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Lessons Learned Recruiting Minority Participants for Research in Urban Community Health Centers

Elizabeth Fam, BA^a and Jeanne M. Ferrante, MD, MPH^{b,c,d}

Elizabeth Fam: ef226@njms.rutgers.edu; Jeanne M. Ferrante: jeanne.ferrante@rutgers.edu

^aPreliminary Medicine, Rutgers- New Jersey Medical School, 185 South Orange Ave, Newark, New Jersey, 07103, USA

^bDepartment of Family Medicine and Community Health, Rutgers- Robert Wood Johnson Medical School, 112 Paterson St., New Brunswick, New Jersey, 08901, USA

^cThe Cancer Institute of New Jersey, Rutgers-Robert Wood Johnson Medical School, New Brunswick, New Jersey, USA

^dRutgers Institute of Health, Health Care Policy, and Aging Research, New Brunswick, New Jersey, USA

Abstract

To help understand and mitigate health disparities, it is important to conduct research with underserved and underrepresented minority populations under real world settings. There is a gap in the literature detailing real-time research staff experience, particularly in their own words, while conducting in-person patient recruitment in urban community health centers. This paper describes challenges faced at the clinic, staff, and patient levels, our lessons learned, and strategies implemented by research staff while recruiting predominantly low-income African-American women for an interviewer-administered survey study in four urban Federally Qualified Health Centers in New Jersey. Using a series of immersion-crystallization cycles, fieldnotes and research reflections written by recruiters, along with notes from team meetings during the study, were qualitatively analyzed. Clinic level barriers included: physical layout of clinic, very low or high patient census, limited private space, and long wait times for patients. Staff level barriers included: unengaged staff, overburdened staff, and provider and staff turnover. Patient level barriers included: disinterested patients, patient mistrust and concerns over confidentiality, no-shows or lack of patient time, and language barrier. We describe strategies used to overcome these barriers and provide recommendations for in-person recruitment of underserved populations into research

Corresponding author: Jeanne M. Ferrante, MD, MPH, Dept. of Family Medicine and Community Health, Rutgers-Robert Wood Johnson Medical School, 112 Paterson St, New Brunswick, NJ 08901, jeanne.ferrante@rutgers.edu, phone: 848-932-5252, fax: 732-932-1451.

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studies. To help mitigate health disparities, disseminating recruiters' experiences, challenges, and effective strategies used will allow other researchers to build upon these experience in order to increase recruitment success of underserved and underrepresented minority populations into research studies.

Keywords

recruitment; health disparities; underserved populations; minorities

1. INTRODUCTION

Underserved minority populations are disproportionately affected by higher rates of chronic diseases and worse health outcomes. Examples include the increased prevalence of obesity and diabetes in African-American and Hispanic adults,^{1, 2} the higher rates of hypertension and deaths from heart disease and stroke among African-Americans,³ and the highest rates of late stage cancer and mortality for several cancers among African-Americans.⁴ It is unclear if these racial disparities reflect unequal access to health care, including prevention, screening, diagnosis, and treatment of disease, or other factors.⁵ To help understand and mitigate health disparities, it is important to conduct research with underserved and underrepresented minority populations under real world settings.

Federally Qualified Health Centers (FQHCs) are community health centers and programs that provide primary care and other medical services in low-income underserved urban and rural communities.⁶⁻⁹ While there is an abundance of studies being conducted in FQHCs, ⁶⁻¹² few publications detail the actual process of recruiting patients, particularly for interviewer-administered surveys. Previous papers have described recruitment of patients in rural community health centers (CHCs),¹³⁻¹⁵ and recruitment of CHC patients remotely by mail or phone;¹⁶⁻¹⁸ or, they focused on Latino populations,^{17, 18} or one aspect of recruitment, such as the informed consent process.¹⁹ Furthermore, prior literature describes recruitment of patients into clinical trials,^{13-18, 20} which may be more difficult due to greater requirements and need for retention compared with observational survey studies. There is a gap in the literature detailing real-time research staff experience, particularly in their own words, while conducting in-person patient recruitment in urban community health centers.

