Exploring COVID-19 vaccination decision-making process at a FQHC serving primarily Spanish-speaking patients

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Background:

The COVID-19 pandemic has caused widespread morbidity and mortality throughout the United States, but has particularly impacted marginalized communities, including low-income Latinx immigrants. With the development and disbursement of safe and effective COVID-19 vaccinations, primary care physicians play a key role in advocating for and administering vaccines to reduce morbidity and mortality of the disease, while balancing the specific needs of the community they serve.
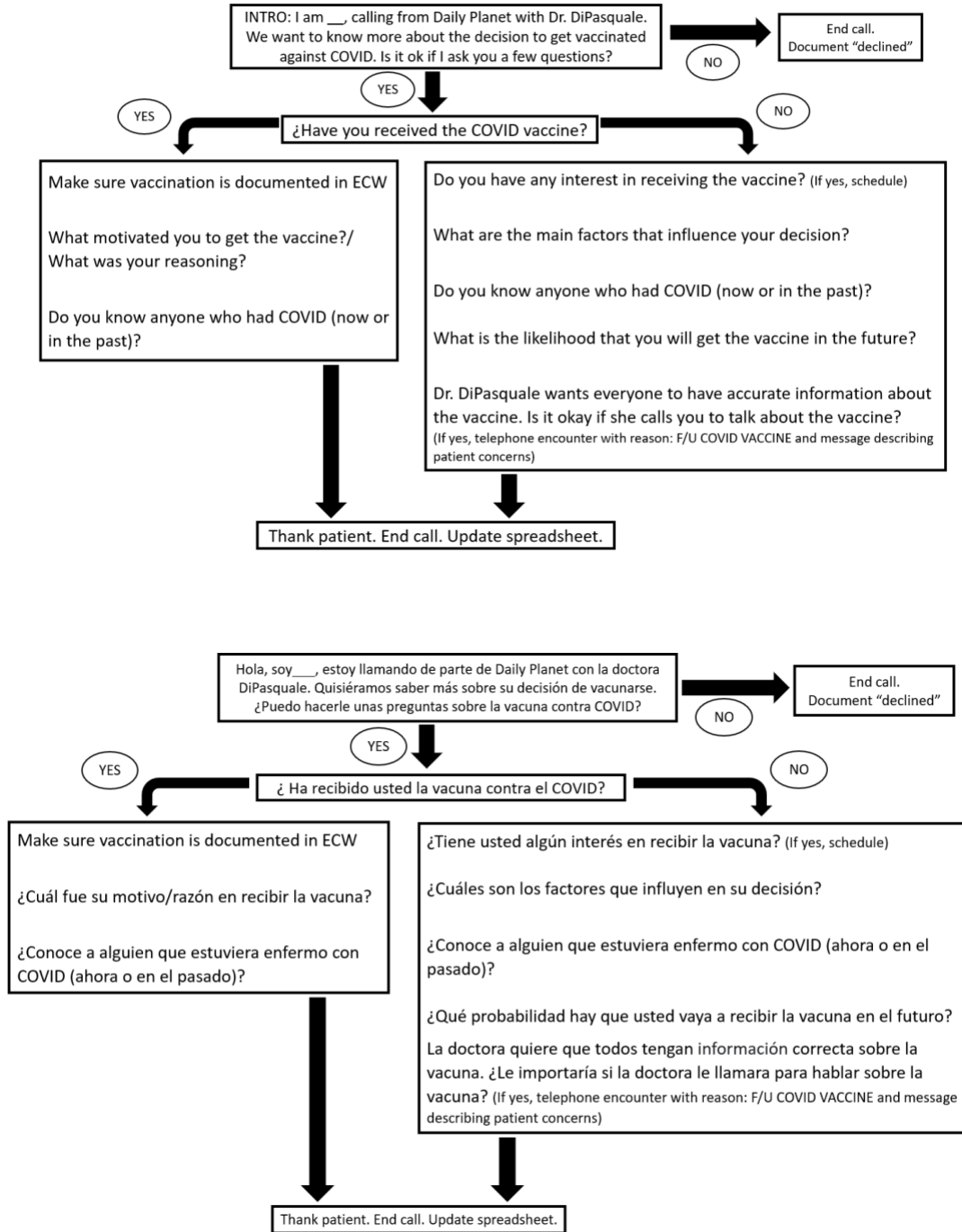
The Vaccination Decision-Making Empathy Tool uses motivational interviewing techniques to engage with patients about their vaccination beliefs in a patient-centered, incremental approach that relies on a longitudinal primary care relationship (Poland, C. M., Matthews, A. K. S., & Poland, G. A., 2021). It uses open-ended questions that ask about the factors influencing the decision to receive or not receive the vaccine. The approach focuses on providing space to listen to patients' motivations and hesitations. It also involves asking patients the likelihood that they would receive the vaccine. This approach is reflective of motivational interviewing ("on a scale of 1-10, how likely are you to make this change?"), and it allows for a physician to understand where their patient is in their decision-making stage of change.

