getting tested by [*name where they got tested*]?
    iv. What were the results of the test?
    v. *If positive:* What did you do with the results?
    (did they call their doctor, inform the public health department, stay home, etc.)

43. What do you think people that test themselves with a COVID-19 home test should do if they test positive?

44. Do you think the results of a home test are as accurate as the results of a test from a testing site, clinic or pharmacy? Which do you trust to be accurate? Why?

45. What information would you need to trust both kinds of testing equally?

46. What do you think COVID home tests are useful for?

Acceptance of messaging about home testing

If there were to be a service that provided messaging about home testing,

47. How would you like to receive it? (probe on: social media, which platforms, etc.)

48. What are the best ways to get messages about testing out to the public?

49. What kind of information would you like to have about home testing?

50. Would you be willing to receive text or other forms of messages to remind you to get tested, or about COVID-19 and diabetes? If so, what frequency?

Conclusion

Is there anything we did not cover that you would like to mention before we end the interview?

That's the end of our interview. Thank you so much for your time!

APPENDIX I: At Risk IDI Guide Spanish

Guía de Entrevistas En Profundidad RADx-UP Diabetes: En riesgo para diabetes

Hola, mi nombre es _____. Soy [titulo] en [institución]. Gracias por participar en esta entrevista como parte de un estudio para comprender las percepciones de las pruebas de COVID-19 en las comunidades más afectadas por el virus. Como miembro de una comunidad de alto riesgo, usted brinda una perspectiva valiosa la cual espero captar en la entrevista de hoy. No hay respuestas buenas o malas ya que se trata de su experiencia.

Esta entrevista durará aproximadamente una hora. Nos gustaría grabar la entrevista con su permiso, para asegurarnos de que hemos grabado sus respuestas correctamente y completamente. La grabación será destruida después de que sus respuestas estén transcritas. Usted es una de varias personas quienes compartirán sus experiencias con nosotros. Toda la información de identificación, incluido su nombre, se eliminará de la transcrita de la entrevista, las notas, u otra información sobre la discusión de hoy. Si prefiere puede elegir un nombre diferente durante la entrevista. Los datos de su entrevista permanecerán confidenciales y seguros durante todo el proyecto.

Su participación es completamente voluntaria. Usted puede elegir no responder algunas de las preguntas o dejar la entrevista en cualquier momento sin ningún motivo, esto no afectará la atención que usted reciba.

¿Tiene usted alguna pregunta antes de empezar con la entrevista?

[*Responde a cualquiera pregunta que tiene y luego empiece*.]

[Empiece con la grabación]

Ahora estamos grabando. Para que conste, ¿Está usted de acuerdo en participar en este estudio de investigación? ¿Tengo su permiso para grabar esta entrevista?

Introducción (2-5 minutos)

1. ¿Podría contarme un poco sobre usted?

2. ¿Cómo se siente sobre el COVID-19 en estos días?

a. *Pregunte más sobre la alusión a: cansancio con el COVID, la vuelta a la normalidad, etc. (ej. "¿Me podría describir cómo siente esto para usted?")*

Acceso al cuidado ANTES DEL COVID-19
Gracias por contarme eso.

3. Ahora me gustaría que usted piense en el pasado antes del comienzo de la pandemia de COVID-19, o el confinamiento, al que me voy a referir como "COVID-19". Me gustaría obtener información sobre cómo era cuidar a alguien que vive con diabetes antes del comienzo de la pandemia, alrededor de marzo del año 2020.

4. ¿Tenía usted cualquier problema de salud antes del COVID-19? Si es así, ¿Me podrías compartir cuáles eran?
    a. *Pregunte cómo el participante atendía a problemas de salud antes del COVID (Si había varios, pregunte cuales eran más priorizados)*
    b. *Pregunte cuáles eran los desafíos con recibir el cuidado antes del COVID (la transportación, el cuesto, etc.)*

Impacto del COVID-19 en el acceso al cuidado/proporcionar apoyo para el manejo de diabetes

También me interesa saber cómo el COVID-19 haya cambiado sus experiencias con la atención médica.

5. ¿En qué maneras ha cambiado el COVID-19 la manera en que obtiene la atención médica que necesita?
    a. *Pregúntele sobre el tipo de atención buscado, dónde, cuándo, ejemplos. Pregúntele sobre cualquieras dificultades que tuvo obteniendo cuidado por el COVID (ej. la transportación, el cuesto, etc.).*

    b. *Pregúntele si las dificultades fueron NUEVAS o DIFERENTES que las previas, o fueron iguales*

6. ¿Cómo ha afectado el COVID-19 su habilidad de recibir la atención médica que necesita?
    a. ¿Podría compartir un ejemplo de cómo usted ha satisfacer sus necesidades médicas durante el COVID-19?

7. ¿Podría dar algunos ejemplos de cómo su cuidado médico ha cambiado durante los primeros dos años de la pandemia COVID-19?
    a. ¿En cuáles maneras ha cambiado su habilidad de ver a su médico?
    b. ¿Cómo han cambiado sus experiencias en sus visitas con el médico?
    c. Desde el comienzo del COVID, ¿ha cambiado su atención como paciente?

8. ¿Han vuelto las cosas a cómo eran antes del COVID, o a la normalidad?
    a. *Si no:* ¿Qué es diferente? ¿Qué significa la normalidad para usted?

Prueba de COVID-19 y COVID-19 fuentes de información confiables

Gracias por contarme eso. Ahora, me gustaría saber dónde encuentra su información sobre COVID-19.

9. ¿Cuáles son sus fuentes de información sobre el COVID-19?
    a. Por ejemplo: noticas en la televisión, radio, redes sociales, WhatsApp, Nextdoor, amigos, familiares, médicos, líderes comunitarios, universidades locales, etc**.**
        i. Confirme el nombre de las estaciones de televisión, radio, periódico, nombres de las instituciones, etc.

10. ¿Cuáles son las fuentes en las que confía para brindarle información correcta sobre el COVID-19?
    a. ¿Qué fuentes cree que tienen la información más confiable sobre las pruebas? ¿Por qué confía en [insertar fuente]?
    b. Si ve información de [fuente en la que confía], ¿Qué piensa de esa información?
        i. ¿Por qué piensa eso?
    c. ¿Qué ha escuchado de estas fuentes confiables que lo motiva a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional?
    d. ¿Qué ha escuchado de estas fuentes confiables que lo desanime a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional?