This paper describes challenges faced, lessons learned, and strategies implemented by research staff while recruiting predominantly low-income African-American women for an interviewer-administered survey at four urban FQHCs in New Jersey. Our experiences from this study provide practical strategies to aid other researchers recruiting underserved minorities for research studies.

2. MATERIALS AND METHODS

2.1 Study Design, Setting and Participants

The patient surveys were part of a pilot study, conducted in 2013–2015, which tested a practice-based educational intervention in improving health professionals' beliefs, attitudes, and behaviors toward individuals with obesity.²¹ Four urban FQHCs were chosen for the

parent study because minority and poor or less educated women have high prevalence of obesity and may experience high rates of weight bias.^{22–24} All centers were typical FQHCs in New Jersey that provide primary health care services, including adult medicine, gynecology, pediatrics, dental care, podiatry, nutrition, and social services. Each center treated 12,000 or more low-income underserved patients per year, and had greater than 40,000 patient visits per year. The centers were interested in improving care of patients with obesity in their clinics, and they received \$1000 for participating.

A convenience sample of women with obesity was recruited to complete an interviewer-administered survey prior to the practice-based intervention, with a different sample recruited one year after the intervention. Details of the 50-item patient survey have been described elsewhere.²¹ Briefly, the goal of the exit survey was to assess the impact of the practice-based education on the women's perception of weight stigmatizing situations in the practice, ratings of their physician's empathy, and receipt of cancer screening recommendations and counseling. The survey lasted approximately 30 minutes and also included questions from the Behavioral Risk Factor Surveillance System (BRFSS) survey asking demographic information and self-ratings of their physical and mental health.²⁵ We focused on women in the study because stigmatization and bias from obesity affect women more profoundly than men, who are much less likely than women to report weight discrimination.^{24, 26} Women were eligible to participate if they were 21–70 years old, had obesity (body mass index [BMI] ≥ 30 kg/m²), were English speaking, and were established patients in the practice for over 12 months, with at least one other appointment at the center within the last 12 months. Exclusion criteria included pregnancy or history of breast or cervical cancer. All participants signed informed consent, and they received a \$25 gift card at completion of the survey. The Rutgers-Robert Wood Johnson Medical School Institutional Review Board approved this study.

2.2 Recruitment protocol

Eleven different research assistants recruited and interviewed patients during the course of the 2-year study. All received standardized training regarding protection of human subjects via the online Collaborative Institutional Training Initiative course (<https://www.citiprogram.org>), recruitment procedures, informed consent, study confidentiality, and the interview protocol, including asking of questions without being leading or biased. Due to turnover in staff, the longer than anticipated time required to recruit participants, and the lack of funds needed to hire additional research personnel, we enlisted and trained part-time student interns to assist with recruitment. One to two (if there was a trainee present) research assistants worked at one time in each assigned health center. Occasionally, recruiters would move to another health center after completing their assignment.

Participants were recruited on site from Adult (Family or Internal) Medicine or Women's Health at each FQHC and interviewed immediately after their physician visit. Because we were interested in participants' experience with the physician and the clinic, we elected to conduct in-person recruitment at the time of the patient visit to minimize recall bias. The original protocol included having one main contact person at each clinic who served as the liaison between clinic staff and research staff, assisting with promotion of the study to clinic

members, and determining scheduled times for the research staff to be on site. The initial recruitment protocol asked the nursing staff, after weighing patients, to give English speaking women with BMI > 30 kg/m² a flyer and recruitment script, and to advise them that a research assistant would approach them after their physician visit to discuss the study in more detail. The recruitment script advised patients about the purpose of the study, the eligibility criteria, the incentive, and that the survey would ask about their experiences with the office and their physician. The recruiter was to approach the women in the examination room after the physician's visit, explain the study, confirm eligibility, review and obtain informed consent, assure confidentiality, and answer all questions before administering the survey. Because we were asking patients to rate their physician's empathy, we did not involve physicians in the recruitment process in order to minimize selection bias. The principal investigator and project manager coordinated with each clinic's administration to adapt recruitment procedures and schedules that worked best for their clinic with the least amount of disruption.

