

Seasonal Flu Vaccination: Why Don't More Americans Get It?

Seasonal flu takes a heavy toll on Americans. The Centers for Disease Control and Prevention (CDC) estimates that between 3,000 and 49,000 people die every year from flu, depending on the severity of the outbreak, and thousands more get sick. Yet flu can be prevented by annual vaccination, which has proven safe and effective in combating seasonal flu. In spite of this, vaccination rates among Americans remain low.

A series of RAND studies has examined this issue. Specifically, RAND researchers

- tracked seasonal flu vaccination rates among U.S. adults
- explored factors that influence decisions to get vaccinated
- identified strategies for increasing rates of adult vaccination.

Low Seasonal Flu Vaccination Rates Among U.S. Adults

A survey conducted by RAND in March 2010 provided a snapshot of seasonal flu vaccine uptake among U.S. adults. The survey included a nationally representative sample of more than 4,000 adults. Results showed that only 39 percent of U.S. adults received seasonal flu vaccinations during the 2009–2010 flu season (Figure 1).

Among adults specifically recommended for vaccination, rates were only slightly higher: 45 percent overall. Forty-five percent of adults ages 18–49 with high-risk chronic conditions were vaccinated; a similar percentage of adults ages 50–64 were vaccinated. Among health care workers at greatest risk of contact with other high-risk individuals, 47 percent received vaccination. The only high-risk group to be vaccinated at rates above 50 percent was adults age 65 or older, of whom 65 percent were vaccinated.

Missed Opportunities and Mistrust

What explains these disappointing flu vaccination rates? Conventional wisdom holds that many

Key findings:

- Less than half of U.S. adults received flu vaccinations in 2010.
- Many of those unvaccinated expressed negative perceptions of flu vaccines.
- Strategies to increase flu vaccination rates need to include stronger efforts to address public skepticism.

Americans go unvaccinated because of “missed opportunities”—that is, visits to a health care provider during flu season when vaccinations could have been delivered but weren’t. In a separate study, a RAND team estimated the size of the unvaccinated population and examined the ease with which rates could be improved. Using data from 2008, the analysis calculated missed opportunities based on vaccination and care use data and found that more than 53 million U.S. adults had at least one health care provider contact between October and December 2008 but remained unvaccinated. Vaccinating all of these patients would increase overall vaccination by about 23 percentage points, producing an overall adult vaccination rate of approximately 62 percent. However, the analysis also found that if only those unvaccinated adults who were willing to be vaccinated were counted, the gains would be considerably smaller—an increase of about 14 percentage points in the general adult population, leading to an overall adult vaccination rate of approximately 53 percent.

These results suggest that public resistance to vaccination plays a significant role in depressing seasonal flu vaccination rates. A RAND survey of adults who went unvaccinated in the 2009–2010 flu season bolstered this conclusion. More than half of the adults surveyed cited factors

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of published, peer-reviewed documents.

Corporate Headquarters
 1776 Main Street
 P.O. Box 2138
 Santa Monica, California
 90407-2138
 TEL 310.393.0411
 FAX 310.393.4818

© RAND 2011

Figure 1
Less Than Half of U.S. Adults Received Flu Vaccinations in the 2009–2010 Flu Season

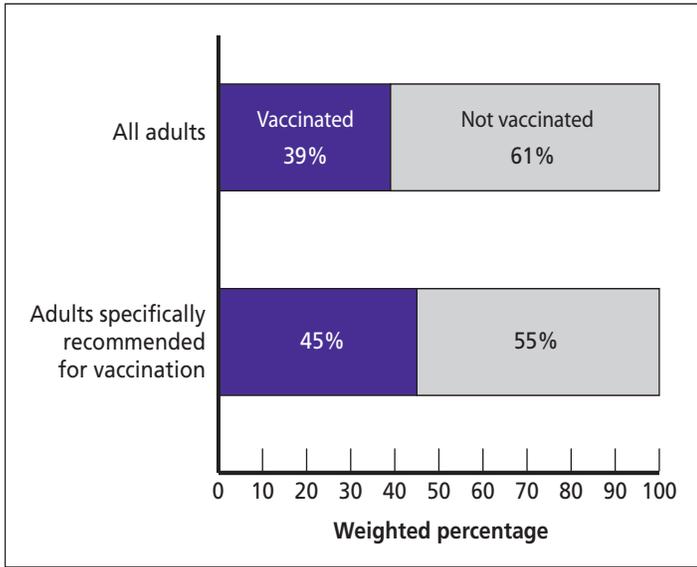
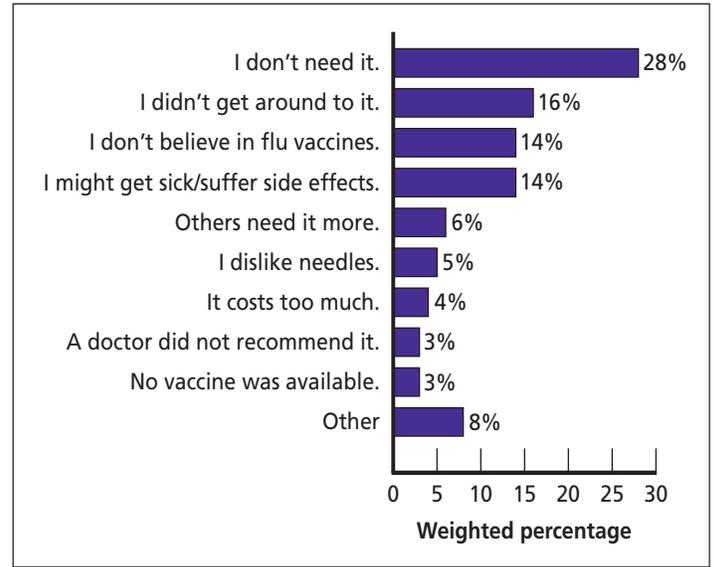


Figure 2
Over Half of Unvaccinated Adults Cited Negative Perceptions About Vaccines



relating to a perceived lack of value as their main reason for not being vaccinated. These reasons included a lack of perceived need for flu vaccine (28 percent), lack of belief in flu vaccines (14 percent), and a perceived risk of illness or side effects (14 percent) (Figure 2).

