Focus Group Interviews on Racial and Ethnic Attitudes Regarding Adult Vaccinations

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Adult immunizations have dramatically improved the health of many Americans. In the United States, researchers have documented disparities in the utilization of adult vaccinations between whites and racial and ethnic minority populations. This article examines racial and ethnic attitudes regarding recommended adult vaccinations.

Methods: Four adult focus groups (N=22) were conducted in community churches in San Francisco, CA. Participants were either age-appropriate or had clinical indications to receive a strong recommendation for influenza and pneumococcal immunizations but had not been routinely immunized against influenza and had never been vaccinated against pneumococcal disease. Content analysis was used to analyze narrative data and identify emerging themes.

Results: Participants reported that they lacked information about the benefits or potential side effects of influenza and pneumococcal vaccinations and that their physicians were not routinely informing them of, or recommending, these vaccinations. Meanwhile, most participants expressed a willingness to be vaccinated against pneumococcal infection and influenza. All focus group participants felt that community churches were a potential venue for delivery of adult vaccines.

Conclusions: Many adult racial and ethnic minorities have basic information regarding the influenza vaccine but lack sufficient information regarding the benefits of pneumococcal vaccinations. Physicians should provide information regarding adult vaccinations to all patients. On-site vaccination and vaccine education programs in community churches may be successful in increasing the utilization of adult vaccinations in unvaccinated church populations.

Key words: adult vaccines influenza ■ pneumococcal ■ race ■ ethnicity

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INTRODUCTION

Vaccinations have dramatically improved the health of Americans, but many, including racial and ethnic minorities, still do not have adequate immunization.[1-4] Compelling evidence supports annual influenza vaccination in patients age ≥50 years and one pneumococcal vaccination in all persons age ≥65 years.[1,5-7] It is poorly understood why racial and ethnic minorities are less likely to utilize adult immunizations. Some data suggest that educational, logistical, and psychological factors may affect a patient's utilization of preventive medicine, particularly adult vaccinations.[8-12] Even among those with access to healthcare, and among recipients of Medicare and Medicaid health insurance programs—which pay for influenza and pneumococcal vaccines—rates of adult vaccinations remain lower among minorities than among their white counterparts.[13-14]

This study describes racial and ethnic attitudes, knowledge, and perceptions about adult immunizations among adults who had not routinely received adult vaccinations as recommended by the U.S. Public Health Service. The authors aimed to better understand and assess barriers to adult immunizations in order to help healthcare providers and public health agencies develop more effective intervention and vaccination promotion programs. Specifically, this study provides research-based information regarding the viability of vaccine-related intervention activities in faith-based organizations. Our specific research questions were: 1) What are the attitudes and perceptions of African-American and Latino adults regarding adult vaccinations? 2) Were participants adequately informed about adult vaccinations? and 3) Do African-American and Latino adults perceive faith-based organizations as a suitable setting to receive adult immunizations?

METHODS

We used a qualitative study design to better understand racial and ethnic differences in knowledge, attitudes, and perceptions regarding adult vaccinations

and to assess the practicality of delivering adult vaccinations in community churches. Content analysis was performed to analyze the narrative data obtained through four focus groups completed in Catholic community churches in San Francisco between April and June 2003. The focus groups were conducted in the language of preference (English or Spanish). Participants were presented with a basic definition of the three primary adult vaccinations (e.g., flu, pneumonia, and tetanus) at the beginning of the focus group. Then, several open-ended questions were posed, such as, "Please tell us in your own words what you have heard about adult immunizations," "Have you heard of the flu or tetanus vaccine?," or "What do you know about the pneumonia vaccine?" Each focus group was professionally taped, transcribed verbatim, translated (Spanish to English), and submitted for thematic analysis by four of the investigators. Phrases and sentences were the unit of analysis.

Data Collection Methods and Recruitment

We used a two-step recruitment method to enroll racial and ethnic minority adults from faith-based organizations as focus group participants. First, invitations to participate were sent to selected San Francisco religious leaders and church-governing bodies representing faith-based organizations located in low socioeconomic neighborhoods with >50% African-American and/or Latino members. Faith-based organizations that expressed interest in participating were invited to an informational group meeting to review the purpose of the project and to explore partnership arrangements. We sought to build relationships with interested faith-based organizations over a period of time before recruiting focus group participants from within their membership. Second, faith-based organizations that agreed to participate were asked to inform their members during church announcements and in weekly bulletins that University of California, San Francisco (UCSF) researchers were available to discuss and enroll eligible members in an adult vaccine focus group study. Church members were asked to stay after religious services for a baseline screening eligibility session. If a member was eligible and willing to participate, an appointment was made at a time, date, and location for a scheduled focus group. We recruited church members who were 1) age 50 or older, 2) adults with chronic heart or lung diseases or diabetes mellitus who had not routinely been immunized against influenza, or 3) adults age 65 or older who had never been vaccinated against pneumococcal disease. Individuals who received the influenza vaccine in the preceding year or the pneumococcal vaccine anytime in the past were excluded from the study.