For this paper, we analyzed fieldnotes and research reflections written by the research assistants (RAs), along with notes from team meetings during the study. The fieldnotes were written by the RAs in real time, and later expanded upon, to document their observations of the office environment and staff behaviors as well as their experiences with recruitment. All RAs wrote research reflections, after completing recruitment, to summarize their experiences and describe what worked best/least for them. The research team used these fieldnotes and research reflections to make modifications to the original recruitment protocol to enhance success for other recruiters. We conducted a series of immersion-crystallization cycles to identify themes among the data and to compare and contrast themes within and between clinics.²⁷ We report main challenges faced, lessons learned, and strategies implemented to facilitate patient recruitment. The quotations included in this paper best represent and exemplify our key findings.

3. RESULTS AND DISCUSSION

3.1 Recruitment Outcomes and Participant Characteristics

Out of 415 patients approached in the 4 clinics, 285 (68.7%) met eligibility requirements, and 195 (68.4%) signed consent forms and completed the exit interviews. The research assistants spent a total of 184 days to recruit and interview the 195 participants, ranging from 16 – 40 days over 2 – 4 months in each clinic at baseline, and 7 – 32 days over 1 – 5 months at follow-up. We initially aimed to enroll 30 participants per clinic at baseline and at 1-year follow-up, but due to the unanticipated length of time required for recruitment, the accrual goal was decreased to 25 patients for the last clinic at baseline, and 20 patients per clinic at follow-up.

Table 1 summarizes the sample characteristics. The average age was 47.5 years (sd 11.1), and the mean BMI was 39.2 (sd 7.3). The majority of the participants were African-American, not married, with high school or less education, and unemployed. All of the participants in the study were female who had been patients at their respective FQHC site for at least one year.

3.2 Challenges Encountered and Strategies Implemented

There were several challenges encountered during recruitment. While the relative importance of challenges varied depending on the clinic, there were barriers that were encountered at all clinics. Below, we describe the main barriers to patient recruitment experienced by all of the recruiters at three levels- clinic, staff, and patient-related challenges, along with some strategies used to overcome them. Unless noted otherwise, these strategies were modifications to the original recruitment protocol in response to challenges faced.

3.2.1 Clinic level barriers

3.2.1.1 Physical layout of clinic: The physical layout of some clinics posed challenges to recruiters. For example, some clinics had different hallways or different floors for Family Medicine and Women's Health, which made approaching all potential participants difficult:

From my vantage point at the reception desk, I can see the patients in the waiting room for Family Medicine and thus have an idea of who is waiting to be seen. Often times, the patients are mainly men and/or clearly not overweight. I will then occasionally walk the few feet over to Women's Health in order to see who is waiting over there. This helps me keep a "census" of sorts...It is difficult to have the perfect vantage point due to the setup of the clinic, and so patients that I was hoping to approach can leave without me seeing.

Some recruiters reviewed the patient schedules with the front desk staff to determine the ideal place to situate themselves. For example:

I would sit in a seat that was located directly outside of the rooms where the two nurses would bring the patients back to take their vital signs. I would be able to watch the patient be brought back, and if they looked as if they might be a candidate for the study, I would ask the nurse if that patient was a candidate after the patient left the vitals room, and she could check her medical record screen for me and see if the BMI was in the right range. Then, when the patient was brought back into the exam room (which I could see from my seat in the hallway), I would go into the exam room with the patient and tell the patient about the study.

3.2.1.2 Patient Census: In some clinics, the census was occasionally very low, due to provider turnover, providers being on vacation, poor weather, time of year or month, or patient no-shows. This resulted in recruiters sometimes spending whole days at the clinic with no potentially eligible participants:

I interacted with the nurse who mentioned that today and yesterday have been super slow and believes that it is due to school recently restarting. It's been over two hours since [Doctor] has had a patient, and [the nurse] has not identified any patients who may fit the criteria.

In these cases, the recruiters worked with the staff to find better days for recruitment:

I found it best at the end of each day to ask the receptionists or another available staff member to look at the schedule for the next few days/next week to see when

they had the most patients scheduled. The best days changed as vacation schedules changed.

However, in other clinics, the patient census was too high and the hectic pace of the clinics inhibited patient recruitment on certain days:

One of the medical assistants also approached me and mentioned that Thursdays are not good as the clinic is too busy to help identify patients even by BMI, and [she] recommended [me] to come on Mondays or Tuesdays instead.

