AARP Public Policy Institute

ISSUE BRIEF

# Racial and Ethnic Disparities in Influenza and Pneumococcal Immunization Rates among Medicare Beneficiaries

## Introduction

Influenza (commonly called *flu*) and pneumonia are both vaccine-preventable diseases. Yet together they represented the seventh leading cause of death in the United States in 2003.[1] Influenza epidemics are responsible for approximately 36,000 deaths and more than 200,000 hospitalizations each year in the U.S. More than 90 percent of these deaths occur among those age 65 and older.[2]

Pneumococcal pneumonia affects about 33,000 persons a year, resulting in 5,000 deaths. Similar to flu, most of the deaths caused by pneumonia occur among those age 65 and older.[3] The Medicare population is especially susceptible to complications associated with flu and pneumonia because both diseases often exacerbate underlying chronic conditions, such as heart or lung disease, asthma, and diabetes.[4]

Flu and pneumonia immunization rates among *all* older adults are significantly below the Healthy People 2010 goals of 90 percent for each vaccine.[5] However, immunization rates among African Americans and Hispanics are substantially below those of their white counterparts.[6]

This Issue Brief discusses adult immunization recommendations and current Medicare immunization coverage policies. It also presents data on immunization disparities, discusses factors that may contribute to the disparities, and highlights federal and state initiatives to address them.

## Adult Immunization Recommendations and Medicare Coverage

The Advisory Committee on Immunization Practices (ACIP) is an expert panel selected by the secretary of the U.S. Department of Health and Human Services to advise the nation on how to reduce vaccine-preventable diseases. The ACIP, which develops standards for routine vaccine administration, including dosage, periodicity schedules, and applicable contraindications for pediatric and adult populations[7], recommends:

- an *annual* influenza vaccine for adults age 50 and older and for all persons who live in long-term care facilities, and
- a *one-time* vaccination for pneumococcal pneumonia for all adults age 65 and older.

The Medicare Program covers pneumococcal and influenza vaccines for persons age 65 and older in accordance with ACIP recommendations. It pays both the cost of the vaccines and their administration by recognized providers. Once five years have elapsed since the initial pneumococcal vaccine, a booster vaccine is covered for persons in high-risk categories.[8] There is no coinsurance or copayment associated with either

vaccine, and beneficiaries are not required to meet a deductible to receive them.[9]

## Disparities in Immunization Rates among Medicare Beneficiaries

Despite Medicare's coverage of influenza and pneumonia vaccines at no out-of-pocket cost to beneficiaries, the number of people who are immunized is less than optimal, with even lower rates noted among African Americans and Hispanics.

In 2004, 67 percent of white adults age 65 and older reported receiving the influenza vaccine. During the same period, 45 percent of older African American and 55 percent of older Hispanics reported having received a flu shot (Figure 1). Influenza immunization disparities persist, even after controlling for other factors such as socioeconomic status and the presence of risk factors for influenza.[10]

The gap is even wider for pneumonia immunization rates, with only 39 percent of African Americans and 34 percent of Hispanics reporting having been vaccinated in 2004, compared to 61 percent of their white counterparts (Figure 2).

**Figure 1**.

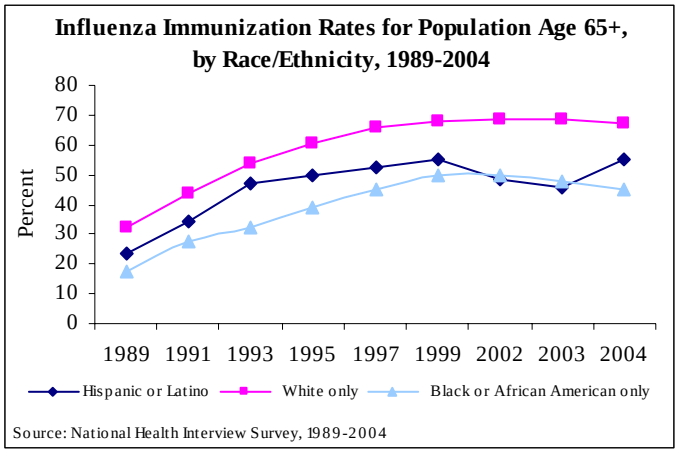
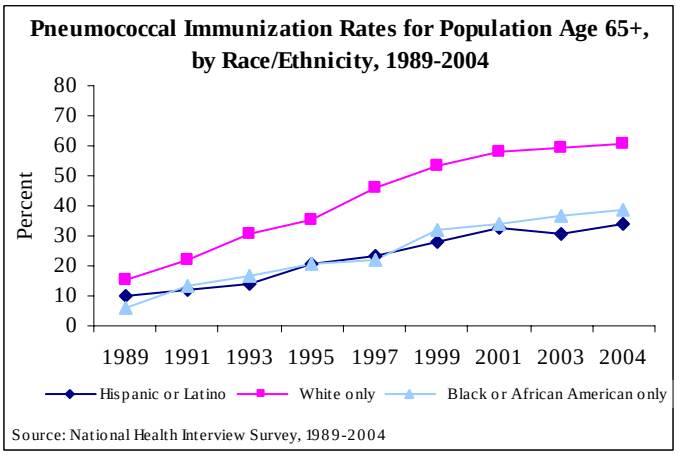



