

COMMENTARY



African American adults and seasonal influenza vaccination: Changing our approach can move the needle

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ABSTRACT

Consistent disparities in influenza (flu) vaccine uptake among African Americans, coupled with a disproportionate burden of chronic diseases, places too many African Americans at high risk for complications, hospitalizations and premature mortality. This disparity is the result of individual attitudes and beliefs, social norms, and health care practices. Recent research identifies critical factors affecting vaccine uptake among African American adults including perceived risk of vaccine side effects, social norms that do not support for vaccination, and lower knowledge of the flu and the vaccine. Yet in our nationally representative survey of African Americans, we also found that there is substantial trust in one's own physician about the flu vaccine coupled with valuing the provider's vaccine recommendation. Other recent research has found that African Americans are not receiving strong recommendations and specific offers of the vaccine in their health care visit. This commentary suggests particular roles and strategies for health care providers, public health agencies, and African American communities and families, which can literally move the needle to increase seasonal flu vaccination.

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Introduction: What we know today

In every influenza season, there is a disparity in the uptake of influenza vaccine between African Americans and Whites. During the 2015–16 influenza season, the Centers for Disease Control and Prevention (CDC) estimated that almost 37% percent of all Black adults were immunized, compared to 45% percent of Whites.¹ When we couple that with the fact that African Americans experience disparities in multiple chronic diseases, lower vaccine uptake is an ongoing threat to their health. Taking cardiometabolic risk (CMR) as an example, African Americans are diagnosed with CMR conditions at higher rates than Whites: they have significantly higher rates of pre-diabetes and type 2 diabetes, compared to Whites.^{2–3} According to the CDC, in 2011–14, 18% of African Americans had diagnosed or undiagnosed diabetes.⁴ In 2015, the CDC reported that 43% of African American men and 44% of women had hypertension.^{5–6} Should they become infected with the influenza virus, these conditions make African Americans more vulnerable to exacerbation of CMR conditions and complications, resulting in increased cost, hospitalizations and premature mortality.

Despite recommendations from the CDC, the American Heart Association, the American Diabetes Association, and the American College of Cardiology urging flu vaccination specifically for people with CMR, only an estimated 33% of high-risk AAs received the vaccine in 2015–16, less than the 38% of high-risk Whites and considerably less than the Healthy People 2020 objective of 70% for *all* adults.^{7–12} This disparity is of serious concern with seasonal influenza. However, imagine in a

pandemic, this issue would be exacerbated exponentially. Today, if you ask Dr. Anthony Fauci, Director of the NIH's National Institute of Allergies and Infectious Diseases what keeps him awake at night, he has a short response: "Pandemic influenza."¹³ Indeed, infectious disease specialists have a saying about influenza pandemics, "It is not a matter of if, it is only a matter of when." Addressing this disparity in seasonal flu vaccination is a necessity now for seasonal flu. Furthermore, because we know that getting an annual flu vaccine is a predictor of getting the vaccine in a pandemic,¹⁴ changing this behavior today has implications in future pandemics. Yet, why does this continue to be a challenge? Most importantly, what can we do to reduce this risk every flu season?

Acceptance of the influenza vaccine: Lessons learned

Since 2012, my research team has used mixed methods research including two cross sectional surveys with nationally representative samples and extensive qualitative research including focus groups and individual interviews to explore cultural and other psychosocial factors associated with flu vaccine disparities.^{15–17} Looking specifically at our African American participants across our studies, we have found some important factors that we believe can improve vaccine uptake. For example, in our nationally representative survey of 819 African Americans, we found they were more likely to perceive higher risk of side effects from the vaccine itself, and specifically, women, younger adults and those with lower education level were more likely to have higher perceived risk of vaccine side effects. However,

Table 1. African American responses to survey items (N = 819).