3.2.1.3 Limited Private Space: In the clinics where patient volume, along with the number of student/resident learners, was high, the business and chaos of the clinic resulted in lack of private space in which to conduct the surveys. For example, one recruiter describes:

One of the med techs said that this was the most [residents] he has seen on one day...There were many bodies walking around, coming and going, in and out of exam rooms. The office that we had been using to interview patients was also being used when all the exam rooms were occupied. Space was definitely an issue today.

Another recruiter stated that she was told a patient may be eligible, but “[I] do not know what to say about where to conduct [the] interview.” Sometimes this lack of space also required patients to wait prolonged periods to initiate the survey:

She was very eager to complete the interview...She was also anxious for it to go fast, which was complicated because we didn’t have access to a room to conduct the interview in, and I had to keep her waiting almost half an hour. She was frustrated about that, although she was still cooperative.

In some cases, the recruiters rescheduled their time in the clinic when days were less busy or when rooms were expected to be available, for example, when the nutritionist was out of the office. Scheduling times to be in the clinic when it was not as busy, however, needed to be balanced against times when there may not be sufficient numbers of eligible patients.

3.2.1.4 Long wait times for patients: Patients in high volume clinics experienced long wait times to see the physician, making them reluctant to stay after their visit to participate in the survey. One recruiter explains:

Patients that come in for visits often schedule appointments with multiple practitioners in the group, and can spend a whole day either waiting to be seen or moving from one department to another... The wait time can be from 3–6 hours at times and often results in frustrated patients... The wait time is so long that often, even patients who are eligible are not interested in participating because they have other responsibilities or do not wish to spend any more time at the clinic.

Some recruiters overcame this challenge by explaining the study and reviewing consent forms with patients while they were waiting for the physician in the examination room. This was an efficient way to review the consent form without taking additional time from the patients’ schedule. Or, they scheduled the patients to return another day:

She is interested but tells me she can't see me after her appointment as she has to get her kids from school...[Another eligible patient] is interested as well but also can't stay to do the interview as she has to drive her daughter to an appointment. We exchange contact information and I tell her that I will call within the next few days to make an appointment for next week.

3.2.1.5 Other unanticipated events: There were some unanticipated events that occurred at some clinics that reduced patient flow, thereby inhibiting recruitment, such as “a spontaneous doctor and staff meeting that lasted 1–2 hours in the middle of the day,” or the need for paramedics to be called in for emergency cases. One recruiter describes how a clinic was “locked down” for about 1 hour:

The chaotic feel of the day is heightened when about 12:30pm the staff report hearing gun shots. It turns out a drive-by shooting had occurred at a funeral being held at a church located ½ block away from the clinic. Armed policeman were in the area actively pursuing the shooters both on foot and in cars. Clinic security people locked down the clinic for about 1 hour as it was feared that shooters may seek refuge in the clinic and the entire area around the clinic was cordoned off from traffic- preventing patients from arriving.

Additionally, days when the electronic medical record or air-conditioning system were not working caused clinicians and staff to be “annoyed” and “irritable” and not receptive to helping identify eligible patients. During these times, the recruiter decided it was best to return on a different day.

3.2.2 Staff level barriers

3.2.2.1 Unengaged staff: Recruiters reported that interest levels of staff varied, “with some seeming indifferent and others very interested.” All recruiters agreed that, “it is crucial to become friendly with the staff, as well as make them feel like this is something they are participating in.” The help of the staff was “absolutely imperative” to help identify eligible patients. One recruiter describes how a staff member was unaccommodating:

One [receptionist] told me to approach patients in the waiting room, however this leads to patients getting offended, and I would prefer to approach patients after they've been taken in. I feel the waiting room is too public, and since it is so small, the attention is concentrated and there is an audience for the approach...It also requires that I try to assess weight and BMI solely by observing the patients in the waiting room, since I do not access patient information. I find this inefficient and unscientific, and find that working with the nurses is a much better approach to recruitment.

To help engage staff, recruiters tried different ways to increase rapport and cooperation.