Conducting the Focus Groups

The study was approved by the Committee on the Protection of Human Subjects at UCSF. All of the study materials were available in English and Spanish. Each focus group participant signed informed consent, received instructions on the interview process, and was encouraged to freely express opinions during the interview. A short sociodemographic questionnaire was administered at the beginning of the focus group. The identity of the participants was kept confidential, and a code number was used to identify each participant's response and the focus group itself. Participants received $20 grocery vouchers for their participation in the group interview.

Table 1. Sociodemographic Characteristics of Adult Vaccinations, Faith-Based Focus Group Participants in San Francisco (N=22), 2003

	Latino (N=9)*	White (N=3)	African-American (N=10)
Mean age	67 years (range 53–75)	61 years (range 55–67)	58 years (range 46–80)
Female gender	7/9 78%	3/3 100%	7/10 70%
U.S.-born	0/9 (0%)	3/3 (100%)	10/10 (100%)
Mean number of visits to doctor in the past year	3.5 (range 1–10)	2.3 (range 2–4)	5.7 (range 0–20)
Percentage with health insurance	89%	100%	100%

* All foreign-born: El Salvador, Mexico, Puerto Rico, Nicaragua, Guatemala, and Argentina.

All focus group leaders were bilingual and bicultural skilled and experienced healthcare researchers with doctoral backgrounds. The two Latino focus groups were conducted in Spanish; the African-American and Caucasian focus groups were conducted in English. Standard moderation techniques were used throughout, and all focus groups lasted approximately an hour.

Data Analyses

Data from the short sociodemographic questionnaire were analyzed using descriptive statistics. Measures of central tendency were used for interval/ratio data. Nominal and ordinal data on participants' characteristics were analyzed with frequencies and proportions. Data analysis for responses to the open-ended questions was conducted through content analysis.[15,16] The focus groups were transcribed, translated if applicable, and reviewed by research investigators who performed content analysis to identify major themes. All investigators read each transcript, identified major themes, and extracted exemplifying quotations. The analysis incorporated line-by-line open coding of each phrase, statement, or response. The investigators coded the data independently and met at a later date to reconcile the emerging themes and to discuss the analysis of theme clusters and categories.

Investigators accomplished data reduction by selecting and grouping themes according to their conceptual association. The codes were clustered to display categories of themes. The last step included verification of emerging themes and their categorization to describe these responses in the context of racial and ethnic differences. Only major themes and specific passages from focus group transcripts are presented herein.

RESULTS

We interviewed a convenience sample of 22 men and women, mean age 62 years (range 46–80 years), who self-identified as white (n=3), Latino (n=9), and African-American (n=10). Sociodemographic and other health-related characteristics are depicted in Table 1. The Latino participants were all foreign-born and came from Mexico, Central America, and Puerto Rico. In general, most of the participants were women (77%) and had health insurance. Each focus group had an average of 5.5 participants (range 3–10).

Content analysis of the focus group transcripts revealed four major themes related to adult vaccinations: 1) awareness and knowledge, 2) barriers, 3) the role of healthcare providers, and 4) a desire to improve health. An additional topic, "Churches as a venue for adult immunization," reflects our findings related to the acceptability of churches as a community-based site for immunization delivery. These themes are discussed below and summarized in Table 2.

Awareness and Knowledge of Adult Vaccinations

The first theme that emerged from the focus groups was the awareness and knowledge of participants about adult vaccinations. Although all focus group participants were aware of the topic of adult vaccinations, they lacked sufficient knowledge regarding the benefits of both flu and pneumonia vaccines. Lack of knowledge, personal beliefs, and other factors led participants to perceive multiple fears, risks and barriers to these two adult immunizations.

Levels of knowledge varied among participants from those who did not know much about adult immunizations to those who had a fairly good knowledge of indications and potential benefits. Most were aware of the flu vaccine, some about the tetanus vaccine and boosters, and almost none had heard about the pneumonia vaccine:

"I'm not even aware that there are other vaccines that are necessary for adults. It was my understanding that once you get past certain age, you don't need any kind of vaccinations or vaccines, except perhaps for the flu—once a year."