11. ¿Hay ciertas personas o grupos en los que NO confía para brindarle información correcta sobre el COVID-19?
    a. ¿Podría explicar por qué NO confía en [insertar fuente]?
    b. ¿Qué tiene la información en la que no confía?

12. Si ve que [fuente en la que no confía] ha publicado la misma información que [fuente en la que confía], ¿Cambia cómo se siente sobre la información publicada por [fuente en la que confía]?
    a. ¿Y [fuente en que no confía]? ¿Por qué o por qué no?

13. Desde el inicio de la pandemia, ¿han cambiado sus fuentes preferidas de información sobre el COVID?
    a. Pregúntele **por qué** cambió sus fuentes de información
        i. Si sus opiniones sobre fuentes en las que confía o no han cambiado o no han cambiado durante la pandemia, pregunte por qué han cambiado o no

14. ¿De qué organizaciones o fuentes de noticias preferiría recibir más información sobre las pruebas de COVID-19?
    a. ¿Y sobre las vacunas y las dosis de refuerzo?
        i. Pregúntele sobre la confianza en información del CDC, NIH, MSM, Emory, instituciones académicas locales, el departamento de salud pública, u otras fuentes mencionadas previamente

15. Ahora, me gustaría hablar sobre cómo usted se conecta con sus amigos y familia.
    a. Ha dicho que le gusta usar [red social], ¿usa cualquiera otra?
    b. ¿Es miembro de algún grupo en una red social?
    c. Recién, ¿ha visto contenido relacionado con el COVID-19 en las redes sociales?
        i. Pregúntele qué tipo de información está viendo, y dónde (grupos a que pertenece, amigos, etc.)
    d. ¿Alguna vez ha publicado u opinado sobre el COVID en [redes sociales mencionadas]?
    e. ¿Hasta qué punto confía en la información en las redes sociales?
    f. ¿Qué hace cuándo ve información en las redes sociales en la que NO confía, o que cree que no es correcta?
        i. *Pregúntele si/cómo responde (ej. si le gusta o no, intenta corregirla, opina, la ignora, la denuncia*)
    g. ¿Qué hace con las cosas sobre el COVID-19 que ve en el internet?
        i. Pregúntele que hace: leer, compartir, gustar, opinar, reaccionar (con corazón, "me gusta" etc.), ¿hace cualquiera cosa?
        ii. Pregúntele sobre los tipos de publicaciones y enlaces que lee o a que responde (haga que sea específico sobre las cosas que "le hablan", por ejemplo, historias de interés humano sobre quién mejoró, etc.)
        iii. Pregunte más sobre los tipos de cosas que publica, comparte, en que opina, y por qué
        iv. Pregunte más sobre qué hace si ve información sobre el COVID que NO confía, o que cree que no es correcta (por ejemplo, ¿busca más información en otra fuente? ¿La ignora? ¿Responde?)

Percepciones de riesgo relacionadas al COVID-19

Ahora, me gustaría que otra vez piense en momento en que recién comenzó el COVID, hace unos dos años.

16. ¿Cuáles fueron sus principales preocupaciones acerca de contraer el COVID-19?
    a. *Diabetes, falta de acceso a la atención médica, tiempo sin trabajar, familia*

17. ¿Qué tan preocupado está de que [familiar] contraiga el COVID-19?

18. ¿Cómo han cambiado sus preocupaciones acerca de contraer el COVID-19?
    a. *Si ya contrajo COVID,* ¿le preocupa volver a contraer el COVID? ¿Por qué o por qué no?

19. ¿Qué ha escuchado sobre la manera en que el COVID-19 afecta a las personas que viven con diabetes?
    a. Pregunte más acerca de cómo ha cambiado lo que ha escuchado (por ejemplo, las personas con diabetes tienen mayor riesgo, etc.)

20. ¿Qué acciones tomó al inicio de la pandemia para evitar contraer el COVID-19? ¿Cómo ha cambiado eso desde entonces? ¿Qué motivó esos cambios?

    i. *Ejemplos de preguntas de seguimiento:*
        a. *¿Había un momento en que dejó de hacer cualquiera de estas cosas?*
        b. *¿Por qué dejó de hacerlo?*
        c. *¿Cuándo dejó de hacerlo?*
        d. *¿Qué información le hizo sentirse cómodo en dejar de hacerlo?*
        e. *¿Empezó de nuevo tomar esas acciones, o todavía toma las mismas acciones? (usar mascarilla, lavado de manos, la distancia social)*
        f. *¿Ha pensado en que haría desde ahora para continuar protegiéndose?*

Percepciones y Experiencias con las Pruebas de COVID-19

Ahora me gustaría hacerle algunas preguntas sobre sus sentimientos y experiencias con las pruebas de COVID-19.

21. ¿Alguna vez se hizo la prueba de COVID-19?
    a. **Si la respuesta es no** – ¿Por qué? (pregunta más sobra las razones)
    b. **Si la respuesta es sí** — ¿Cómo se hizo la prueba? (por ejemplo, en una clínica/sitio de pruebas o una prueba casera)
    c. Pídale contarle sobre su experiencia a lo largo de ese proceso, desde la programación de la cita hasta la recepción de los resultados O el proceso de hacerse la prueba casera y como se sentía de eso

SI *NO SE HAN HECHO* UNA PRUEBA CASERA

22. ¿Ha pensado usted en sacarse una prueba casera de COVID-19?
23. ¿Por qué no se ha hecho una prueba casera de COVID-19?
24. ¿En qué situación usaría una prueba casera de COVID-19?
25. ¿Dónde puede obtener pruebas caseras de COVID-19?

SI *SE HAN HECHO* UN A PRUEBA CASERA

26. ¿Dónde la obtuvo?

27. ¿Qué tipo obtuvo y por qué?
    a. *Si las obtuvo por el programa del gobierno: Pregúntele cómo supo del programa (las noticias, las redes sociales, sus amigos), cómo fue el proceso de pedirlas, etc.*

b. *Si la compró en la farmacia: pregúntele de la facilidad/dificultad de encontrar pruebas*

28. ¿Por qué decidió hacerse la prueba en casa?
    a. *Si fue para un propósito específico:* ¿Qué tipo necesitó para [el propósito]?
    b. ¿Cuántas veces has utilizado una prueba casera?
    c. ¿Me podrías describir cómo fue hacerse la prueba usted mismo?
        i. Pregúntele más sobre la experiencia: cómo fueron las instrucciones, por ejemplo, facilidad de usar, claridad, fue fácil/difícil/raro, qué información le hubiera gustado saber sobre el proceso.
        ii. ¿Cómo se sentía sobre recoger una muestra de sí mismo?
    d. *Si se habían hecho una prueba en un punto de atención antes:* ¿Cómo compara con hacerse la prueba en [dónde se hizo la prueba antes]?
    e. ¿Cuál fue el resultado de la prueba?
    f. *Si positivo*: ¿Qué hizo con los resultados?
        i. (llamó a su doctor, informó el departamento de salud pública sobre los resultados, se quedó en casa, etc.)

