THE JOURNAL OF FAMILY PRACTICE

How can you improve vaccination rates among older African Americans?

Patients want you to address their fear of drug interactions and allergic reactions

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Practice recommendations

- Recommend the flu shot and make it convenient to get vaccinated.
- Tell your patients that the flu is a serious illness and that they may be susceptible, even if they haven't had it before. Reinforce the idea that they should practice good hygiene, such as washing their hands regularly.
- Tell patients that the flu shot is safe; it will not give them the flu or interact with any of their medications.
- Give patients printed materials. Excellent resources are available through the CDC (www.cdc.gov/flu) or the National Institute of Allergy and Infectious Disease (www3.niaid.nih.gov).

Abstract

Purpose Adults 65 and older are at greatest risk for complications and death from influenza, yet one third of those at risk do not receive the influenza vaccine; African American vaccination rates are even lower. This study explored older African Americans' concerns about getting the flu vaccine and vaccine providers' level of awareness of these concerns.

Methods Focus groups and in-depth interviews were conducted among African Americans who were 50 years of age and older, and vaccine providers.

Results Older African Americans' fear of getting the flu from vaccination was widespread, as were concerns about vaccine interaction with medications and allergic reactions. Older African Americans also doubted the vaccine's effectiveness, and distrusted both the vaccine and the healthcare system. For their part, providers understood patients' concerns and recognized that fear of illness caused by the shot was a major issue. They did not, however, recognize the importance of asking about, and discussing, patients' fears of allergies and medication interactions when administering the vaccine.

Conclusions In order to improve vaccination rates among older African Americans, health care providers would be wise to take the time to discuss the vaccine and address vaccine efficacy, safety, side effects, and drug interactions.

Why are older African Americans less likely than whites to get a flu vaccination? Despite the existence of an effective flu vaccine, usage rates still remain low: 66% on average,[1] and are even lower among minority

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groups.[2] One survey found only 47% of older African Americans were vaccinated against the flu.[3]

These disparities are not easily explained. Even when controlling for increased risk, age distribution, perceived health status, family size and marital status, poverty level, education, and access to medical care and health insurance, African Americans are still less likely than whites to get vaccinated.[3,4]

In light of this disparity, we explored barriers to flu vaccination among this population, including concerns over safety and adverse events, and the role that health care providers can play in overcoming these issues.

FAST TRACK

A physician's recommendation to get the flu vaccine appears to motivate patients in risk groups to get vaccinated

What are the barriers?

Structural factors, such as having access to a location that provides vaccinations,[5] and social factors, such as believing that others support vaccination,[6] increase vaccination rates. Vaccination increases with age[5,7] and is more likely in those who have previously been vaccinated.[8]

People who believe they aren't susceptible to a disease are less likely to get vaccinated.[9,10] Fear of side effects is also a significant barrier.[2,6,7,11,12] Fear of illness from the vaccine is often cited by both white and African American Medicare patients, older adults, and most notably by older African Americans.[2,5,12] African Americans and other minority groups are less likely to accept the vaccine as safe.[13]

A physician's recommendation to get the flu vaccine appears to motivate patients in risk groups to get vaccinated,[6,7,12] and is a significant determinant of vaccine acceptance in surveys of older Americans, high-risk patients, and older African Americans in particular.[6,12]

Methods

Focus groups and interviews

The study team conducted qualitative formative research with 2 pertinent audiences: African American adults (hereafter, "public participants") and clinicians who administer the flu vaccine (hereafter, "providers"). The Saint Louis University Institutional Review Board approved the research.

We recruited older African American public participants through local community contacts, and screened to identify those ambivalent about getting a flu shot. A trained moderator then conducted focus groups and interviews with those who were ambivalent about the flu shot to assess their knowledge, beliefs, norms, and intentions related to vaccination.

We also recruited vaccine providers by calling local hospitals, doctors' offices, health departments, and clinics that serve African Americans. To identify providers' perceptions of patients' concerns, we carried out interviews at the clinicians' place of business or in a university conference room; a focus group was conducted at a community clinic.

All focus groups and interviews were audiotaped and transcribed. In pairs, research team members (all authors except for HJ) coded each of the transcripts independently, reviewed and discussed their codes, and then came to agreement on the final codes. Coded transcripts were entered into Atlas.ti (Atlas.ti GmbH, Berlin, Germany), a qualitative data analysis software program, and were analyzed with summary reports drafted for each focus group and interview. Findings were then synthesized across groups and interviews, and across segments.

Results

Description of participants

Four focus groups (N=35) and 8 in-depth interviews were conducted with the public participants—African American adults ages 50 and over. As shown in the **TABLE**, most participants were female, had children, had less than a college degree, and earned less than $30,000 a year. Widows and widowers made up the largest percentage of participants.

One focus group (N=9) and 5 interviews were conducted with vaccine providers—professionals working in clinics that offered the flu vaccine and served African Americans—for a total sample of 14. As the providers were sampled according to their professional affiliation, demographics were not systematically recorded. These informants were nurses, physicians' assistants, and vaccination program administrators.