**Figure 2**.




## Factors Associated with Racial and Ethnic Immunization Disparities among Medicare Beneficiaries

Researchers have associated the following factors with low flu and pneumococcal pneumonia immunization rates among African Americans and Hispanics:

- consumer lack of awareness about the need for the vaccinations;[11]
- consumer fear that the vaccines will cause severe illness;[12]
- few consumer-initiated visits to providers to receive the vaccines;[13]
- provider underestimation of the safety and efficacy of the vaccines;[14]
- provider lack of familiarity with age-based immunization recommendations;[15]
- provider failure to recommend age-appropriate immunizations to older adults;[16] and
- provider failure to institute standing-order programs despite

ACIP recommendations to use them.[17]

## Federal Initiatives to Address Immunization Disparities

In 2002, the Centers for Disease Control and Prevention, in partnership with other federal agencies, launched a three-year demonstration project to address racial and ethnic disparities in immunization rates among African American and Hispanic Medicare beneficiaries.[18] The project, called the Racial and Ethnic Adult Disparities in Immunization Initiative (or READII, pronounced "ready") was launched in five sites—Chicago, Illinois; Rochester, New York; San Antonio, Texas; Milwaukee, Wisconsin; and 19 counties in the Mississippi delta region. Although the projects and targeted population varied among the project sites, all projects shared three underlying principles:

- to develop local buy-in to the project design;
- to engage stakeholders (persons age 65 and older); and
- to use evidence-based interventions with providers and in the community. [19]

Each READII site developed community plans, conducted communications research to determine which messages resonated best with older African American and Hispanic community members, and conducted local community events. Strategies aimed at providers included education about standing orders, patient reminders and recalls, and provider reminders.[20]
In another federal effort to increase immunization rates among older persons, the Centers for Medicare and Medicaid Services (CMS) issued final rules on October 7, 2005, requiring Medicare and Medicaid long-term care facilities to offer flu and pneumococcal vaccines to their residents. Long-term care facilities are required to document refusals and indicate that the resident or his or her legal representative received appropriate education and consultation. Although African Americans and Hispanics are not targeted in the rule, those living in nursing homes can benefit from this policy.[21]

Recently, CMS launched "A Healthier U.S. Starts Here" tour. Together with its partners,[22] CMS will conduct a cross-country bus tour during spring and summer of 2007 to promote awareness of Medicare's prevention benefits, including flu and pneumococcal immunizations. Although the tour does not specifically address immunization disparities, African American and Hispanic beneficiaries are among the targeted groups.[23]

## State Strategies to Address Immunization Disparities

States use a variety of strategies to increase immunization rates among older adults, including Medicare beneficiaries. Some of these activities are described below.