29. ¿Qué cree que deberían hacer las personas que se hacen una prueba casera de COVID-19 si tienen un resultado positivo?
30. ¿Cree usted qué los resultados de una prueba casera son tan precisos como una prueba de un sitio de pruebas, clínica, o farmacia? ¿En qué confía para ser más preciso? ¿Por qué?
31. ¿Qué información necesitaría para tener la misma confianza en ambos tipos de prueba?
32. ¿Para qué cree que sirven las pruebas caseras de COVID?

Aceptación de mensajes sobre las pruebas caseras

Si hubiera un servicio que proporcionara información sobre las pruebas caseras,

33. ¿Cómo le gustaría recibirlo? (pregunte de: las redes sociales, que plataformas, etc.)

34. ¿Cuáles son las mejores maneras de difundir mensajes sobre las pruebas al público?

35. ¿Qué tipo de información le gustaría tener sobre las pruebas caseras?

36. ¿Estaría dispuesto a recibir mensajes de texto u otras formas de mensajes para recordarle que debe hacerse la prueba de COVID-19? Si está dispuesto, ¿con qué frecuencia?

Conclusión

¿Hay algo que no cubrimos que le gustaría mencionar antes de que terminemos la entrevista?

Este es el final de nuestra entrevista. ¡Muchísimas gracias por su tiempo!

APPENDIX J: Caregiver IDI Guide Spanish

Guía de Entrevistas En Profundidad RADx-UP Diabetes: Cuidadores Familiares

Hola, mi nombre es _____. Soy [titulo] en [institución]. Gracias por participar en esta entrevista como parte de un estudio para comprender las percepciones de las pruebas de COVID-19 en las comunidades más afectadas por el virus. Como miembro de una comunidad de alto riesgo, usted brinda una perspectiva valiosa la cual espero captar en la entrevista de hoy. No hay respuestas buenas o malas ya que se trata de su experiencia.

Esta entrevista durará aproximadamente una hora. Nos gustaría grabar la entrevista con su permiso, para asegurarnos de que hemos grabado sus respuestas correctamente y completamente. La grabación será destruida después de que sus respuestas estén transcritas. Usted es una de varias personas quienes compartirán sus experiencias con nosotros. Toda la información de identificación, incluido su nombre, se eliminará de la transcrita de la entrevista, las notas, u otra información sobre la discusión de hoy. Si prefiere puede elegir un nombre diferente durante la entrevista. Los datos de su entrevista permanecerán confidenciales y seguros durante todo el proyecto.

Su participación es completamente voluntaria. Usted puede elegir no responder algunas de las preguntas o dejar la entrevista en cualquier momento sin ningún motivo, esto no afectará la atención que usted reciba.

¿Tiene usted alguna pregunta antes de empezar con la entrevista?

[*Responde a cualquiera pregunta que tiene y luego empiece*.]

[Empiece con la grabación]

Ahora estamos grabando. Para que conste, ¿Está usted de acuerdo en participar en este estudio de investigación? ¿Tengo su permiso para grabar esta entrevista?

Nota para el entrevistador: *Asegúrese de que quede claro de qué momento el individuo está hablando. Use una confirmación, por ejemplo: "Para confirmar, el ejemplo que ha compartido ocurrió durante "X" momento de la pandemia." Tenemos que poder distinguir entre antes de la pandemia, diferentes momentos durante la pandemia, y el presente.*

Introducción (5 minutos)

Me gustaría empezar haciéndole algunas preguntas sobre su familia y las personas en su hogar a quienes usted cuida.

1. ¿Podría describir brevemente como es un día típico en su hogar?
2. Pregunte sobre: número de personas en el hogar, quien tiene diabetes, cuantos trabajan fuera de casa, a que se dedican (ej. Trabajadores esenciales), quien es responsable de preparar la comida, hacer las compras, etc.

3. ¿Cuánto tiempo ha sido usted cuidador de alguien que vive con diabetes?
    a. ¿Cuál es su relación familiar con él o ella? (marido, padres, etc.)

4. ¿Cómo se sienten todos ustedes sobre el COVID-19 en estos días?
    a. *Pregunte más sobre la alusión a: cansancio con el COVID, la vuelta a la normalidad, etc. (ej. "¿Me podría describir cómo siente esto para usted?")*

5. ¿En qué manera piensa que estos sentimientos sobre el COVID han afectado cómo cuida a su familiar?

Acceso al cuidado ANTES DEL COVID-19

Gracias por contarme eso.

6. Ahora me gustaría que usted piense en el pasado antes del comienzo de la pandemia de COVID-19, o el confinamiento, al que me voy a referir como "COVID-19". Me gustaría obtener información sobre cómo era cuidar a alguien que vive con diabetes antes del comienzo de la pandemia, alrededor de marzo del año 2020.

7. ¿Cómo manejaba su [insertar familiar] su diabetes antes del COVID-19? Y por "manejo" me refiero a organizar las visitas al doctor (ej., horario, transporte), medicarse, o seguir las recomendaciones para dieta y ejercicio.
    a. *Pregunte más sobre cualquiera dificultad que tenía recibiendo cuidado antes del COVID (ej. la transportación, el cuesto, etc.)*

8. ¿Tenía cualquier otro problema de salud antes del COVID?
    a. *Pregunte cómo el participante atendía a este problema de salud. (Si había varios, pregunte cuales eran más priorizados)*

9. ¿Cuál era su rol con respecto al manejo de la diabetes antes del COVID-19?
    a. *Pregunte cuáles eran los desafíos con proveer o ayudar con el cuidado antes de COVID*

10. ¿Tenía usted cualquier problema de salud antes del COVID-19? Si es así, ¿Me podrías compartir cuáles eran?
    a. *Pregunte cómo el participante atendía a problemas de salud antes del COVID (Si había varios, pregunte cuales eran más priorizados)*
    b. *Pregunte cuáles eran los desafíos con recibir el cuidado antes del COVID (la transportación, el cuesto, etc.)*

Impacto del COVID-19 en el acceso al cuidado/proporcionar apoyo para el manejo de diabetes

También me interesa saber cómo el COVID-19 haya cambiado la forma en que apoya a su [familiar] además de sus experiencias con la atención médica.