How patients and clinicians see things differently

Susceptibility. Most public participants were familiar with only a few of the high-risk groups recommended for vaccination. Many participants said that children needed the flu shot, but did not state that those in their 50s were also recommended to get the flu shot. Those never stricken with the flu didn't consider themselves susceptible. "*Because I have never gotten it before.... I get a lot of other things but I don't get colds and things like that.*"

The health care providers identified senior citizens as a high-risk group for influenza because of the high occurrence of comorbid conditions. Providers were especially concerned that seniors who don't go out much may incorrectly believe they don't need to get vaccinated.

Severity of the flu. While some of the public participants didn't see influenza as a deadly disease, others did.

Providers recognized that some members of the public regarded the flu as more of a nuisance then a serious illness and emphasized the need to raise awareness.

Vaccine efficacy. The opinions that the public participants had about the effectiveness of the influenza vaccine varied. Some said it was effective; others believed the vaccine was not effective because they knew they could still get the flu even after being vaccinated. "*I know people who got the flu shot and they still got the flu.*" Many believed that home remedies, cleanliness, and staying away from others were more effective means of prevention.

Providers believed the vaccine is effective if it matches the correct strain of flu virus. They noted that even if a patient is vaccinated against the wrong

TABLE

4 focus groups and 8 interviews included 43 public participants*

VARIABLE	FOCUS GROUPS (N=35)	INTERVIEWS (N=8)
Age		
50–55	9 (26%)	3 (38%)
56–60	5 (14%)	1 (12%)
61–65	4 (11%)	—
66–70	4 (11%)	—
71–75	3 (9%)	1 (12%)
76–80	—	—
81–85	1 (3%)	2 (25%)
86 and older	1 (3%)	1 (12%)
Gender		
Male	6 (17%)	2 (25%)
Female	29 (83%)	6 (75%)
Education		
Less than high school	4 (11%)	1 (12%)
Some high school	7 (20%)	1 (12%)
High school diploma/GED	7 (20%)	1 (12%)
Some college	9 (26%)	4 (50%)
College degree	5 (14%)	1 (12%)
Graduate degree	2 (6%)	—
Marital status		
Single	9 (26%)	4 (50%)
Married/living with partner	4 (11%)	1 (12%)
Divorced or separated	4 (11%)	—
Widowed	17 (49%)	3 (38%)
Children		
Yes	33 (94%)	6 (75%)
No	1 (3%)	2 (25%)
Family income		
Less than $10,000	13 (37%)	3 (37%)
$10,000–$19,999	8 (23%)	3 (37%)
$20,000–$29,999	3 (9%)	1 (12%)
$30,000–$39,999	—	—
$40,000–$49,999	3 (9%)	—
$50,000–$59,999	1 (3%)	—
$60,000–$69,999	—	—
$70,000–$79,999	1 (3%)	—

* Not all participants answered all questions

strain, flu symptoms will be milder. Providers recognized patient concerns about vaccine efficacy, but none mentioned that it was important to encourage vaccination along with cleanliness and avoidance measures.

Safety and side effects. The most common concern about vaccine safety that the public participants discussed was that the influenza vaccine causes flu illness. Several respondents substantiated this concern with their own experiences, or those of others, where shortly after vaccination a flulike illness resulted. "*It gave them the flu. And they were sick for 2 or 3 weeks.*"

Another common safety concern was that the vaccine would interact with prescription medications for chronic illnesses. Many public participants also noted that health care providers neglected to discuss the matter. "*[M]y reason for not taking the flu shot is because I'm on other medicine and I do have some concerns.... What are you putting in my body?*" Some were also concerned about the safety of vaccine components and receiving a tainted vaccine. These participants also mentioned their fear of an allergic reaction to the flu vaccine.

Overall, providers did not have concerns about vaccine safety; however, they understood patients were afraid the influenza vaccine would give them the flu. They felt they should inform patients that full protection from the influenza vaccine takes up to 2 weeks. Providers were also aware that many African Americans who are 50 years of age and older distrust the medical system.

Main reason for vaccination: Doctor's advice

All of the African American adults agreed that physicians and other health care professionals were important sources of vaccine information. Though initially ambivalent, a majority also reported receiving the vaccine primarily because of recommendations from their doctor. Some noted that providers can do more to encourage vaccination when patients express concerns. "*I would have taken it if he had said, 'I think you should take it.'*" The public participants also got vaccine information from family, friends, broadcast media, and print material. They noted that they wanted to see the following in flu vaccination information: the pros and cons of the vaccine, efficacy of the vaccine, how the vaccine reduces flu severity, vaccine safety, and history and background of the vaccine.

Providers noted the importance of: promoting informed decision making, one-on-one communication, using a matriarchal figure to promote vaccination and using the media to promote vaccination. "*You would have to have a mother, or a grandmother, or aunt figure because that is usually who is responsible, who takes care of the family.*" Providers also pointed out that patients often voice concerns about not having enough information to make informed decisions, and that patients rely on convenience and doctors' recommendations when deciding about vaccination.