### Illinois

The Chicago Department of Public Health partners with community groups to provide increased access to immunizations in high-risk communities. The Chicago project seeks to increase access by providing immunizations in alternative settings such as churches, park districts, and aldermanic offices.[24]

### Minnesota

In 2001, the Minnesota legislature created the 10-year, statewide Eliminating Health Disparities Initiative to address health disparities in the state. The goal of the initiative is to fund a variety of projects that promote culturally appropriate, community-based public health programs.[25]

For example, one initiative that focuses on adult immunization disparities is a project, called *There Is a Balm*, which targets faith-based communities to raise awareness among African Americans about the need and requirements for adult immunization, and encourages individuals to take charge of their health. The project partners with area clinics to provide free vaccines and reaches about 20 churches around the Twin Cities metro area.[26]

### New York

The New York City Department of Health and Mental Hygiene's Bureau of Immunization (the Bureau) uses data from the annual New York City Community Health Survey (CHS) to obtain neighborhood and citywide estimates of immunization rates among targeted populations.[27] According to 2005 CHS data, 47.9 percent of African Americans and 43.6 percent of Hispanics age 65 and older reported receiving the influenza vaccination within the past year, compared to 55.8 percent of their white counterparts.[28] The CHS does not collect data on immunization rates for pneumococcal pneumonia.

Bureau activities to address immunization disparities include the following:

- working with medical providers to address provider behavior and strengthen their actions to immunize their patients;
- developing partnerships with a variety of community-based organizations to educate and motivate consumers to seek immunizations; and
- partnering with media outlets to design and promote culturally appropriate messages. [29]

### Texas

In 2005, the Texas Legislature passed legislation (Senate Bill 1330) seeking to eliminate immunization disparities. Specifically, the law requires hospitals, dialysis centers, and doctors' offices to inform elderly patients of the availability of pneumococcal and influenza vaccines and to be able to provide the vaccines to all who request them.[30]

## Conclusion

Although the Medicare program pays for influenza and pneumococcal vaccinations for all beneficiaries, racial and ethnic disparities persist among African Americans and Hispanics. There are promising strategies to promote influenza and pneumococcal immunization among the general population, as well as efforts targeted at African Americans and Hispanics. Sustained effort is needed in order to reduce disparities in immunization rates among vulnerable populations.

[1] National Center for Health Statistics, Health, United States, 2006, with Chartbook on Trends

in the Health of Americans (Hyattsville, MD: U.S. Department of Health and Human Services, 2006).

[2] Partnership for Prevention, *Strengthening Adult Immunization: A Call to Action* (Washington, DC:; Medicare and Medicaid Programs; "Condition of Participation: Immunization Standard for Long Term Care Facilities," *Federal Register*, 70 (194), Friday, October 7, 2005/Rules and Regulations.

[3] Partnership for Prevention, op. cit.

[4] Nichol, Kristin, et al., "Benefits of Influenza Vaccination for Low- Intermediate-, and High-Risk Senior Citizens," *Archives of Internal Medicine*, 158: 1769–1776, September 14, 1998; Centers for Disease Control and Prevention, "Influenza and Pneumococcal Vaccination Coverage among Persons Age ≥65 Years and Persons Aged 18-64 Years with Diabetes or Asthma—United States, 2003," *Morbidity and Mortality Weekly Review*, 53(43), November 5, 2004.

[5] Healthy People 2010 is a set of health objectives for the nation to achieve over the first decade of the new century. Healthy People 2010 was developed through a broad consultation process, built on the best scientific knowledge and designed to measure programs over time, U.S. Department of Health and Human Services, Office of Disease Prevention and Health Promotion, *Healthy People*, accessed at http://www.healthypeople.gov/About/whatis.htm

[6] *Supra*, note 5.

[7] Centers for Disease Control and Prevention, National Immunization Program, Advisory Committee on Immunization Practices, accessed at http://www.cdc.gov/nip/acip/.

[8] Persons who receive a pneumococcal vaccine before age 65 should receive another dose after they turn age 65 *and* five years have elapsed since their first dose. Persons with the following conditions should receive a booster vaccine: functional or anatomic asplenia (e.g., sickle cell disease, splenectomy), human immunodeficiency virus (HIV) infection, leukemia, lymphoma, Hodgkin's disease, multiple myeloma, generalized malignancy, chronic renal failure, nephritic syndrome, or other conditions associated with immunosuppression, such as organ or bone marrow transplantation, and those receiving immunosuppressive chemotherapy; Centers for Disease Control and Prevention, "Recommended Adult Immunization Schedule—United States, October 2006–September 2007," *Mortality and Morbidity Weekly Report*, 55(40), Q1–Q4, October 13, 2006, accessed at http://www.cdc.gov/mmwr/preview/mmwrhtml/mm5540-Immunizationa1.htm; Centers for Medicare and Medicaid Services, Dallas Regional Office, *Immunizers' Question and Answer Guide to Medicare Coverage of Influenza and Pneumococcal Vaccinations: Steps to Promoting Wellness Adult Immunizations* (Dallas, TX:, October 2006).

