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Ethnic Disparities in Influenza Immunization Rates

*Susie Shin**

I. INTRODUCTION

Influenza causes 36,000 deaths and more than 200,000 hospitalizations per year in the United States.[1] Ninety percent of these deaths include individuals aged sixty-five and older who are especially susceptible to influenza.[2] If these individuals had received the influenza vaccine, mortality and morbidity rates would be reduced, especially among elderly individuals with diabetes, asthma, and other conditions.[3] Additionally, vaccinations would reduce the costs of hospitalization and health care in general.[4]

Although influenza is vaccine-preventable, only 40% of individuals aged sixty-five and older are vaccinated in the United States.[5] Currently, the Advisory Community on Immunization Practices (ACIP) recommends yearly influenza

* Juris Doctor Candidate, Loyola University Chicago School of Law, Class of 2010. Ms. Shin is a staff member of *Annals of Health Law*.

[1] Lynda Flowers et al., *Racial and Ethnic Disparities in Influenza and Pneumococcal Immunization Rates Among Medicare Beneficiaries*, AARP Pub. Pol'y Inst. 1, Oct. 2008, *available at* http://assets.aarp.org/rgcenter/health/i12_flu.pdf.

[2] *Id.*

[3] Leonard E. Egede & Deyi Zheng, *Racial/Ethnic Differences in Influenza Vaccination Coverage in High-Risk Adults*, 93(12) AM. J. PUB. HEALTH 2074, 2074 (2003).

[4] *Id*. at 2074; K.L. Nichol et al., *The Efficacy and Cost Effectiveness of Vaccination Against Influenza Among Elderly Persons Living in the Community*, 331(12) NEW ENG. J. MED. 778, 783 (1994) (among individuals aged sixty-four years and older, annual influenza vaccination savings averaged $117 per person vaccinated with cumulative savings of almost $5 million).

[5] Lawson et al., *Standing Orders for Influenza Vaccination Increased Vaccination Rates in Inpatient Settings Compared with Community Rates*, 55A(9) J. GERONTOLOGY: MED. SCI., M522, M522 (2000).

vaccinations for adults aged 50 and older.[6] Medicare also encourages beneficiaries to be vaccinated by paying for vaccines with participating providers.[7]

Despite these efforts, disparities in influenza vaccination rates between races still persist.[8] In 2006, among Medicare beneficiaries aged sixty-five years and older, 67% of Caucasians received the influenza vaccine, while only 47% of African Americans and 45% of Hispanics received it.[9] These variations exist even among individuals that are most likely to be vaccinated, such as highly educated individuals.[10] If the percentage of minority citizens who are vaccinated increased or surpassed the current level of vaccinations amongst Caucasian citizens, the benefits of influenza vaccinations, including the prevention of hospitalizations, deaths, and financial losses, would be significant.[11] Specifically, 1,880 minority deaths could be prevented annually if African Americans and Hispanics were immunized at the same rate as Caucasians.[12]

Although these discrepancies are extensively documented, the reasons they exist are poorly understood.[13] There are several possibilities why different ethnicities may not receive the influenza vaccine, including the lack of knowledge about the vaccine,[14] the inability to afford the vaccine,[15] or the inaccessibility of

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[6] Flowers, *supra* note, 1 at 1 ("The ACIP is an expert panel selected by the U.S. Department of Health and Human Services to advise the nation on how to reduce vaccine-preventable diseases"); ANTHONY E. FIORE ET AL., PREVENTION AND CONTROL OF INFLUENZA: RECOMMENDATIONS OF THE ADVISORY COMMUNITY ON IMMUNIZATION PRACTICES (ACIP) (2008), *available at* http://www.cdc.gov/mmwr/preview/mmwrhtml/rr5707a1.htm .

[7] CENTERS FOR MEDICARE & MEDICAID SERVICES, IMMUNIZERS' QUESTION & ANSWER GUIDE TO MEDICARE COVERAGE OF INFLUENZA AND PNEUMOCOCCAL VACCINATIONS 13 (2006), http://www.cms.hhs.gov/AdultImmunizations/Downloads/fluguide0607rev.pdf [hereinafter Q&A].