Within the Latinx community, as within any community, there are a variety of opinions and thoughts surrounding COVID-19 vaccination. Each patient has their own understanding of the COVID-19 disease and vaccine, which influences their desire to receive or not receive the vaccination. The Vaccination Decision-Making Empathy Tool is a promising tool to use in a primary care setting with a specific group of patients to engage with their individualized motivations and fears surrounding vaccination. Only with a strong understanding of the factors involved in an individual's decision to receive the COVID vaccine can primary care physicians better serve their communities in a patient-centered manner during the pandemic.

Methods

Our study design is a cross-sectional qualitative survey that investigates patients' COVID-19 vaccination decision-making processes. The survey was adapted from the Vaccination Decision-Making Empathy Tool (Poland et al., 2021) to evaluate the factors that motivate patients to receive and the factors that prevent patients from receiving the COVID-19 vaccine. Our participants were patients seen from January 1, 2021 to June 21, 2021 by a PCP at a FQHC that serves primarily Spanish-speaking adults 200% below the federal poverty line in Richmond, VA. The survey was translated in English and Spanish, and a flowsheet (see below) was created to standardize the flow of the telephone calls.

Diagram 1: Flowsheet of telephone surveys, in English and Spanish

INTRO: I am ___, calling from Daily Planet with Dr. DiPasquale. We want to know more about the decision to get vaccinated against COVID. Is it ok if I ask you a few questions?

NO → End call. Document "declined"

YES

¿Have you received the COVID vaccine?

YES ← → NO

Make sure vaccination is documented in ECW

What motivated you to get the vaccine?/ What was your reasoning?

Do you know anyone who had COVID (now or in the past)?

Do you have any interest in receiving the vaccine? (If yes, schedule)

What are the main factors that influence your decision?

Do you know anyone who had COVID (now or in the past)?

What is the likelihood that you will get the vaccine in the future?

Dr. DiPasquale wants everyone to have accurate information about the vaccine. Is it okay if she calls you to talk about the vaccine?
(If yes, telephone encounter with reason: F/U COVID VACCINE and message describing patient concerns)

Thank patient. End call. Update spreadsheet.

Hola, soy___, estoy llamando de parte de Daily Planet con la doctora DiPasquale. Quisiéramos saber más sobre su decisión de vacunarse. ¿Puedo hacerle unas preguntas sobre la vacuna contra COVID?

NO → End call. Document "declined"

YES

¿ Ha recibido usted la vacuna contra el COVID?

YES ← → NO

Make sure vaccination is documented in ECW

¿Cuál fue su motivo/razón en recibir la vacuna?

¿Conoce a alguien que estuviera enfermo con COVID (ahora o en el pasado)?

¿Tiene usted algún interés en recibir la vacuna? (If yes, schedule)

¿Cuáles son los factores que influyen en su decisión?

¿Conoce a alguien que estuviera enfermo con COVID (ahora o en el pasado)?