One describes:

Another tactic I used was making sure I made small talk with the office staff when they weren't busy, and even went out to lunch with them once. I explained to them

that I needed to recruit 30 patients before I was done at the clinic, and they began to feel involved in trying to help me reach that goal.

Another recruiter brought in breakfast for the nursing staff as appreciation of the assistance they provided. Recruiters were also careful to be sensitive to the daily routine and tasks of the nursing staff:

When I noticed a lull in activity, I would ask an MA or a nurse to go through the schedule with me. I used my judgment—if it seemed like they were in a rush, I didn't press them when they quickly went through and identified who would be a good fit. However, if it seemed like they had a little extra time, I'd politely ask if they wouldn't mind clicking through each patient so I could note why they were or weren't eligible, as well as their name so I could be on the watch for them. By keeping the staff engaged by saying things like “we got 2 more!” or “only X amount left to go!” it seemed to make them feel a part of it, and they really wanted to help me reach the goal.

3.2.2.2 Overburdened staff: At times the hectic pace of the clinic and insufficient numbers of staff made them feel “overburdened with patient volume and work” and too rushed to advertise or discuss the study with patients. Accordingly, this led to a haphazard method of recruitment, with some nurses advertising the study (verbally or by handing out flyers) to patients only when reminded to or asked by the recruiter. Moreover, as one recruiter describes, sometimes “the MA/nurse would start looking through their entire schedule [to search for eligible patients] only to get interrupted, and I did not want to keep asking so as to not interfere with their own duties.”

One particularly effective strategy for creating a systematic recruitment plan was identifying a “study champion” who was enthusiastic in helping to brainstorm strategies to enhance recruitment. The original protocol specified a contact person, usually chosen by the medical director, to be the designated liaison between research staff and clinic staff. Sometimes, the recruiter identified and developed a relationship with another clinic staff member who would enlist the help of other staff members to promote the study. The study champion would help identify potential patients proactively by reviewing the patient schedule and electronic medical records for eligibility criteria. Often, the study champion would enlist the help of other staff members to advertise the study, which was key in increasing recruitment:

I definitely think the best way of going about recruiting the patients is to ID them with the staff, and then have the MA hand the patient the flyer when they take them back to the exam room. For one, it helps to bridge things as the patient is more familiar with the staff, versus a stranger approaching them about a weight study. Also, it helped as they were then prepared for me as soon as they were done, and it made it less crucial for me to be hyper aware as to when a patient was leaving.

Noteworthy features of this amended recruitment protocol were the staff's identification of eligible patients and communication of this information to the recruiter. Once the recruiter received the information, s/he could then wait and approach the nursing staff member who was rooming the patient or approach the patient themselves without having to constantly ask

the staff if someone eligible came in. This ultimately allows the recruiter to be more efficient since the patients being approached were already known to fulfill the eligibility criteria.

3.2.2.3. Staff turnover: All clinics experienced some provider and staff turnover, which decreased the number of patients being seen as well as the ability to return back into the clinic for the one-year follow-up. A recruiter wrote:

I have been trying to get in touch with our contact at [Center], both through email and phone. It turns out that she (nurse supervisor) and the medical director are no longer working there.

3.2.3 Patient level barriers

3.2.3.1 Disinterested patients: Some eligible patients “seemed indifferent or disinterested.” Recruiters overcame this barrier by emphasizing the importance of the study in helping improve healthcare for overweight patients in the future. For example, one recruiter describes:

After the interview, she mentioned that she was getting late to another appointment yet had taken the time to do the interview. She really hopes that we can make changes and wants to help women overall.

In addition to discussing the importance of research, providing gift cards, as per original protocol, was particularly effective. Several recruiters indicated the significance of the gift card as an incentive. For example:

The patient was skeptical upon approach. I had to convince her to participate in the study by providing her with a detailed explanation of the study. The patient appeared to be very pressed for time and stated that she was reluctant to participate in the study because she wanted to have time to meet up with her friend and go to the movies. She was very interested in participating when she was told about the Visa gift card.

3.2.3.2 Patient mistrust and concerns over confidentiality: Some patients had mistrust of the medical research community or were hesitant to sign the consent form because of concerns over confidentiality. A recruiter wrote:

I had somewhat of a challenge enrolling this patient because the patient was reluctant to sign the consent form. I had to reassure the patient that the information was confidential...The patient agreed to participate in the study, however she was adamant about not giving her real name. She said that she had this strong feeling due to the fact that identity theft is such a huge problem these days.