[8] Michael W. Link et al., *Racial and Ethnic Disparities in Influenza Vaccination Coverage Among Adults During the 2004-2005 Season*, 163(6) AM. J. EPIDEMIOLOGY 571, 571 (2006).

[9] Flowers, *supra* note 1, at 2.

[10] *Id.*

[11] Egede, *supra* note 3, at 2074.

[12] Kevin Fiscella et al., *Impact of Influenza Vaccination Disparities on Elderly Mortality in the United States*, 45 PREVENTIVE MED. 83, 84 (2007).

[13] Carla A. Winston 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*, 54(2) J. AM. GERIATRICS SOC'Y 303, 303 (2006).

[14] Winston, *supra* note 12, at 303.

providers to administer the vaccine.[16] With a better understanding of why they are present, laws and policies could be implemented to relieve ethnic disparities in influenza vaccination rates.

II. CAUSES OF VARIATIONS IN VACCINATION RATES

One major reason for the ethnic disparity in influenza vaccination rates is health insurance coverage.[17] Compared to Caucasians, African Americans are almost twice as likely, and Hispanics are three times as likely, to be uninsured.[18] These uninsured individuals are unlikely to visit a healthcare provider for a routine checkup where vaccines are primarily administered.

A lack of health insurance may also be linked to an individual's lack of understanding about the influenza vaccination and general healthcare system.[19] Without insurance, minorities may not know healthcare providers or how to access them.[20] In particular, they may not know about the preventive benefits available to them, such as an influenza vaccination.[21]

Minority beneficiaries could learn about preventive benefits through a healthcare professional. However, in areas where large numbers of minorities live, there is a lack of providers which could hinder influenza vaccination.[22] In addition to an already low number of available providers, minorities tend to seek out healthcare providers of the same ethnic group.[23] In particular, those with

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[15] Timothy Stoltzfus Jost, *Disentangling Fact From Fiction: The Realities of Unequal Health Care Treatment: Article: Racial And Ethnic Disparities in Medicare: What the Department Of Health and Human Services and the Centers for Medicare and Medicaid Services Can, and Should, Do*, 9 DEPAUL J. HEALTH CARE L. 667, 675 (2005).
[16] *Id.* at 677.
[17] *Id.* at 675.
[18] *Id.*
[19] *Id.* at 680.
[20] *Id.*
[21] *Id.*; Paul L. Hebert et al., *The Causes of Racial and Ethnic Differences in Influenza Vaccination Rates Among Elderly Medicare Beneficiaries*, 40(2) HEALTH SERV. RES. 517, 520 (2005) (Twenty one percent of Caucasians stated that they did not receive an influenza vaccine because they did not know it was needed. In contrast, 33% of Hispanics and 25% of African Americans were unaware of a need for influenza vaccination).
[22] Jost, *supra* note 16, at 677.
[23] *Id.*

limited English proficiency prefer a provider with their same ethnicity.[24] Therefore, the lack of providers that minorities feel comfortable with can deter minorities from receiving influenza vaccinations.

III. LAWS AND POLICIES TO INCREASE IMMUNIZATION RATES

A. Existing Laws and Policies

Since 1993, Medicare has provided financial coverage for the influenza vaccine.[25] In 2002, the Centers for Disease Control and Prevention (CDC) collaborated with federal agencies to start the Racial and Ethnic Adult Disparities in Immunization Initiative project to address lower vaccination rates among African American and Hispanic Medicare beneficiaries.[26] The project was set up in five areas: Chicago, Illinois; Rochester, New York; San Antonio, Texas; Milwaukee, Wisconsin; and several counties in the Mississippi delta region.[27] As part of the project, each area created strategies to reach out to African American and Hispanic individuals aged sixty-five and older.[28] The results showed that the most successful strategy was targeting providers to encourage them to contact their patients to visit their offices for an influenza vaccination.[29]