¿Qué probabilidad hay que usted vaya a recibir la vacuna en el futuro?

La doctora quiere que todos tengan información correcta sobre la vacuna. ¿Le importaría si la doctora le llamara para hablar sobre la vacuna? (If yes, telephone encounter with reason: F/U COVID VACCINE and message describing patient concerns)

Thank patient. End call. Update spreadsheet.

Data collection was via telephone survey (in Spanish or English, based on patient preference) and documented in a secure excel spreadsheet. Data was then de-identified and analyzed to highlight the main factors that motivated vaccination and the main factors that prevented vaccination. In addition, the immediate effects of the telephone call were measured by the number of unvaccinated patients that scheduled vaccine information calls with PCP or scheduled vaccination during telephone visit.

The primary goal was to better understand the decision-making process behind COVID vaccination of patients at Southside Health Center, including a better understanding of both the main motivations and the main obstacles to vaccination. For example, are patients unvaccinated because of accessibility concerns (ex: clinic hours of operation) or because of belief about the vaccine (ex: the vaccine is not safe)? The answer to this question greatly differs the type of intervention needed to address the obstacles. A secondary goal was to engage with patients in an ongoing dialogue about the vaccination that focuses on patient-specific and community-specific concerns.

Outcomes

154 adults (age range 23-76, median age 44) participated in the telephone survey. 110 (71%) were female and 44 (29%) were male. 124 (81%) were Spanish-speaking, and 30 (19%) were English-speaking. In terms of COVID vaccination, 106 (69%) were fully vaccinated, 8 (5%) were partially vaccinated, and 40 (26%) were unvaccinated.

Table 1: Participant Demographics

Characteristics	Fully Vaccinated	Partially Vaccinated	Unvaccinated
Total N	106	8	40
Female	77	5	28
Male	29	3	12
Age			
18-24	3	0	2
25-34	19	2	8
35-44	30	3	16
45-54	24	1	9
55-64	21	1	3
65+	9	1	2
Spanish-Speaking	87	6	31
English-Speaking	19	2	9