To counteract patients' reluctance or doubts, recruiters thoroughly explained how their identity would not be revealed to anyone. Recruiters emphasized the importance of the patients' privacy and protection of their identity to build trust with the patient. If needed, patients were allowed to sign a fictitious name on the consent form.

3.2.3.3 No-shows or lack of patient time: Several patients who fulfilled eligibility criteria did not show up for their appointments, resulting in a discrepancy between expectation and reality of actual recruitment:

A main setback that arose is that patients would not show up as scheduled, hence there were days where I could not recruit any patients.

Also, there were patients who were interested but had to leave after their appointment with the doctor. One recruiter devised this new strategy:

I was able to get phone numbers for two women who are interested and qualified but couldn't stay to complete the interview. I have their contact information and they have agreed to come back in to complete the interview next week.

3.2.3.4 Language barrier: The FQHCs that participated in this study were located in areas that treat many Spanish-speaking patients. Consequently, it was sometimes difficult to find patients who fulfilled the English speaking criteria of our study. A few recruiters described this difficulty:

Every time I go over and ask [clinic staff members], they look at the patients there and the main issue is that the majority of the women speak only Spanish.

Unfortunately, due to funding, staff and time limitations, our pilot study did not have the resources to translate documents and enroll Spanish-speaking participants.

3.3. Discussion

Most papers describing recruitment of patients for research in community health centers conduct initial mailings and eligibility screenings via telephone.^{13–16, 18, 20} In contrast, our study used in-person recruitment and eligibility screening as our main recruitment method. Additionally, we describe recruiters' experiences and barriers encountered at the clinic, staff and patient levels, along with strategies used in their own words in real-time. Other studies retrospectively interviewed personnel involved in recruitment, which may lead to recall bias.^{13, 19, 20} Although our urban-based FQHC study consisted of a one-time administered survey with English-speaking women, our findings overlap meaningfully with those described by others conducting clinical trials,^{13, 16–18, 20} in rural CHCs,^{13–15} and with Spanish-speaking participants.^{17, 18} It may be safe to assume that most of these findings will apply to patient recruitment in other community health centers.

3.4 Recommendations for in-person recruitment

Based on the literature and our lessons learned, we offer the following recommendations (at the clinic, staff, and patient levels) for in-person recruitment of underserved populations for research studies:

1. **Choose clinics with adequate numbers of the target patient population.** This helps avoid having fewer eligible patients than initially estimated, especially if eligibility criteria are narrow.²⁰ While we used clinics in which we already had a relationship,¹⁸ some of these clinics' patient population consisted of many non-English speaking persons, which negatively impacted our recruitment rates.

Inviting additional FQHCs to participate after the study begins may be necessary to reach recruitment goals.¹⁷

2. **Continuously communicate with administrators and clinical staff regarding the optimal schedule, location of research staff, and office space needed.** Proactively planning out the logistics with clinic administrators and staff, and having regular meetings to discuss recruitment updates and to strategize about logistical challenges, can help develop relationships and increase cooperation.^{15–17, 19, 20} Maintaining ongoing communication with the administrators or study champion throughout the study is essential,¹⁷ and it would have alerted us to leadership turnovers that impacted our follow-up recruitment process.
3. **Develop rapport with office staff by being friendly, engaging conversation, and showing appreciation.** An essential feature of recruiters is their ability to engage clinic staff, with whom the patients of the health center are already comfortable in the recruitment process.¹⁸ We found that staff members are more inclined to help recruiters who they perceive as friendly and polite.
4. **Identify a “study champion” to facilitate communication between research staff and clinical staff members and help brainstorm strategies for recruitment.** A study champion or site coordinator from the center, with whom the clinical staff are familiar and friendly with, is helpful for answering questions, reminding staff about the study, and encouraging them to advertise the study. A physician champion can also lend credibility and demonstrate organizational support.¹⁷ Other studies used site coordinators or clinic staff to initiate contact with potential participants or to enroll them into the study.^{13, 17, 19} While using clinic staff may be ideal for recruitment due to their established relationships with the patients, they may lack experience with research studies and have difficulties in explaining the requirements and benefits of the study and in answering questions.^{13, 19}
5. **Enlist a nurse or MA to help identify eligible patients and hand out study flyers.** A staff member, after reviewing the appointment schedule or medical record,¹⁹ can proactively advise the recruiter on which patients qualify for the study and when they are scheduled. Patients can be given written materials that they could read to familiarize themselves with the study before being contacted by research staff. Having clinic staff involved in the recruitment process increases the number of subjects enrolled in a research study.¹⁹
6. **Be flexible with staff and patient time.** Federally Qualified Health Centers are usually crowded and busy, and patients often spend many hours at the clinic. It is recommended that the research staff not interrupt or interfere with clinic staff’s responsibilities.¹⁷ Recruiters who have this understanding can better form stronger relationships with clinic staff and develop rapport to overcome the barrier of disinterested staff.¹⁶ Furthermore, recruiters may need to be flexible to accommodate patients’ busy schedules e.g., contacting no-shows and rescheduling people in a rush to leave.¹⁷ Sometimes, home visits or free