In 2005, the Centers for Medicare and Medicaid Services (CMS) also issued federal rules requiring long-term care facilities housing Medicare and Medicaid beneficiaries to offer influenza vaccines.[30] Although this regulation did not specifically target minority groups, African Americans and Hispanics living in long-term care facilities benefited.[31]

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[24] *See id.* at 678.
[25] Q&A, *supra* note 7, at 4.
[26] Flowers, *supra* note 1, at 3.
[27] *Id.*
[28] CENTERS FOR DISEASE CONTROL AND PREVENTION, HIGHLIGHTS IN MINORITY HEALTH & HEALTH DISPARITIES (2006), *available at* http://www.cdc.gov/omhd/Highlights/2006/HAug06.htm#PROGRAMS.
[29] Flowers, *supra* note 1, at 3.
[30] *Id.* at 4.
[31] *Id.*

Individual states also have implemented influenza vaccination initiatives. In 2007, the Chicago Department of Public Health in Illinois provided vaccine clinics and promoted vaccination in high-risk communities targeting the elderly during the flu season.[32] In 2008, 70% of long-term care facility residents in Illinois had received the influenza vaccine.[33] Moreover, in Montana, letters were sent to Medicare beneficiaries that promoted influenza vaccination.[34] As a result, influenza vaccination rates increased 9% with personal letters and 7% with form letters.[35] Similarly, in Wyoming, influenza vaccination rates increased by 19% with personal letters and 20% with form letters.[36]

B. Possible Future Laws and Policies

A range of laws and policies should be implemented to reach a large amount of minorities aged sixty-five and older. Past studies and research have shown effective strategies, including sending influenza vaccination reminders directly to individuals,[37] encouraging healthcare providers promote influenza vaccination,[38] executing standing order programs,[39] providing interpreter services,[40] and incentivizing physicians to work in minority areas.[41]

Hospitals and providers should educate minorities about vaccinations.[42] A small amount of Caucasians (8%) who did not have a medically documented resistance to vaccination remained unvaccinated despite being seen in providers' offices during the influenza vaccination period, whereas 14% of African

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[32] *Id.*
[33] *Id.*
[34] DM Berwick, *Flu Mailings Boost Vaccination Rates Among Medicare Enrollees*, J. WATCH GEN MED., Oct. 31, 1995, *available at* http://general-medicine.jwatch.org/cgi/content/full/1995/1031/1.
[35] *Id.*
[36] *Id.*
[37] Flowers, *supra* note 1, at 3.
[38] *See* Dale W. Bratzler et al., *Failure to Vaccinate Medicare Inpatients*, 162 ARCHIVES INTERNAL MED. 2349, 2352 (2002).
[39] Charles M. Helms, et al., *Strengthening the Nation's Influenza Vaccination System: An NVAC Assessment*, 29 AM. J. PREVENTIVE MED. 221, 223 (2005).
[40] Jost, *supra* note 16, at 702.
[41] *Id.* at 691.
[42] *See* Bratzler, *supra* note 39, at 2352.

Americans and 17% of Hispanics remained unvaccinated under similar conditions.[43] These figures indicate that healthcare professionals are missing vaccination opportunities.[44] Because studies have shown that patients respond well to providers' recommendations,[45] more patients may be encouraged to receive the influenza vaccine if healthcare professionals actively promoted it.[46] In addition, most adults seek healthcare providers when they have an acute or chronic illness, not for a preventive service like a vaccination.[47] Therefore, if minority patients go to a provider for non-vaccination purposes during the influenza vaccination period, providers should take advantage of this opportunity to educate patients.

On an institutional level, hospitals could execute standing order programs. Some hospitals require a physician's written order before a hospital can vaccinate a patient.[48] This administrative step hinders access to vaccines.[49] A standing order program can increase access by allowing vaccines to be administered without a written order from a physician.[50] For example, a hospital without a standing order policy had about 33% of its patients vaccinated, while a hospital with a standing order program in place had over 90% of its patients vaccinated.[51]

Standing order programs at non-traditional healthcare centers, such as pharmacies and grocery stores, also can increase vaccination access.[52] For example, states in which pharmacists were allowed to administer influenza vaccines to individuals aged sixty-five and older had significantly higher influenza vaccination rates than in states without standing order programs.[53] Non-traditional healthcare centers could be helpful in areas with physician shortages.