Participants shared several factors that caused vaccination motivation and hesitation. Main factors that motivated patients to receive vaccine included to protect self (N=78), to protect others (N=44), for work requirement (N=9), convenience (N=9), and doctor-patient relationship (N=6). Other factors that motivated vaccination were mammogram requirement (N=2), the precedence of always receiving vaccinations (N=2), travel requirement (N=1), religion (N=1), and pregnancy (N=1). Main factors that prevented vaccination included fear of side effects (N=14), safety concerns (N=13), scheduling and transportation challenges (N=6), precedence of never receiving vaccinations (N=4), and desire to go to a familiar clinic (N=2). Other factors that prevented vaccination were pregnancy (N=1), fear of injections (N=1), belief in low disease severity (N=1), belief that the pandemic is over (N=1), desire to only receive Pfizer vaccination (N=1), and pregnancy (N=1). Out of the unvaccinated patients (N=41), 33% (N=13) scheduled a phone call with PCP regarding vaccine and 15% (N=6) scheduled vaccination appointment.
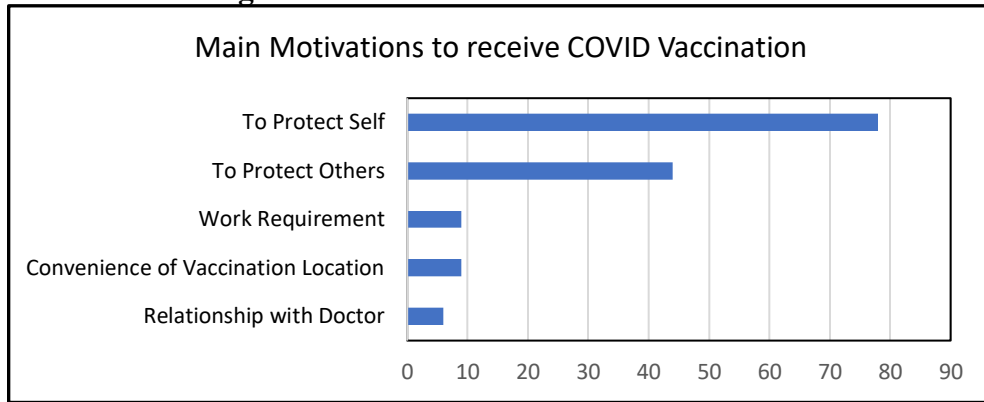
Diagram 2: Motivations behind COVID vaccination
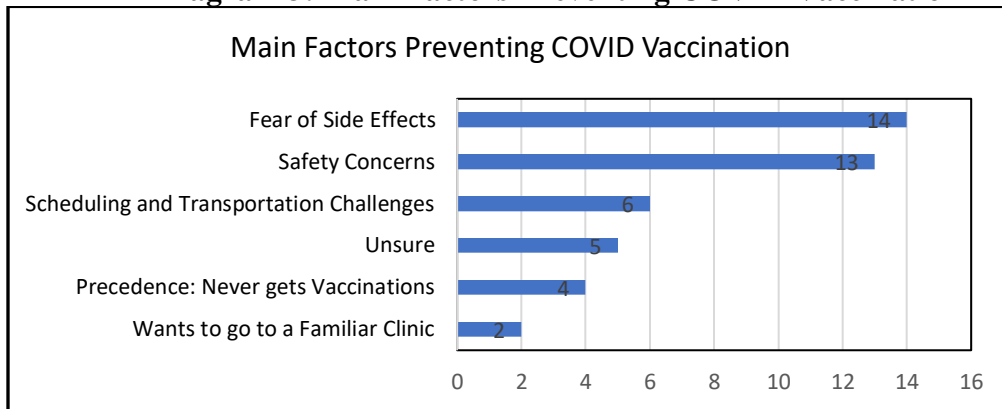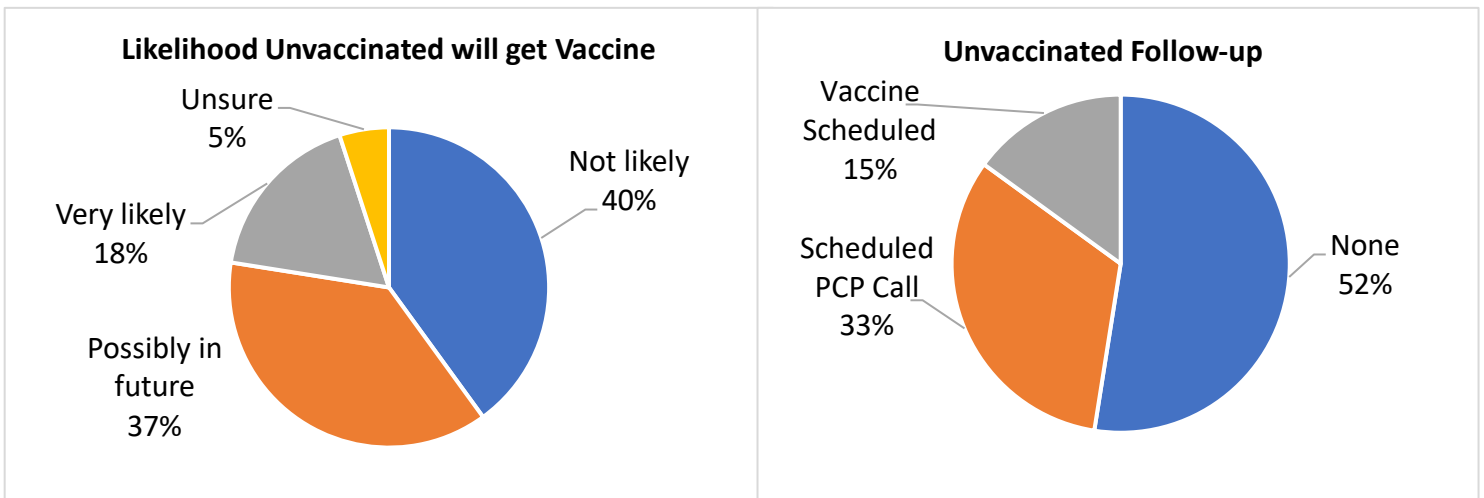
Main Motivations to receive COVID Vaccination