transportation may be helpful for patients who no-showed multiple times.
15, 17, 18

7. **Approach patients in the examination room while they are waiting for the physician.** Using the patients' down time to explain the study and review the consent form is an effective and efficient way to minimize inconvenience for patients. This occupies the patient until the physician is ready.
8. **Provide extra assurances of patient confidentiality.** Minority populations, in particular, have distrust of the research community and concerns over confidentiality and privacy.^{19, 20} Because our study consisted of a one-time administered questionnaire, we allowed concerned participants to only initial or sign a fictitious name on the consent form.
9. **Provide patient incentives.** Participants are more inclined to participate in research if they receive a monetary incentive as compensation for their time.^{13, 16, 17, 20} Some participants also felt privileged to help in improving the clinic and care of future patients, and in participating in a federally funded research study.
10. **Plan for extra time, additional research staff, and ability to modify recruitment strategies.** Similar to our study, others have reported longer than anticipated time for recruitment.^{16, 20} As in our study, staff turnover at the clinic can significantly delay recruitment efforts.¹³ There is often a need to hire additional recruitment personnel and to revise eligibility criteria, recruitment goals, timing of enrollment, and length of the study.^{16, 18, 20} To overcome lack of funds needed to hire additional research personnel, we trained part-time student interns to assist with recruitment.¹⁶ When there is turnover in research staff, care must be taken to systematically train part-time personnel to ensure consistent procedures and data quality.

4. IMPLICATIONS

Recruitment of patients for research studies from community health centers in both urban and rural areas requires research staff to understand how these clinics operate in terms of administration and patient flow, develop relationships with the clinic administrators and staff, adapt to the environment of the clinic, and accommodate to the needs of the clinic and patient population.^{14–18, 20} To help mitigate health disparities, disseminating recruiters' experiences, challenges, and effective strategies used will allow other researchers to build upon our experience to increase recruitment success of underserved and underrepresented minority populations into research studies.

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Table 1

Characteristics of research participants from 4 FQHCs in New Jersey (N=195)

Participant Characteristics	N (%)
Age (years)	
40	52 (26.8)
41–50	49 (25.2)
51–60	76 (39.2)
> 60	17 (8.8)
Body mass index (kg/m ²)	
< 35	59 (30.2)
35–39.9	68 (34.9)
≥40	68 (34.9)
Race	
White, non-Hispanic	16 (8.2)
Black, non-Hispanic	152 (78.4)
Hispanic	23 (11.9)
Other	3 (1.5)
Marital Status	
Never married	93 (47.7)
Married or unmarried couple	50 (25.6)
Divorced	25 (12.9)
Separated	19 (9.7)
Widowed	8 (4.1)
Educational level	
< High school diploma	47 (24.1)
High school diploma	85 (43.6)
Some college or college diploma	63 (32.3)
Employment	
Employed	69 (35.6)
Out of work	50 (25.8)
Homemaker	12 (6.2)
Retired	4 (2.1)
Unable to work	53 (27.3)
Student	6 (3.0)

* Numbers may not add to total due to missing data