FAST TRACK

"I would have taken it if he had said, 'You should take it'"

Discussion

Patients may distrust the system, but they trust their doctor

Our study's findings from both providers and older African Americans suggest that physicians are the most influential source of information when patients are deciding about flu vaccination. This is true despite the fact that the public makes no secret of its distrust of the medical system and the safety of the vaccine. The African American participants also suggested that physicians do not adequately address patient concerns through discussion and the information they provide.

Providers were concerned that many people do not believe the flu is a severe illness or that they are susceptible. Although the African Americans in the study recognized some high-risk groups, they tended not to consider themselves part of any of those groups.

Doctors didn't realize that patients fear drug interactions

One of the interesting findings of this study was that armed with the knowledge that the flu shot does not guarantee flu prevention, African American adults were willing to forego the vaccine. This absence of a guarantee also reinforced their beliefs that other prevention methods, such as handwashing and avoidance, are more effective.

Not surprisingly, of course, was the finding that patients continue to avoid the flu shot for fear of getting the flu.[2,6] What was a bit surprising was that providers did not recognize that fear of medication reactions (drug interactions and allergic reactions) was also a barrier to flu vaccination. Providers also missed out on an educational opportunity, since many of the African American participants wanted to discuss the possibility of interactions with them.

Limitations of the study

External validity is limited because the findings cannot be generalized to every African American population in the US. The participants made up a non-random convenience sample of older African Americans in a Midwestern city, although the community-based recruitment strategy succeeded in reaching members of a lower income urban population. This study included only those who were ambivalent about the vaccine and who were open to both the pros and cons of vaccination. Project staff minimized possible interviewer bias by using experienced moderators, ensuring the consistent use of moderator guides, and using consensus coding procedures. ■

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Funding

This research was funded by grant #6465 from the National Immunization Program at the Centers for Disease Control and Prevention, via Special Interest Project 11, to the Prevention Research Center at the Saint Louis University School of Public Health.

Acknowledgments

We thank Katie Duggan at the School of Public Health and Edith Gary and Pascale Wortley at the CDC for their support. This article is dedicated to the memory of Joe D. Wray, MD, who suggested it.

Disclosure

The authors reported no potential conflict of interest relevant to this article.

References

1. US Department of Health and Human Services. Immunization and infectious disease. Progress Report. Healthy People 2010. Available at: www.healthypeople.gov/Document/HTML/Volume1/14Immunization.htm. Accessed on September 28, 2007.
2. Centers for Disease Control and Prevention. Reasons reported by Medicare beneficiaries for not receiving influenza and pneumococcal vaccinations—United States, 1996. *MMWR Morb Mortal Wkly Rpt* 1999; 48:889–890.
3. Marin M, Johanson W, Salas-Lopez D. Influenza vaccination among minority populations in the United States. *Prev Med* 2002; 34:236–241.
4. Fiscella K, Franks P, Doescher M, Saver B. Disparities in health care by race, ethnicity, and language among the insured: Findings from a national sample. *Med Care* 2002; 40:52–59.
5. Ludwig-Beymer P, Gerc S. An influenza prevention campaign: The employee perspective. *J Nurs Care Qual* 2002; 16(3):1–12.
6. Zimmerman R, Santibanez T, Janosky J, et al. What affects influenza vaccination rates among older patients? An analysis from inner-city, suburban, rural, and Veterans Affairs practice. *Am J Med* 2003; 114:31–38.
7. Nexoe J, Oltarzewska A, Sawicka-Powierza J, Kragstrup J, Kristiansen I. Perception of risk information: Similarities and differences between Danish and Polish general practitioners. *Scand J Prim Health Care* 2002; 20:183–187.
8. Nichol K, Lofgren R, Gapinski J. Influenza vaccination: Knowledge, attitudes, and behavior among high-risk outpatients. *Arch Intern Med* 1992; 152:106–110.
9. Santibanez T, Nowalk M, Zimmerman R, et al. Knowledge and beliefs about influenza, pneumococcal disease, and immunizations among older people. *J Am Geriatr Soc* 2002; 51:1711–1716.
10. Demicheli V, Jefferson T, Rivetti D, Deeks J. Prevention and early treatment of influenza in healthy adults. *Vaccine* 2000; 18:957–1030.
11. Telford R, Rogers A. What influences elderly peoples' decisions about whether to accept the influenza vaccination? A qualitative study. *Health Educ Res* 2003; 18:743–753.
12. Nicoleau A, Nicoleau C, Balzora J, Oboh A, Siddiqui N, Rosenberg C. Elderly African-Americans and the influenza vaccine: The impact of the primary care physician. *J Am Med Dir Assoc* 2001; 2:56–59.
13. Riddiough M, Willems J, Sanders C, Kemp K. Factors affecting the use of vaccines: Considerations for immunization program planners. *Public Health Rep* 1981; 96:528–535.
14. Steuart G. Social and behavioral change strategies. In: Phillips H, Gaylord S, eds. *Aging and Public Health.* New York, NY: Springer; 1985.

FAST TRACK

Patients wanted their doctor to discuss the possibility of drug interactions