Survey data from 2009–2010 also showed that adults newly recommended for flu vaccination—a group that in 2010–2011 includes, for the first time, all adults over age 18—are even less likely than members of groups previously recommended for flu vaccination to believe that vaccines are safe (44 percent compared with 63 percent), ever to have been vaccinated for flu (36 percent compared with 64 percent), to be vaccinated following a health care provider recommendation (44 percent compared with 52 percent), and to visit a doctor's office during vaccination season (41 percent compared with 69 percent).

Strategies for Boosting Vaccination Rates

These results underscore the need to promote vaccination more actively. Stepping up conventional strategies to encourage vaccination, including mail/telephone reminders and

physician recommendations, and offering vaccines at more convenient locations, would help. Special efforts may be required to reach the healthy young adults who are now recommended for vaccination but do not visit providers often and may be difficult to reach through standard modes of public health messaging. These efforts could include using new media to deliver public service announcements and making vaccinations available at work. Finally, those most skeptical about vaccination may require one-on-one counseling with health care providers to help them understand that vaccination for flu carries very little risk compared with the risk that going unvaccinated poses to themselves and those around them.

In addition, the public health community needs greater investment in advancing research on the best ways of informing and motivating the public. While cutting-edge laboratory science to enhance the safety and effectiveness of vaccines is vital to public health, it is equally vital to understand the forces that shape public views about the risks and benefits of vaccination. This knowledge is central to translating biomedical advances into effective action. ■

This research highlight summarizes RAND Health research reported in the following publications:

Harris KM, Maurer J, and Kellermann AL, “Influenza Vaccine—Safe, Effective, and Mistrusted,” *New England Journal of Medicine*, Vol. 363, No. 23, December 2, 2010, pp. 2183–2185 (EP-201001-70, http://www.rand.org/pubs/external_publications/EP20100170.html).

Harris KM, Maurer J, and Uscher-Pines L, *Seasonal Influenza Vaccine Use by Adults in the U.S.: A Snapshot from the End of the 2009–2010 Vaccination Season*, Santa Monica, Calif.: RAND Corporation, OP-311-GSK, 2010 (http://www.rand.org/pubs/occasional_papers/OP311.html).

Harris KM, Maurer J, and Uscher-Pines L, *Seasonal Influenza Vaccine Use by Adults in the U.S.: Detailed Survey Data Tables for the 2009–2010 Vaccination Season*, Santa Monica, Calif.: RAND Corporation, OP-311/1-GSK, 2010 (http://www.rand.org/pubs/occasional_papers/OP311z1.html).

Maurer J, Harris KM, and Lurie N, “Reducing Missed Opportunities to Vaccinate Adults Against Influenza: What Is Realistic?” *Archives of Internal Medicine*, Vol. 169, No. 17, September 28, 2009, pp. 1633–1634 (EP-200909-19, http://www.rand.org/pubs/external_publications/EP20090919.html).

Maurer J, Uscher-Pines L, and Harris KM, “Awareness of Government Seasonal and 2009 H1N1 Influenza Vaccination Recommendations Among Targeted U.S. Adults: The Role of Provider Interactions,” *American Journal of Infection Control*, Vol. 38, No. 6, August 2010, pp. 489–490 (EP-201000-95, http://www.rand.org/pubs/external_publications/EP20100095.html).

Maurer J, Uscher-Pines L, and Harris KM, “Perceived Seriousness of Seasonal and A(H1N1) Influenzas, Attitudes Toward Vaccination, and Vaccine Uptake Among U.S. Adults: Does the Source of Information Matter?” *Preventive Medicine*, Vol. 51, No. 2, August 2010, pp. 185–187 (EP-201000-80, http://www.rand.org/pubs/external_publications/EP20100080.html).

Uscher-Pines L, Maurer J, Kellermann AL, and Harris KM, “Healthy Young and Middle Age Adults: What Will It Take to Vaccinate Them for Influenza?” *Vaccine*, Vol. 28, No. 46, October 28, 2010, pp. 7420–7422 (EP-201001-39, http://www.rand.org/pubs/external_publications/EP20100139.html).

Abstracts of all RAND Health publications and full text of many research documents can be found on the RAND Health website at www.rand.org/health. This research highlight was written by David M. Adamson. The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors. **RAND**® is a registered trademark.

RAND Offices

Santa Monica, CA • Washington, DC • Pittsburgh, PA • New Orleans, LA/Jackson, MS • Boston, MA • Doha, QA • Abu Dhabi, AE • Cambridge, UK • Brussels, BE



HEALTH

CHILDREN AND FAMILIES
EDUCATION AND THE ARTS
ENERGY AND ENVIRONMENT
HEALTH AND HEALTH CARE
INFRASTRUCTURE AND
TRANSPORTATION
INTERNATIONAL AFFAIRS
LAW AND BUSINESS
NATIONAL SECURITY
POPULATION AND AGING
PUBLIC SAFETY
SCIENCE AND TECHNOLOGY
TERRORISM AND
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from www.rand.org as a public service of the RAND Corporation.

Support RAND

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

For More Information

Visit RAND at www.rand.org

Explore [RAND Health](#)

View [document details](#)

Research Brief

This product is part of the RAND Corporation research brief series. RAND research briefs present policy-oriented summaries of individual published, peer-reviewed documents or of a body of published work.

Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).