Nota para el entrevistador: *Asegúrese de que quede claro de qué momento el individuo está hablando. Use una confirmación, por ejemplo: "Para confirmar, el ejemplo que ha compartido ocurrió durante "X" momento de la pandemia."*

11. ¿En qué maneras ha cambiado su rol como cuidador como resultado del COVID-19?
    a. Pregúntele sobre cualquieras dificultades que tuvo sacando cuidado para su [familiar] por el COVID (ej. la transportación, el cuesto, etc.). ¿Las dificultades fueron NUEVAS o DIFERENTES que las previas, o fueron iguales?

    b. Pregúntele sobre los cambios de responsabilidad, y cambios de comportamiento para evitar que el participante o un miembro del hogar contraiga el COVID-19

    c. Pregúntele sobre otros desafíos relacionados a las identidades del cuidador (padre de niño no vacunado, trabajador esencial) que podrían afectar como brindan cuidado

12. ¿Cómo ha afectado el COVID-19 la habilidad de su [familiar] recibir la atención médica que necesita?
    a. ¿Podría compartir un ejemplo de cómo usted le ha ayudado satisfacer sus necesidades médicas durante el COVID-19?

13. ¿Podría dar algunos ejemplos de cómo el cuidado médico de su [familiar] ha cambiado durante los primeros dos años de la pandemia COVID-19?
    a. ¿En cuáles maneras ha cambiado su habilidad de ver a su médico?
    b. ¿Cómo han cambiado sus experiencias en sus visitas con el médico?
    c. Desde el comienzo del COVID, ¿ha cambiado su atención como paciente?

14. ¿Y para usted? ¿Podría dar algunos ejemplos de cómo su cuidado médico ha cambiado durante los primeros dos años de la pandemia COVID-19?
    a. ¿Podría compartir un ejemplo de cómo usted ha satisfecho sus necesidades médicas durante el COVID-19?

15. ¿Han vuelto las cosas a cómo eran antes del COVID, o a la normalidad?
    a. *Si no:* ¿Qué es diferente? ¿Qué significa la normalidad para usted?

Prueba de COVID-19 y COVID-19 fuentes de información confiables Gracias por contarme eso. Ahora, me gustaría saber dónde encuentra su información sobre COVID-19.

16. ¿Cuáles son sus fuentes de información sobre el COVID-19?
    a. Por ejemplo: noticas en la televisión, radio, redes sociales, WhatsApp, Nextdoor, amigos, familiares, médicos, líderes comunitarios, universidades locales, etc**.**

17. ¿Cuáles son las fuentes en las que confía para brindarle información correcta sobre el COVID-19?
    a. ¿Qué fuentes cree que tienen la información más confiable sobre las pruebas? ¿Por qué confía en [insertar fuente]?
    b. Si ve información de [fuente en la que confía], ¿Qué piensa de esa información?
        i. ¿Por qué piensa eso?

c. ¿Qué ha escuchado de estas fuentes confiables que lo motiva a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional?
d. ¿Qué ha escuchado de estas fuentes confiables que lo desanime a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional?

18. ¿Hay ciertas personas o grupos en los que NO confía para brindarle información correcta sobre el COVID-19?
    a. ¿Podría explicar por qué NO confía en [insertar fuente]?
    b. ¿Qué tiene la información en la que no confía?

19. Si ve que [fuente en la que no confía] ha publicado la misma información que [fuente en la que confía], ¿Cambia cómo se siente sobre la información publicada por [fuente en la que confía]?
    a. ¿Y [fuente en que no confía]? ¿Por qué o por qué no?

20. Desde el inicio de la pandemia, ¿han cambiado sus fuentes preferidas de información sobre el COVID?
    a. Pregúntele **por qué** cambió sus fuentes de información
        i. Si sus opiniones sobre fuentes en las que confía o no han cambiado o no han cambiado durante la pandemia, pregunte por qué han cambiado o no

21. ¿Confía la persona para quien cuida en las mismas fuentes?
    a. Si no, ¿por qué?
    b. ¿Cuáles son las fuentes en las que confía?
    c. ¿Cómo maneja eso usted?

22. ¿De qué organizaciones o fuentes de noticias preferiría recibir más información sobre las pruebas de COVID-19?
    a. ¿Y sobre las vacunas y las dosis adicionales?
        i. Pregúntele sobre la confianza en información del CDC, NIH, MSM, Emory, instituciones académicas locales, el departamento de salud pública, u otras fuentes mencionadas previamente

23. Ahora, me gustaría hablar sobre cómo usted se conecta con sus amigos y familia.
    a. Ha dicho que le gusta usar [red social], ¿usa cualquiera otra?
    b. ¿Es miembro de algún grupo en una red social?
    c. Recién, ¿ha visto contenido relacionado con el COVID-19 en las redes sociales?
        i. Pregúntele qué tipo de información está viendo, y dónde (grupos a que pertenece, amigos, etc.)
    d. ¿Alguna vez ha publicado u opinado sobre el COVID en [redes sociales mencionadas]?
    e. ¿Hasta qué punto confía en la información en las redes sociales?

f. ¿Qué hace cuándo ve información en las redes sociales en la que NO confía, o que cree que no es correcta?
    i. *Pregúntele si/cómo responde (ej. si le gusta o no, intenta corregirla, opina, la ignora, la denuncia*)
g. ¿Qué hace con las cosas sobre el COVID-19 que ve en el internet?
    i. Pregúntele que hace: leer, compartir, gustar, opinar, reaccionar (con corazón, "me gusta" etc.), ¿hace cualquiera cosa?
    ii. Pregúntele sobre los tipos de publicaciones y enlaces que lee o a que responde (haga que sea específico sobre las cosas que "le hablan", por ejemplo, historias de interés humano sobre quién mejoró, etc.)
    iii. Pregunte más sobre los tipos de cosas que publica, comparte, en que opina, y por qué
    iv. Pregunte más sobre qué hace si ve información sobre el COVID que NO confía, o que cree que no es correcta (por ejemplo, ¿busca más información en otra fuente? ¿La ignora? ¿Responde?)