Item	Few (0 to 20%)	Less than half (21% to 40%)	Around half (41% to 60%)	More than half but not all (61% to 80%)	Most or Nearly all (81% to 100%)
Of the people close to you, what proportion WANT YOU TO GET a flu vaccine?	38.5%	14.4%	20.3%	10.2%	16.6%
Of the people close to you, what proportion DO NOT WANT YOU TO GET a flu vaccine?	61.2%	13.7%	11.1%	5.6%	8.4%

when African Americans also perceived a high risk of influenza itself, the perceived risk of side effects did not affect vaccine uptake.¹⁵⁻¹⁶ In our qualitative research, we found when African Americans thought about vaccine risk, they often discussed very severe side effects, which are highly unusual.¹⁷ For example, one African American man reported, “I hear people, I hear tall tales, someone will say, ‘It will paralyze you. They’re injecting a live virus in you and it’s going to kill you. No, no, no, I’m not doing it.’”¹⁷

We also found that African Americans had lower knowledge about the flu vaccine, less trust in the vaccine, and perceived greater barriers to getting a vaccine.¹⁵ We know that social norms can influence behavior, so our finding that African Americans were less likely to believe that people close to them wanted them to get the flu vaccine is troubling. In Table 1, we present the data from two survey items, administered as part of our larger cross-sectional survey with GfK’s Knowledge Panel in 2015. Clearly, our respondents reported limited support for getting the flu vaccine. Of great concern is that 25% of African Americans said that half to nearly all of people close to them did not want them to get the flu vaccine.

We also asked this question, “How much do the following people influence whether or not you get a flu vaccine?”. Just over 36% of African Americans responded that their spouse/partner was somewhat to very influential in their decision, followed closely by children at 36%. Certainly, these findings suggest that these social norms are important influencing factors on vaccine behavior and yet to a large extent, those norms do not support and some actually oppose getting a flu vaccine.

However, there is some promising news. Interestingly, 28.2% of African Americans reported that public health guidelines are somewhat important in determining whether they get the vaccine, 23.9% fairly important, and 16.6% extremely important. This evidence suggests opportunities for both health care providers (HCP) and public health agencies to increase education with patients and the broader community about vaccine recommendations.

African Americans’ health care experiences and their association with flu vaccination

There are several critical levers to consider if we seek to improve vaccination rates. What is currently happening in HCP offices when African American patients seek care? What do they experience? We explored this area in our 2015 survey, examining racial factors including 1) racial fairness, defined as perceptions of whether treatment, either by government or within a health care setting, is fair to one’s race; 2) racial consciousness defined as the awareness of oneself as a racial being

in a health care setting; 3) experience with discrimination in health care, and 4) the impact of that discrimination on the ability to get health care.¹⁵ We found that higher perceived racial fairness was associated with key factors such as higher trust in the vaccine, higher confidence in the vaccine, and lower perceived risk of vaccine side effects.¹⁵ Racial consciousness explored the extent to which an individual thought their race affected their experiences with health care. Not surprisingly, we found that higher scores on racial consciousness were associated with lower trust in the vaccine, greater perceived risk of side effects, and higher perception of barriers. Finally, higher racial fairness mediated higher trust in the vaccine, contributing to greater vaccine uptake. Racial consciousness and discrimination affected key variables such as perceived risk of side effects and decreased uptake.¹⁵

Furthermore, the literature suggests that missed opportunities for vaccination are a challenge. In a national survey, Maurer et al¹⁸ defined as a challenge, “missed opportunities for seasonal vaccination as the number of respondents who were a) unvaccinated for seasonal flu; b) reported at least one HCP visit; and 3) indicated willingness to be vaccinated if HCP strongly recommended” (p. 1626). They found minorities, including high-risk individuals, actually had significantly higher probability of at least one HCP contact, but that blacks had significantly lower uptake than whites, and that the number of missed opportunities with Black patients was significantly higher. Similarly, using data from the 2012 CDC National Flu Survey, Benedict and colleagues¹⁹ found that 56.5% of adults visiting a health care provider during flu season did not get a recommendation for the flu vaccine. Yet they also reported that those patients who receive both a recommendation and an offer to give the vaccine are more likely to get vaccinated. Of great concern is their finding that only 42% of Blacks reported receiving a recommendation and an offer in spite of actually having more than one provider visit.¹⁹

Given that research tells us that minorities rely more frequently on medical than non-medical settings (workplace, drug store, grocery store) for vaccination, working with health care providers is a critical step to reducing vaccine disparities.