In response to an answer that reflected lack of knowledge about immunizations, a Latino focus group participant explained the following: =

"I believe that the first thing we have to clarify is what a vaccine is, because this gentleman here is possibly talking about another kind of medication that is not a vaccine. The vaccine is injected [in] to a person, the same antibodies that produce the disease, minimized, so that the body reacts to it."

Participants had heard about the flu vaccine from public announcements and knew that people of a certain age should be immunized but did not show an understanding of the indications for flu vaccines. We found several misconceptions about the recommendations for the flu and pneumonia immunizations among all three racial and ethnic groups. These misconceptions range from those who perceived that the flu vaccine led to a mild flu or to developing the illness itself by "bringing out the infection," to those who believed that receiving vaccination led to multiple physical discomforts and risks. A white woman who was familiar with adult vaccinations stated:

"I am acquainted with the flu vaccine, and I have chosen not to get them, because I never get the flu—mainly because I am single, and I don't have to have a lot of contact with children and the workplace environment anymore."

An African-American woman who believes it is important to have a tetanus shot every 10 years stated:

"I normally get the tetanus booster every 10 years as it comes up. And I can see the benefits of the pneumonia, the pneumovac...for older people.

As far as the flu, I've never had the flu, so I don't get the vaccine."

In addition to limited knowledge and misconceptions regarding specific adult vaccinations, some participants believe immunizations in general are a curative rather than a preventive measure:

"The vaccine is good, really, so that it will take out all the infection that you have, like that, really!"

These beliefs were more common among Latino than among African-American and white participants. When asked about the role of the flu vaccine, a Latino participant declared:

"When they put the vaccine (flu), the flu comes, and you throw out a lot of phlegm."

Another participant stated:

"Well, I think it's good (the flu vaccine). For example, if you have flu without the vaccine, then all of the infection that you have will not go out, really because the flu is an infection that we have in our chest, in our body, whatever it is."

We also found that participants believe the value of flu immunizations as a good preventive measure depends on personal health status or history of the flu. Many participants felt that if you were "old" or "frail" or already sick or if you had had the flu before, then you needed an annual flu vaccination.

Most of the participants seemed to be more familiar with and knowledgeable about the flu vaccine than the pneumonia vaccine:

"I wasn't aware that I was supposed to have pneumonia (immunization), or that it was available, or that I would...had to think about it."

Some had heard of it at some point, but were unaware if it was indicated for them or not:

"I have heard that the pneumonia vaccine is to prevent you from catching the pneumonia. However, I am not sure because I have never had the pneumonia vaccine, and I hope I will never need it."

Some participants were aware that the flu and pneumonia could be related to mortality events in the aged population. Some perceived that the flu was far less dangerous than pneumonia, including that older adults could not die from the flu but could die from pneumonia. However, some were not able to relate this potential risk to themselves or to others unless a pre-existing condition or other health issues were present:

"Yes, I believe it could be (that death could occur) but not directly because of the flu, because when the flu is developed where there is high temperature and low defenses, that could trigger another kind of disease that is present but unseen. I know, because that happened to my father-in-law. He had prostate cancer...he could have lived for a long time, but he caught a very bad flu, and it forced him to stay in bed. That happens to elderly people when they stay in bed for a long time, especially on their backs, and it gets complicated. It complicates with the lung, and he died...but truly, you can't say that it was only because of the flu.

Table 2. Summary of Focus Group Themes, San Francisco Churches, 2003

Awareness and Knowledge of Adult Vaccinations

- Some believe that vaccines are preventive, while others believe they are curative (such as antibiotics for upper respiratory problems).
- Participants were more knowledgeable about influenza than pneumococcus.
- Unaware of mortality benefits from vaccinations.
- Misconceptions—"Not for everybody, not for me"—based on personal health status and lack of flu history.
- Lack of knowledge about vaccine cost and insurance coverage.

Barriers to Immunizations

- Fear and Risk Perceptions: Believe vaccines cause harm, pain, disease (flu), and change hot and cold balance.
- Barriers: Literacy, insurance status, cost, transportation, gender and occupational roles, fears for legal status, lack of trust in the health care system and providers, inconvenience.

Role of Health Care Providers

- More vaccine education requested.
- Need for consistency in recommendation.
- Promote with patient reminders.

Faith-based Organizations as a Venue for Adult Immunization Delivery

- Use peer models for persuasion.
- Use bulletin, posters, and support from faith-based leaders to provide encouragement.