Percepciones de riesgo relacionadas al COVID-19
Ahora, me gustaría que otra vez piense en momento en que recién comenzó el COVID, hace unos dos años.

24. ¿Cuáles fueron sus principales preocupaciones acerca de contraer el COVID-19?
    a. *Diabetes, falta de acceso a la atención médica, tiempo sin trabajar, familia: preocupaciones sobre la persona a quien cuida [quien le cuidaría si el cuidador se enfermara, cómo el cuidador cuidaría el familiar que se enfermara, etc.]*

25. ¿Qué tan preocupado está de que [familiar] contraiga el COVID-19?

26. ¿Cómo han cambiado sus preocupaciones acerca de contraer el COVID-19?
    a. ¿Y si la persona a quien cuida se enfermara?
    b. *Si ya contrajo COVID,* ¿le preocupa volver a contraer el COVID? ¿Por qué o por qué no?
27. ¿Qué ha escuchado sobre la manera en que el COVID-19 afecta a las personas que viven con diabetes?
    a. Pregunte más acerca de cómo ha cambiado lo que ha escuchado (por ejemplo, las personas con diabetes tienen mayor riesgo, etc.)
28. ¿Qué acciones tomó al inicio de la pandemia para evitar contraer el COVID-19? ¿Cómo ha cambiado eso desde entonces? ¿Qué motivó esos cambios?
    a. ¿Y la persona a quien cuida? ¿Qué hizo?
    b. ¿Hace las mismas cosas que usted? ¿Por qué o por qué no?

        i. *Ejemplos de preguntas de seguimiento:*
            a. *¿Había un momento en que dejó de hacer cualquiera de estas cosas?*

b. ¿Por qué dejó de hacerlo?
c. ¿Cuándo dejó de hacerlo?
d. ¿Qué información le hizo sentirse cómodo en dejar de hacerlo?
e. ¿Empezó de nuevo tomar esas acciones, o todavía toma las mismas acciones? (usar mascarilla, lavado de manos, la distancia social)
f. ¿Ha pensado en que haría desde ahora para continuar protegiéndose?

Percepciones y Experiencias con las Pruebas de COVID-19
Ahora me gustaría hacerle algunas preguntas sobre sus sentimientos y experiencias con las pruebas de COVID-19.

29. ¿Alguna vez se hizo la prueba de COVID-19?
    a. **Si la respuesta es no** – ¿Por qué? (pregunta más sobra las razones)
    b. **Si la respuesta es sí** — ¿Cómo se hizo la prueba? (por ejemplo, en una clínica/sitio de pruebas o una prueba casera)
    c. Pídale contarle sobre su experiencia a lo largo de ese proceso, desde la programación de la cita hasta la recepción de los resultados O el proceso de hacerse la prueba casera y como se sentía de eso

SI *NO SE HAN HECHO* UNA PRUEBA CASERA
30. ¿Ha pensado usted en sacarse una prueba casera de COVID-19?
31. ¿Por qué no se ha hecho una prueba casera de COVID-19?
32. ¿En qué situación usaría una prueba casera de COVID-19?
33. ¿Dónde puede obtener pruebas caseras de COVID-19?

SI *SE HAN HECHO* UN A PRUEBA CASERA
34. ¿Dónde la obtuvo?

35. ¿Qué tipo obtuvo y por qué?
    a. Si las obtuvo por el programa del gobierno: Pregúntele cómo supo del programa (las noticias, las redes sociales, sus amigos), cómo fue el proceso de pedirlas, etc.
    b. Si la compró en la farmacia: pregúntele de la facilidad/dificultad de encontrar pruebas

36. ¿Por qué decidió hacerse la prueba en casa?
    a. *Si fue para un propósito específico:* ¿Qué tipo necesitó para [el propósito]?
    b. ¿Cuántas veces has utilizado una prueba casera?
    c. ¿Me podrías describir cómo fue hacerse la prueba usted mismo?

i. Pregúntele más sobre la experiencia: cómo fueron las instrucciones, por ejemplo, facilidad de usar, claridad, fue fácil/difícil/raro, qué información le hubiera gustado saber sobre el proceso.
ii. ¿Cómo se sentía sobre recoger una muestra de sí mismo?

d. *Si se habían hecho una prueba en un punto de atención antes:* ¿Cómo compara con hacerse la prueba en [dónde se hizo la prueba antes]?
e. ¿Cuál fue el resultado de la prueba?
f. *Si positivo*: ¿Qué hizo con los resultados?
    i. (llamó a su doctor, informó el departamento de salud pública sobre los resultados, se quedó en casa, etc.)

37. ¿Qué cree que deberían hacer las personas que se hacen una prueba casera de COVID-19 si tienen un resultado positivo?

38. ¿Cree usted qué los resultados de una prueba casera son tan precisos como una prueba de un sitio de pruebas, clínica, o farmacia? ¿En qué confía para ser más preciso? ¿Por qué?

39. ¿Qué información necesitaría para tener la misma confianza en ambos tipos de prueba?

40. ¿Para qué cree que sirven las pruebas caseras de COVID?

Aceptación de mensajes sobre las pruebas caseras
Si hubiera un servicio que proporcionara información sobre las pruebas caseras,

41. ¿Cómo le gustaría recibirlo? (pregunte de: las redes sociales, que plataformas, etc.)

42. ¿Cuáles son las mejores maneras de difundir mensajes sobre las pruebas al público?

43. ¿Qué tipo de información le gustaría tener sobre las pruebas caseras?

44. ¿Estaría dispuesto a recibir mensajes de texto u otras formas de mensajes para recordarle que debe hacerse la prueba de COVID-19? Si está dispuesto, ¿con qué frecuencia?

Conclusión

¿Hay algo que no cubrimos que le gustaría mencionar antes de que terminemos la entrevista?

Este es el final de nuestra entrevista. ¡Muchísimas gracias por su tiempo!

APPENDIX K: People Living With Diabetes IDI Guide Spanish

Guía de Entrevistas En Profundidad RADx-UP Diabetes: Persona que vive con diabetes

Hola, mi nombre es _____. Soy [titulo] en [institución]. Gracias por participar en esta entrevista como parte de un estudio para comprender las percepciones de las pruebas de COVID-19 en las comunidades más afectadas por el virus. Como miembro de una comunidad de alto riesgo, usted brinda una perspectiva valiosa la cual espero captar en la entrevista de hoy. No hay respuestas buenas o malas ya que se trata de su experiencia.