[9] Ibid.

[10] Herbert, P.L., et al., "The Causes of Racial and Ethnic Differences in Influenza Vaccination Rates among Elderly Medicare Beneficiaries," *Health Services Research* 40(2), April 2006.

[11] The Council of State Governments, "Protecting Our Communities: Programs to Reduce Adult Immunization Disparities," *Healthy States Brief* 1(8), August 2006); Winston, C., et al., "Factors Associated with Vaccination of Medicare Beneficiaries in Five U.S. Communities: Results from the Racial and Ethnic Adult Disparities in Immunization Initiative Survey, 2003," *Journal of the American Geriatric Society* 54: 303–310, 2006.

[12] Centers for Disease Control and Prevention, "Racial/Ethnic Disparities in Influenza and Pneumococcal Vaccination Levels Among Persons Aged ≥ 65 Years—United States, 1989–2001," *Morbidity and Mortality Weekly Review*, 52(40); Winston, C., et al., "Factors Associated with Vaccination of Medicare Beneficiaries in Five U.S. Communities: Results from the Racial and Ethnic Adult Disparities in Immunization Initiative Survey, 2003," *Journal of the American Geriatric Society*, 54: 303–310, 2006.

[13] Winston, 2006, op. cit,.

[14] Schwartz, J.S., et al., "Internists' Practices in Health Promotion and Disease Prevention: A Survey," *Annals of Internal Medicine*, 114: 46–53, 1991.

[15] Ibid.

[16] *Supra*, note 13.

[17] Standing order programs authorize nurses or pharmacists to administer vaccinations according to an institution- or physician-approved protocol; Bratzler, D.W., et al., "Failure to Vaccinate Medicare Inpatients: A Missed Opportunity," *Archives of Internal Medicine*, 162: 2349–2355, November 11, 2002.

[18] Kicera, T., Douglas, M. and Guerra, F., "Best Practice Models that Work: The CDC's Racial and Ethnic Adult Disparities Immunization Initiative (READII) Programs," *Ethnicity and Disease*, 15, Spring 2005.

[19] Ibid.

[20] Although the projects ended in 2004, an official evaluation is still pending; ibid.

[21] Medicare and Medicaid Programs, *Condition of Participation: Immunization Standard for Long Term Care Facilities*. *Federal Register*,. 70(194), Friday, October 7, 2005/Rules and Regulations.

[22] Other federal partners include Office of Public Health and Science, Administration for Children and Families, Administration on Aging, Agency for Healthcare Research and Quality, Centers for Disease Control and Prevention, Health Resources and Services Administration, Indian Health Service, Office of Intergovernmental Affairs, National Institutes of Health, Office of Disability, and Substance Abuse and Mental Health Services Administration.

[23] Centers for Medicare and Medicaid Services, "CMS Officials Kick Off A Healthier U.S. Starts Here Initiative: National Effort Promotes Prevention, Healthier Living," press release Baltimore, MD, April 20, 2007, accessed at http://www.hhs.gov/news/press/2007pres/04/pr20070420a.html.

[24] The Council of State Governments, 2006, op. cit.; Kicera, Douglas, and Guerra, 2005, op. cit.

[25] Minnesota Legislature, Legislative Report: Eliminating Health Disparities Initiative, Investing in Minnesota's Populations of Color and Americans Indians, January 15, 2007.

[26] Ibid.

[27] The CHS is a telephone survey conducted by the Department of Health and Mental Hygiene, Division of Epidemiology, Bureau of Epidemiology Services to provide neighborhood and citywide estimates on a broad range of chronic diseases and behavioral risk factors; New York City Department of Health and Mental Hygiene, Community Health Survey, accessed at http://www.nyc.gov/html/doh/html/survey/survey-2005.shtml.

[28] Ibid.

[29] New York City Department of Health and Mental Hygiene, Bureau of Immunization Outline of Strategies and Plans for Influenza Season 2006–07, August 2006).

[30] The Council of State Governments, 2006, op. cit.

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