Desire to Improve Health

A few participants expressed not being afraid about dying from the flu or pneumonia, and these beliefs led them to believe that they did not need to receive the pneumonia vaccine:

"I've never been afraid of dying from the flu. I suppose...it has occurred to me that if you are much older, and in ill health, and in a fragile condition, that you could die from the flu. But at this stage, I'm not worried about dying from the flu...I am aware that people can die from pneumonia...but I also feel that most people who are sick will eventually get to the doctor or to the hospital, and they will be treated. And unless they're severely weakened, they will get their antibiotic or whatever else they need from the providers of health—the doctor, the hospital—and they will survive. It's not a fear of mine that I would die of pneumonia."

Participants also had very limited knowledge and understanding of the existing healthcare insurance coverage for the flu and pneumonia vaccines. Even those who had Medicare and Medi-Cal insurance were not aware of the existing benefits. Among those with managed care and private insurance, some did not know what benefits they were entitled to or if adult vaccinations were provided without out-of-pocket expenses. Some of the participants felt that knowledge of the costs and benefits of these immunizations may be a motivating factor to increase immunization. An African-American participant stated:

"If the black community were more aware of these free vaccines—I mean, it's going to be cost-effective for them healthwise, and also for HMOs, because you don't need to fill up a hospital with a bunch of people with pneumonia."

Barriers to Immunizations

The second theme that emerged from the interviews was related to perceptions of barriers to receiving immunizations. The most commonly occurring themes were fear, risk, and racial and socioeconomic barriers. Focus group participants differed in their opinions and trust of vaccinations and the healthcare system. African Americans were more distrustful of adult vaccinations and the healthcare system than were their Latino and white counterparts. Latinos were more likely to discuss socioeconomic barriers and fear of side-effects from vaccines, and whites focused on barriers in the context of issues related to convenience and accessibility to receive immunizations.

One African-American participant summarized what he believed were the overall fears of his community as follows:

"We have a general distrust of the medical profession, and we have beliefs in home remedies and that kind of thing."

Another participant followed by stating:

"Black people, we have fears. We have fears of the healthcare community—you know, the Tuskegee stuff."

Participants in the Latino focus groups were more likely to discuss other types of fears, including concerns for cost and access to healthcare:

"The lack of care would make people to seldom receive the vaccines or prevent them from receiving them. It is that they don't have a doctor, people don't have access to doctors."

Similarly, when asked about his perception of barriers to immunizations, an African-American participant remarked:

"There's no discussion [about immunizations] and accessibility. My doctor said vaccines were too expensive. They're not going [to] carry it...So, that's a barrier."

In addition, having to sign with names, provide addresses, and fears related to legal immigration status were also mentioned as barriers to receiving adult immunization among Latino participants. During a discussion, one participant acquainted with this fear in the community affirmed:

"Yes, yes. I have heard commentaries that they don't get near the vaccines because: 'I am illegal.' Now, yes and they are distrustful, really, because you have to sign papers with your name."

Paradoxically, one Latina woman in the same group stated:

"The hospital that I go, they tell you every year to go and get the vaccine. Then, I go and get the vaccine because I am scared that they would take away my assistance!"

Participants in the Latino focus groups were more likely to talk about the potential side-effects of immunizations, such as getting the flu itself, getting ill, or developing fevers or more intense colds and flu:

"Frankly, a lot of people don't get them (immunizations) because they are scared, and some others because they tell them that they will have fever, they are shivering and they say, no, it's better if I don't get it."

Participants were unanimous in their recommendation that adult vaccinations, especially the influenza vaccination, be provided in convenient community locations. Even though the recommendation to make adult vaccines more conveniently available was espoused by all groups, it was more important for white participants than for Latinos or African Americans. Convenient community delivery of vaccines in pharmacies, shopping malls, and supermarkets was touted as an important strategy for ensuring that persons receive annual influenza vaccinations. One white participant said:

"In terms of flu shots, it's, I think, a whole matter of convenience."

Role of Healthcare Providers

All of the participants felt their doctors needed to better inform and remind them of adult vaccinations. One African-American participant said:

"It was news to me that you are even talking about it [the pneumonia vaccine]...my doctor never mentioned it."

Other participants discussed how providers did not present them with information, guidance, and education related to immunizations. An African-American woman eloquently stated:

"I don't remember being reminded to get a flu shot. I used to go to a general practitioner and perhaps he would mention that...My gynecologist doesn't talk about flu shots. I have an oncologist, he doesn't talk about flu shots—so most of my doctors are more linked to specific conditions, they're specialist, and they don't talk about flu shots."