Esta entrevista durará aproximadamente una hora. Nos gustaría grabar la entrevista con su permiso, para asegurarnos de que hemos grabado sus respuestas correctamente y completamente. La grabación será destruida después de que sus respuestas estén transcritas. Usted es una de varias personas quienes compartirán sus experiencias con nosotros. Toda la información de identificación, incluido su nombre, se eliminará de la transcrita de la entrevista, las notas, u otra información sobre la discusión de hoy. Si prefiere puede elegir un nombre diferente durante la entrevista. Los datos de su entrevista permanecerán confidenciales y seguros durante todo el proyecto.

Su participación es completamente voluntaria. Usted puede elegir no responder algunas de las preguntas o dejar la entrevista en cualquier momento sin ningún motivo, esto no afectará la atención que usted reciba.

¿Tiene usted alguna pregunta antes de empezar con la entrevista?

[*Responde a cualquiera pregunta que tiene y luego empiece*.]

[Empiece con la grabación]

Ahora estamos grabando. Para que conste, ¿Está usted de acuerdo en participar en este estudio de investigación? ¿Tengo su permiso para grabar esta entrevista?

Nota para el entrevistador: *Asegúrese de que quede claro de qué momento el individuo está hablando. Use una confirmación, por ejemplo: "Para confirmar, el ejemplo que ha compartido ocurrió durante "X" momento de la pandemia." Tenemos que poder distinguir entre antes de la pandemia, diferentes momentos durante la pandemia, y el presente.*

Introducción (2-5 minutos)

Me gustaría empezar haciéndole algunas preguntas sobre usted y las personas que viven con usted.

1. ¿Podría describir brevemente como es un día típico en su hogar?
2. Pregunte sobre: número de personas en el hogar, quien tiene diabetes, cuantos trabajan fuera de casa, a que se dedican (ej. Trabajadores esenciales), quien es responsable de preparar la comida, hacer las compras, etc.

3. ¿Cuánto tiempo ha tenido usted diabetes?
4. ¿Cómo se sienten todos ustedes sobre el COVID-19 en estos días?
    a. *Pregunte más sobre la alusión a: cansancio con el COVID, la vuelta a la normalidad, etc. (ej. "¿Me podría describir cómo siente esto para usted?")*

Acceso al cuidado ANTES DEL COVID-19

Gracias por contarme eso.

5. Ahora me gustaría que usted piense en el pasado antes del comienzo de la pandemia de COVID-19, o el confinamiento, al que me voy a referir como "COVID-19". Me gustaría obtener información sobre su salud antes del comienzo de la pandemia, alrededor de marzo del año 2020.
6. ¿Tenía usted cualquier problema de salud antes del COVID-19? Si es así, ¿Me podrías compartir cuáles eran?
    a. *Pregunte cómo el participante atendía a problemas de salud antes del COVID (Si había varios, pregunte cuales eran más priorizados)*
    b. *Pregunte cuáles eran los desafíos con recibir el cuidado antes del COVID (la transportación, el cuesto, etc.)*

Impacto del COVID-19 en el acceso al cuidado

También me interesa saber cómo el COVID-19 haya cambiado sus experiencias con la atención médica.

7. ¿En qué maneras ha cambiado el COVID-19 la manera en que obtiene la atención médica que necesita?
    a. *Pregúntele sobre el tipo de atención buscado, dónde, cuándo, ejemplos.*
    b. *Pregúntele sobre cualquieras dificultades que tuvo obteniendo cuidado por el COVID (ej. la transportación, el cuesto, etc.).*
    c. *Pregúntele si las dificultades fueron NUEVAS o DIFERENTES que las previas, o fueron iguales*

8. ¿Cómo ha afectado el COVID-19 su habilidad de recibir la atención médica que necesita?
    a. ¿Podría compartir un ejemplo de cómo usted ha satisfacer sus necesidades médicas durante el COVID-19?

9. ¿Podría dar algunos ejemplos de cómo su cuidado médico ha cambiado durante los primeros dos años de la pandemia COVID-19?
    a. ¿En cuáles maneras ha cambiado su habilidad de ver a su médico?
    b. ¿Cómo han cambiado sus experiencias en sus visitas con el médico?
    c. Desde el comienzo del COVID, ¿ha cambiado su atención como paciente?

10. ¿Han vuelto las cosas a cómo eran antes del COVID, o a la normalidad?
    a. *Si no:* ¿Qué es diferente? ¿Qué significa la normalidad para usted?

Prueba de COVID-19 y COVID-19 fuentes de información confiables
Gracias por contarme eso. Ahora, me gustaría saber dónde encuentra su información sobre COVID-19.

11. ¿Cuáles son sus fuentes de información sobre el COVID-19?
    a. Por ejemplo: noticas en la televisión, radio, redes sociales, WhatsApp, Nextdoor, amigos, familiares, médicos, líderes comunitarios, universidades locales, etc**.**
        i. *Confirme el nombre de las estaciones de televisión, radio, periódico, nombres de las instituciones, etc.*

12. ¿Cuáles son las fuentes en las que confía para brindarle información correcta sobre el COVID-19?
    a. ¿Qué fuentes cree que tienen la información más confiable sobre las pruebas? ¿Por qué confía en [insertar fuente]?
    b. Si ve información de [fuente en la que confía], ¿Qué piensa de esa información?
        i. ¿Por qué piensa eso?
    c. ¿Qué ha escuchado de estas fuentes confiables que lo motiva a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional o de refuerzo?
    d. ¿Qué ha escuchado de estas fuentes confiables que lo desanime a hacerse la prueba de COVID-19? ¿A vacunarse? ¿A recibir una dosis adicional o de refuerzo?

13. ¿Hay ciertas personas o grupos en los que NO confía para brindarle información correcta sobre el COVID-19?
    a. ¿Podría explicar por qué NO confía en [insertar fuente]?
    b. ¿Qué tiene la información en la que no confía?

14. Si ve que [fuente en la que no confía] ha publicado la misma información que [fuente en la que confía], ¿Cambia cómo se siente sobre la información publicada por [fuente en la que confía]?
    a. ¿Y [fuente en que no confía]? ¿Por qué o por qué no?