Communication to increase flu vaccination among African Americans: The message and the messenger matter

These research studies all raise the question of what will it take to make a difference in acceptance of seasonal flu vaccine among African Americans. Quite literally, how do we move the needle to increase vaccination for all African Americans, particularly for those at higher risk of serious complications? Based

on our own and others' research, there are opportunities for health care providers, public health agencies and African American communities to move the needle on this challenge.

Health care providers can make a difference: Role models

First, for health care practices, there is significant evidence for practice strategies to improve vaccination rates. According to the Community Guide for Preventive Services,²⁰ HCP should adopt recommended practices including client reminder and recall systems, provider reminders, and standing orders. These practices can strengthen HCPs' ability to engage with their patient in a conversation about the vaccine, and ideally, make a recommendation and an offer at the same visit.

Health care providers are critical to improving vaccine uptake. Unfortunately, low vaccine uptake among HCP remains a problem, and yet, in multiple discussions with HCP, they do not make any connection between their own reluctance to take the vaccine and their patients' reticence to do so. However, Godoy et al²¹ found in their study of physicians in Spain that physicians' own vaccination was associated with higher uptake among their patients. Unfortunately, in the US, Ojha²² et al found that African American health care workers had many of the same concerns that African American high risk patients have about the flu vaccine, particularly its safety, effectiveness, and necessity.

Therefore, efforts to increase vaccination rates among HCP would likely also yield benefits in increasing patient uptake. Until then, there are still strategies that HCP can use to improve vaccine acceptance. First, the Guide to Community Preventive Services²⁰ found that materials promoting a discussion between patient and providers are the most useful, especially for adult vaccination. For HCP, there are carefully designed health education materials, particularly from the CDC, which can be used in an office setting, including posters and brochures that can be given at the time of the encounter and form the basis of the discussion between HCP and patient. Some of those materials are targeted toward African American HCP (see Fig. 2).²¹ Nowak and colleagues have conducted extensive research on communication about flu vaccination to craft materials that address key messages about vaccine safety, risk and effectiveness.²⁴ Equally important is that visuals be used in the materials, particularly that reflect the patient population with regard to race, age, and gender. CDC specifically has found that intergenerational photographs are particularly important for African Americans.²⁴

Secondly, the evidence is clear that making a strong recommendation and offering the actual vaccine at the same time is effective in increasing acceptance.¹⁹ In our own research, we found that 24% of African Americans reported that "what my healthcare provider recommends" is somewhat important, 25% fairly important, and 30% extremely important. Furthermore, we found substantial trust in their personal physician related to the flu vaccine (see Fig. 1). These data bode well for increasing uptake of the vaccine upon receipt of a recommendation and the actual offer of vaccine delivery. However, it will require some changes in the communication between HCP and African American patients.

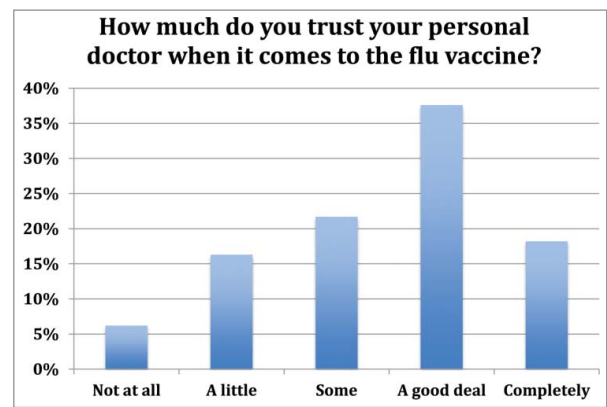


Figure 1. Trust in personal physician among African American adults.