One woman contrasted how her primary care provider routinely recommends an annual cancer screening but not adult immunizations:

"But, I don't remember on any regular basis—any doctor or nurse—saying to me...for instance, I just got notice in the mail that it was time to have my mammogram. And then I thought—oh, okay, I'll do that. But I've never gotten anything in the mail or from my doctor saying, 'It's time to have your flu shot'."

Desire to Improve Health through Adult Immunizations

Overall, there was a strong desire to improve health and to take advantage of health education and prevention services. Despite issues related to lack of knowledge and the multiple barriers often mentioned by participants, there was an overall agreement by participants that they were willing to discuss the risks and benefits of adult immunizations to improve their health. These comments were common among all groups and included statements, such as:

"It would be good if I could talk to the doctor to see if my vaccine is due...and maybe we need some other...another kind of health personnel to give those (vaccination) explanations to the people needing the vaccines."

Throughout this discussion, participants agreed that the focus of information should be on who needs vaccinations and how immunizations could improve their health. A white focus group participant said:

"Well, it's for my health so I'm going do it, if it's the best thing for me."

Another person also responded by saying:

"If they [churchgoers] felt that the flu shot were to their advantage, they would stand in line for five or 10 minutes and get the shot and then go home."

Other participants provided many suggestions about how to effectively provide information on the significance of these immunizations to the health of older adults. This included strategies through the healthcare system, media, community-based organizations, and churches. A participant stated:

"I think if you had multiple sources of information—if you had it through the church, the announcements at church or in the bulletin, on TV, on the radio, in the newspapers...then you could remember where and when (to get the flu shots)."

Faith-Based Organizations as a Venue for Adult Immunization Delivery

We asked participants if they considered churches an acceptable setting to provide information and immunizations for older adults. Participants were unanimous in their belief that churches were a good additional venue for adult vaccine education and the delivery of adult vaccinations. One Latino participant said:

"I think that church is a good place for vaccinations because a lot of people go there."

Churches were perceived as convenient and accessible community locations, trusted organizations in the community, and sites where a significant number of older adults regularly convened:

"I think it would be a good place. Obviously, there needs to be other places too, for people that don't go to church. But I think you would find a lot of them—I know that the older generation does tend to go to church or go back to the church at some point."

The availability and convenience of immunizations at churches was often compared to the success of similar efforts in reaching older adults at local supermarkets, shopping malls, and pharmacies:

"The only reason my husband had a flu shot was that he happened to be in supermarket, and they were doing them."

However, some participants argued that this type of approach required a concerted effort by both healthcare providers and church leaders to provide plenty of information, announcements ahead of time, and perhaps incentives. The majority of participants felt that Sunday after church services was the best time for vaccine education programs or vaccination days.

DISCUSSION

The findings in this article suggest that many adults are not well-informed about the benefits or potential side-effects of influenza and pneumococcal vaccinations and that their physicians are not routinely recommending these vaccinations, even though all study participants were either age-appropriate or had clinical indications to receive a strong recommendation for influenza and pneumococcal immunizations. Participants largely agreed that they want more information

regarding the influenza and pneumococcal vaccines and that adult vaccination delivery needs to be conveniently available in more community-based sites, such as churches. Attitudinal factors regarding convenience of vaccination location confirm a previously reported study, which demonstrated that convenience was a major factor in adult vaccination decisions.[17]

Attitudes diverged, however, on the perceived safety of vaccines and on trust of the healthcare system, with African Americans being more distrustful of vaccines and of healthcare in general.

The study has a number of limitations. We studied a small and self-selected sample of churchgoers in one metropolitan area. The focus groups varied in size and by ethnic group; therefore, the findings are limited in their representation of the knowledge, attitudes and perceptions of these populations. However, multiple steps were implemented to guarantee the scientific adequacy and rigor of the qualitative process and analysis including credibility, fittingness, and auditability.[18] The methods used to gather detailed narrative data on the attitudes and perceptions of focus group participants and themes discussed likely do accurately reflect the general attitudes of these subpopulations.

Previous studies that have used community-based churches as a site for developing and implementing blood pressure control, cancer screening, mental health, nutritional, and research recruitment programs have been successful.[19-22] The ultimate aim of this focus group study was to evaluate group-specific attitudes, to develop and implement a randomized controlled trial of adult vaccine-related intervention activities in faith-based organizations. Based on the findings of these focus groups, we believe that outreach programs and interventions such as on-site vaccinations in community faith-based organizations and vaccine educational programs are likely to be successful. Although interventions may be tailored for each faith-based organization, the core components of the intervention can be implemented in all sites. Educational programs that emphasize the importance and potential health benefits of adult vaccinations are likely to increase the utilization of adult vaccinations in unvaccinated church populations and reduce racial and ethnic disparities.

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