15. Desde el inicio de la pandemia, ¿han cambiado sus fuentes preferidas de información sobre el COVID?
    a. Pregúntele **por qué** cambió sus fuentes de información
        i. *Si sus opiniones sobre fuentes en las que confía o no han cambiado o no han cambiado durante la pandemia, pregunte por qué han cambiado o no*

16. ¿De qué organizaciones o fuentes de noticias preferiría recibir más información sobre las pruebas de COVID-19?

a. ¿Y sobre las vacunas y las dosis de refuerzo?
    i. *Pregúntele sobre la confianza en información del CDC, NIH, MSM, Emory, instituciones académicas locales, el departamento de salud pública, u otras fuentes mencionadas previamente*

17. Ahora, me gustaría hablar sobre cómo usted se conecta con sus amigos y familia.
    a. Ha dicho que le gusta usar [red social], ¿usa cualquiera otra?
    b. ¿Es miembro de algún grupo en una red social?
    c. Recién, ¿ha visto contenido relacionado con el COVID-19 en las redes sociales?
        i. Pregúntele qué tipo de información está viendo, y dónde (grupos a que pertenece, amigos, etc.)
    d. ¿Alguna vez ha publicado u opinado sobre el COVID en [redes sociales mencionadas]?
    e. ¿Hasta qué punto confía en la información en las redes sociales?
    f. ¿Qué hace cuándo ve información en las redes sociales en la que NO confía, o que cree que no es correcta?
        i. *Pregúntele si/cómo responde (ej. si le gusta o no, intenta corregirla, opina, la ignora, la denuncia*)
    g. ¿Qué hace con las cosas sobre el COVID-19 que ve en el internet?
        i. Pregúntele que hace: leer, compartir, gustar, opinar, reaccionar (con corazón, "me gusta" etc.), ¿hace cualquiera cosa?
        ii. Pregúntele sobre los tipos de publicaciones y enlaces que lee o a que responde (haga que sea específico sobre las cosas que "le hablan", por ejemplo, historias de interés humano sobre quién mejoró, etc.)
        iii. Pregunte más sobre los tipos de cosas que publica, comparte, en que opina, y por qué
        iv. Pregunte más sobre qué hace si ve información sobre el COVID que NO confía, o que cree que no es correcta (por ejemplo, ¿busca más información en otra fuente? ¿La ignora? ¿Responde?)

Percepciones de riesgo relacionadas al COVID-19

Ahora, me gustaría que otra vez piense en momento en que recién comenzó el COVID, hace unos dos años.

18. Cuándo recién comenzó la pandemia de COVID-19, ¿qué tan preocupado estuvo sobre contraer el COVID?
    a. ¿Y ahora?
19. ¿Cuáles fueron sus principales preocupaciones acerca de contraer el COVID-19?
    a. *pregúntele sobre: diabetes, falta de acceso a la atención médica, tiempo sin trabajar, familia*
    b. ¿Y ahora?

20. ¿Cómo han cambiado sus preocupaciones acerca de contraer el COVID-19?

a. *Si ya contrajo COVID,* ¿le preocupa volver a contraer el COVID? ¿Por qué o por qué no?

21. ¿Qué ha escuchado sobre la manera en que el COVID-19 afecta a las personas que viven con diabetes?
    a. Pregunte más acerca de cómo ha cambiado lo que ha escuchado

22. ¿Qué acciones tomó al inicio de la pandemia para evitar contraer el COVID-19? ¿Cómo ha cambiado eso desde entonces? ¿Qué motivó esos cambios?

    i. *Ejemplos de preguntas de seguimiento:*
        a. *¿Había un momento en que dejó de hacer cualquiera de estas cosas?*
        b. *¿Por qué dejó de hacerlo?*
        c. *¿Cuándo dejó de hacerlo?*
        d. *¿Qué información le hizo sentirse cómodo en dejar de hacerlo?*
        e. *¿Empezó de nuevo tomar esas acciones, o todavía toma las mismas acciones? (usar mascarilla, lavado de manos, la distancia social)*
        f. *¿Ha pensado en que haría desde ahora para continuar protegiéndose?*

Percepciones y Experiencias con las Pruebas de COVID-19

Ahora me gustaría hacerle algunas preguntas sobre sus sentimientos y experiencias con las pruebas de COVID-19.

23. ¿Alguna vez se hizo la prueba de COVID-19?
    a. **Si la respuesta es no** – ¿Por qué? (pregunta más sobra las razones)
    b. **Si la respuesta es sí** — ¿Cómo se hizo la prueba? (por ejemplo, en una clínica/sitio de pruebas o una prueba casera)
    c. Pídale contarle sobre su experiencia a lo largo de ese proceso, desde la programación de la cita hasta la recepción de los resultados O el proceso de hacerse la prueba casera y como se sentía de eso

SI *NO SE HAN HECHO* UNA PRUEBA CASERA

24. ¿Ha pensado usted en sacarse una prueba casera de COVID-19?
25. ¿Por qué no se ha hecho una prueba casera de COVID-19?
26. ¿En qué situación usaría una prueba casera de COVID-19?
27. ¿Dónde puede obtener pruebas caseras de COVID-19?

SI *SE HAN HECHO* UN A PRUEBA CASERA

28. ¿Dónde la obtuvo?

29. ¿Qué tipo obtuvo y por qué?
    a. *Si las obtuvo por el programa del gobierno: Pregúntele cómo supo del programa (las noticias, las redes sociales, sus amigos), cómo fue el proceso de pedirlas, etc.*
    b. *Si la compró en la farmacia: pregúntele de la facilidad/dificultad de encontrar pruebas*

30. ¿Por qué decidió hacerse la prueba en casa?
    a. *Si fue para un propósito específico:* ¿Qué tipo necesitó para [el propósito]?
    b. ¿Cuántas veces has utilizado una prueba casera?
    c. ¿Me podrías describir cómo fue hacerse la prueba usted mismo?
        i. Pregúntele más sobre la experiencia: cómo fueron las instrucciones, por ejemplo, facilidad de usar, claridad, fue fácil/difícil/raro, qué información le hubiera gustado saber sobre el proceso.
        ii. ¿Cómo se sentía sobre recoger una muestra de sí mismo?
    d. *Si se habían hecho una prueba en un punto de atención antes:* ¿Cómo compara con hacerse la prueba en [dónde se hizo la prueba antes]?
    e. ¿Cuál fue el resultado de la prueba?
    f. *Si positivo*: ¿Qué hizo con los resultados?
        i. (llamó a su doctor, informó el departamento de salud pública sobre los resultados, se quedó en casa, etc.)