Changing the focus on the communication to address key factors is vital. Usually, communication between a HCP and a patient focuses on disease risk; what we know now is that a sole focus on disease risk will not be sufficient if a patient sees the vaccine as risky. However, helping patients who are at high risk to fully understand their risk of complications, combined with an honest discussion of any vaccine risks, could improve their accuracy of perceived risk.

Based on new research, there are some communication strategies that HCP can utilize to improve that discussion with patients. Broniatowski, Hilyard and Dredze²⁵ examined Facebook shares during the Disneyland measles outbreaks and determined that Facebook posts that included gist, defined as a bottom-line meaning, were shared most often, followed by those with actual statistics. This suggests that HCP could adopt Broniatowski et al's²⁵ proposed 'gist' communication framework that combines factual evidence with the use of a linking phrase such as "so, the reason that is important is... the thing to remember is...", thereby creating gist or a bottom-line meaning that aids in comprehension and recall.

We believe that addressing perceived risk and trust in the vaccine itself are linked to increasing vaccine uptake. To reinforce disease risk, which is essential, HCP can use gist to communicate about the increased risk of serious complications and hospitalizations, followed by a linking phrase that addresses risk of vaccine side effects. For example, addressing both types of perceived risk could sound like this, "We know that the flu vaccine is approved annually and safe, with only minor side effects for few people. The reason that is important is that with your heart disease, you are more likely to have serious complications from the flu and I strongly recommend you take the vaccine." Using gist to address critical issues, coupled with an offer to give the vaccine at that same encounter, can facilitate improved vaccination rates.

Additionally, research indicates that African Americans have lower levels of knowledge about influenza and influenza vaccine.^{15,24} Therefore, HCP can also enhance uptake by addressing key gaps such as how the vaccine itself works, its effectiveness, and myths about the vaccine causing influenza.

A role for public health agencies

Although many public health agencies, including CDC, have worked extensively on developing evidence-based



Figure 2. CDC materials for health care providers (source: <https://www.cdc.gov/flu/images/freeresources/print-large/healthcare-poster-large.jpg>).

communications, which are frequently targeted and tailored for specific populations including African Americans and high risk individuals, many health communication materials do not typically address perceived risk effects from the vaccine, safety and effectiveness. This is a gap that is often filled by misinformation and myths within social networks and specifically on social media. Public health agencies can and should do more to develop effective communication tools that address knowledge gaps related to influenza, the vaccine, and perceived risks of the vaccine.

African American families and communities: Looking out for the collective good

Our research on the influence of family and social networks on vaccine behavior, coupled with the CDC's findings that messages focused on the collective good and protecting one's family are effective, reinforce the critical importance of reaching African American families and communities. Certainly, HCP can reinforce the potential impact of flu vaccination in protecting other members of families. Equally vital is the need to engage community organizations including faith communities, trusted opinion leaders for civic groups, and large organizations such as sororities, fraternities, and others to promote the importance of flu vaccination as a means to protect the broader community. Many black family reunions occur in late summer and early fall, providing an opportunity for promotion of early vaccination.

Summary: The gist

Given the disproportionate impact of chronic diseases on African Americans, increasing annual influenza vaccination

rates among African American adults is necessary to alleviate unnecessary complications, hospitalizations and even deaths every flu season. To do so will require that health care providers, public health agencies and African Americans families change knowledge, attitudes and social norms around the flu vaccination. Those efforts, coupled with health care providers changing their practices to ensure that all high-risk African Americans receive both a recommendation, an offer, and effective communication about the vaccine, can move the needle to increase vaccination among high-risk and indeed, all African Americans.

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