Motivation	Value
To Protect Self	~78
To Protect Others	~44
Work Requirement	~9
Convenience of Vaccination Location	~9
Relationship with Doctor	~6

Diagram 3: Main Factors Preventing COVID Vaccination

Main Factors Preventing COVID Vaccination

Factor	Value
Fear of Side Effects	14
Safety Concerns	13
Scheduling and Transportation Challenges	6
Unsure	5
Precedence: Never gets Vaccinations	4
Wants to go to a Familiar Clinic	2

Diagram 4: Unvaccinated: Likelihood will receive vaccine and Follow-u

Likelihood Unvaccinated will get Vaccine

- Unsure 5%
- Not likely 40%
- Very likely 18%
- Possibly in future 37%

Unvaccinated Follow-up

- Vaccine Scheduled 15%
- Scheduled PCP Call 33%
- None 52%

Discussion

This project used a cross-sectional qualitative telephone survey to determine the factors involved in the decision to receive COVID-19 vaccine at a FQHC that serves primarily low-income Spanish-speaking adults in Richmond, VA. While there were several factors, including the desire to protect self and others, that many participants shared as their motivation to receive

the vaccine, there were also several factors, including pregnancy, travel, and religion that were individual-specific. Similarly, while fear of side effects and safety concerns were the main factors preventing vaccination, 15% of participants had individualized concerns, such as fear of injections and desire to only receive Pfizer vaccination. This highlights that while public health efforts can work to impact the common hesitations, individual physicians and healthcare workers should also engage with patients at an individual level.

Limitations of this study include that 154 participants were surveyed out of the over 1000 patients seen at the clinic during the period of eligibility. Since less than 20% of eligible patients were surveyed, there is a possibility that the sample is biased. In addition, since the survey participants were chosen based on clinic visits, the survey targets people who are already engaged in the healthcare system and have access to a PCP, which means that the results likely underestimate challenges surrounding access that might exist otherwise in the low-income Spanish-speaking community. 71% of participants were female, which might reflect the clinic population, but further highlights possible disparities between the population served by the FQHC and community-members not seen in the clinic. Lastly, the pandemic is ongoing and opinions surrounding vaccination are dynamic and changing, so it is possible that the patients that we surveyed have developed new factors that influence their thoughts on vaccination. This limitation highlights the importance of engaging with patients about vaccination in an ongoing manner rather than through a one-time encounter.

The primary impact of this project is the improvement of the FQHC's medical team's understanding of their patients' vaccination decision-making process. A secondary impact is the collaborative engagement with patients about vaccination with a focus on incremental stepwise behavior changes. An immediate impact was that 13 patients scheduled telephone visits with Dr. DiPasquale to discuss COVID vaccination risks and benefits and 6 scheduled vaccinations.

In terms of dissemination, Dr. DiPasquale used our data during a webinar created in collaboration with the Virginia Department of Health to discuss commonly asked questions and misperceptions surrounding the COVID vaccination. The goal of the webinar was to disseminate information about the vaccine directly to the FQHC's patients and other Spanish-speakers in the Richmond area. In addition, a partner FQHC that serves the unhoused population in Richmond is replicating our qualitative telephone survey format to improve their second COVID dose vaccination rate.

Overall, this project shows how understanding patients' vaccination beliefs and fears informs community-based vaccination interventions. It emphasizes the importance of both community-level interventions that can focus on the most common factors influencing vaccine hesitancy and the individual-level interventions that involve collaboration and ongoing engagement through meaningful doctor-patient relationships.

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