31. ¿Qué cree que deberían hacer las personas que se hacen una prueba casera de COVID-19 si tienen un resultado positivo?
32. ¿Cree usted qué los resultados de una prueba casera son tan precisos como una prueba de un sitio de pruebas, clínica, o farmacia? ¿En qué confía para ser más preciso? ¿Por qué?
33. ¿Qué información necesitaría para tener la misma confianza en ambos tipos de prueba?
34. ¿Para qué cree que sirven las pruebas caseras de COVID?

Aceptación de mensajes sobre las pruebas caseras

Si hubiera un servicio que proporcionara información sobre las pruebas caseras,

35. ¿Cómo le gustaría recibirlo? (pregunte de: las redes sociales, que plataformas, etc.)
36. ¿Cuáles son las mejores maneras de difundir mensajes sobre las pruebas al público?
37. ¿Qué tipo de información le gustaría tener sobre las pruebas caseras?
38. ¿Estaría dispuesto a recibir mensajes de texto u otras formas de mensajes para recordarle que debe hacerse la prueba de COVID-19? Si está dispuesto, ¿con qué frecuencia?

Conclusión

¿Hay algo que no cubrimos que le gustaría mencionar antes de que terminemos la entrevista?

Este es el final de nuestra entrevista. ¡Muchísimas gracias por su tiempo!

APPENDIX L: At Risk Blank RAP Sheet

At Risk for Diabetes RAP Sheet

RAP sheet by:
Interviewer:
Aim 2 Participant ID:
REDCap Participant ID:
Date of Interview:
Additional information about interviewee (if/when diagnosed with diabetes/at risk conditions, family history, caretaking background, etc):

Instructions: Most of the domains are referring to COVID testing. However, if an interviewee is discussing the COVID vaccine but it would otherwise apply to a certain domain, please include it under that domain and add "[V]" at the end of that bullet point(s). This indicates that the interviewee was referring to the vaccine and not testing. If the bullet point applies to testing and vaccines, please include [T&V] at the end.

Pre-COVID HEALTHCARE CONCERNS/PRE-EXISITING CONDITIONS CONCERNS/MANAGEMENT (Q1)

-

IMPACT OF COVID-19 ON ACCESS TO HEALTHCARE NEEDS (Q2-4, 23)

-

COVID-19 TRUSTED AND DISTRUSTED SOURCES OF INFORMATION AND CHANGES (Q5-11)

TRUSTED SOURCES

-

DISTRUSTED SOURCES

-

CHANGES

-

SOCIAL MEDIA ENGAGEMENT

-

PERCEPTIONS OF RISK RELATED TO COVID-19 (Q12, 13, 15)

-

PERCEPTIONS OF RISK RELATING TO PEOPLE AT RISK OF DIABETES (Q14)

-

PERCEPTIONS AND EXPERIENCES WITH COVID-19 TESTING (Q16-18)

-

PERCEPTIONS AND EXPERIENCES OF HOME TESTING (Q19-20)

-

PERCEPTIONS AND EXPERIENCES ABOUT VACCINATIONS (Q21-22)

-

OTHER COMMENTS

APPENDIX M: Caregiver Blank RAP Sheet

Caregiver RAP Sheet

RAP sheet by:
Interviewer:
Aim 2 Participant ID:
REDCap Participant ID:
Date of Interview:
Additional information about interviewee (if/when diagnosed with diabetes/at risk conditions, family history, caretaking background, household activities etc):

Instructions: Most of the domains are referring to COVID testing. However, if an interviewee is discussing the COVID vaccine but it would otherwise apply to a certain domain, please include it under that domain and add "[V]" at the end of that bullet point(s). This indicates that the interviewee was referring to the vaccine and not testing. If the bullet point applies to testing and vaccines, please include [T&V] at the end.

CURRENT FEELINGS ABOUT COVID-19 (Q3-4)

-

ACCESS TO CARE/CARETAKING BEFORE COVID-19 (Q5-6)

-

IMPACT OF COVID-19 ON DIABETES SUPPORT AND MANAGEMENT (Q7, 35)

-

COVID-19 TRUSTED AND DISTRUSTED SOURCES OF INFORMATION AND CHANGES (Q8-15, 30)

PARTICIPANT

-

***PERSON* THAT THEY CARE FOR**

-

SOCIAL MEDIA ENGAGEMENT

-

PERCEPTIONS OF RISK RELATED TO COVID-19 (Q16-20)

-

PERCEPTIONS OF RISK RELATED TO COVID-19 FOR PEOPLE WITH DIABETES

-

PERCEPTIONS AND EXPERIENCES WITH COVID-19 TESTING (Q21-24)

-

PERCEPTIONS AND EXPERIENCES ABOUT HOME TESTING (Q25-29)

-

PERCEPTIONS ABOUT VACCINATIONS (Q31-34)

PARTICIPANT:

-

PERSON PARTICIPANT IS TAKING CARE OF:

-

OTHER COMMENTS

APPENDIX N: Person Living With Diabetes Blank RAP Sheet

People Living with Diabetes RAP Sheet

RAP sheet by:
Interviewer:
Aim 2 Participant ID:
REDCap Participant ID:
Date of Interview:

Additional information about interviewee (if/when diagnosed with diabetes, family history, caretaking background, etc):

Instructions: Most of the domains are referring to COVID testing. However, if an interviewee is discussing the COVID vaccine but it would otherwise apply to a certain domain, please include it under that domain and add "[V]" at the end of that bullet point(s). This indicates that the interviewee was referring to the vaccine and not testing. If the bullet point applies to testing and vaccines, please include [T&V] at the end.

PRE-COVID HEALTHCARE CONCERNS/PRE-EXISTING CONDITIONS & CONCERNS AND/OR DIABETES MANAGEMENT (Q1-2)

-

IMPACT OF COVID-19 ON DIABETES CARE AND MANAGEMENT/ACCESS TO HEALTHCARE NEEDS (Q3-4)

-

COVID-19 TRUSTED AND DISTRUSTED SOURCES OF INFORMATION AND CHANGES (Q5-11)

- **TRUSTED SOURCES**
- **DISTRUSTED SOURCES**
- **CHANGES**

SOCIAL MEDIA ENGAGEMENT

PERCEPTIONS OF RISK RELATED TO COVID-19 (Q8-9/Q12,13,15)

-

PERCEPTIONS AND EXPERIENCES WITH COVID-19 TESTING (Q10-12 / Q16-18)

-

PERCEPTIONS OF HOME TESTING (Q19-20)

-

PERCEPTIONS AND EXPERIENCES ABOUT COVID-19 VACCINATION (Q13-15; Q21-22)

-

Other Comments

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