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[43] Hebert, *supra* note 22, at 529.
[44] *Id.* at 532.
[45] Flowers, *supra* note 1, at 3.
[46] David S. Fedson, *Clinical Practice and Public Policy for Influenza and Pneumococcal Vaccination of the Elderly*, 8(1) CLINICS IN GERIATRIC MED. 183, 190 (1992).
[47] Helms, *supra* note 40, at 223.
[48] Lawson, *supra* note 5, at M522.
[49] *Id.*
[50] *Id.* at M525.
[51] *Id.* at M524.
[52] Helms, *supra* note 40, at 223.
[53] Flowers, *supra* note 1 at 6.

They also could lessen financial barriers since influenza vaccines are less expensive at a local pharmacy than at a physician's office,[54] which would help uninsured minorities. A standing order program could break down language barriers since patients could be vaccinated at a local grocery store or pharmacy where the healthcare professional and patient may speak the same language.

One strategy that could be put in place nationally is based on the finding that the strongest predictor of future immunization is whether an individual has received the influenza vaccination previously.[55] If the Social Security Administration (SSA) included information about influenza vaccinations in social security check envelopes, never-vaccinated seniors would be reminded to obtain vaccination. In turn, these individuals may seek another vaccination the following year. Additionally, these reminders could be written in different languages depending on the recipient's primary language.

To further minimize challenges associated with language differences, Congress could require all Medicare providers to provide interpreter services. Individual states and the Department of Health and Human Services (HHS) should help supplement the costs.[56] At least ten state Medicaid programs are already paying for interpreters.[57] Further, interpreter services are low in cost.[58] The United States Office of Management and Budget estimate that the average cost for interpreter services is only $4.04 per visit.[59]

Other government agencies, such as CMS, should incentivize physicians to serve in minority communities.[60] Currently, in order to increase physician access in rural areas, the government provides bonuses to physicians who work in such areas.[61] Similarly, the government could offer bonuses to physicians who

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[54] *Id.*
[55] Berwick, *supra* note 35. The study found that the strongest predictor of immunization in Montana and Wyoming in the 1994 season was prior immunization in 1993. *Id.*
[56] Jost, *supra* note 16, at 701.
[57] *Id.*
[58] *Id.* at 702.
[59] *Id.*
[60] *Id.* at 691.
[61] *Id.* at 669.

serve minority beneficiaries or work in understaffed areas largely populated by minorities.[62] The Medicare Modernization Act currently provides health care professionals a 10% incentive payment for working in government-designated health professional shortage areas and a 5% incentive payment in physician scarcity areas.[63] However, these areas do not include minority populations.[64] CMS should modify the provisions to expressly include minority areas.[65]

IV. CONCLUSION

Ethnic disparities in influenza vaccination rates contribute considerably to minority mortality in those aged sixty-five years and older.[66] Although the government is promoting influenza vaccination at the state and federal levels, vaccination disparities still exist.[67] As a result, efforts need to be made to specifically target minorities. Effective strategies can be promulgated by hospitals and healthcare providers who can educate and vaccinate minorities directly. In addition, laws requiring standing order programs can be utilized. Strategies also can be through government agencies, such as the SSA, CMS, or HHS. By applying effective laws and policies, ethnic disparities can be decreased significantly, minimizing economical losses and more importantly, preventable fatalities.

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[62] *Id.*
[63] *Id.* at 691.
[64] *Id.* CMS interprets the 5% incentive as applying at the county level and excluding urban areas where minorities live.
[65] *Id.*
[66] Fiscella, *supra* note 11, at 85.
[67] Flowers, *supra* note 1, at 1.