

## ADULT IMMUNIZATION DISPARITIES: A CHALLENGE FOR THE PUBLIC HEALTH/PRIMARY CARE PARTNERSHIP

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Vaccine preventable pneumonias account for 5% of all the years of potential life lost (YPLL) attributable to racial and ethnic health disparities. Eliminating disparities in influenza and pneumococcal vaccination rates could eliminate many of these pneumonia deaths and hospitalizations among at-risk individuals. This represents one of the most focused and achievable targets within the broader agenda of eliminating racial and ethnic health disparities, which is one of two major health goals for the nation outlined in *Healthy People 2010*. A broad, three-dimensional conceptual framework guiding a strong public health/primary care partnership will be required to achieve this goal. (*Ethn Dis.* 2005;15[suppl 3]: S3-1–S3-3)

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### INTRODUCTION

Immunization is one of the “top 10” public health issues identified in *Healthy People 2010*, the nation’s 21st century guidebook of objectives for disease prevention and health promotion. The two overarching goals in *Healthy People 2010* are: 1) to increase years and quality of healthy life; and 2) to eliminate racial and ethnic health disparities.<sup>1</sup> Eliminating immunization disparities is a well-defined and achievable goal within this broader agenda.

### DETERMINANTS OF HEALTH

*Healthy People 2010* presents a model for “determinants of health” that includes individual factors such as biology (age, immune status, etc), personality, lifestyle, and behavior. The individual is also affected by environment, both physical and social. The physical environment can be protective (safe highways, clean air, pure water, etc), or it can contain viruses, bacteria, toxins, and allergens. The social environment includes both challenges and strengths, such as poverty/wealth, educational resources, neighborhood characteristics, extended families, faith communities, and culture. In addition to individual factors and the physical and social environment, there are health determinant factors related to health care and the public health system. There are, for example, significant disparities in people’s access to health care and quality of care. Finally, the model includes policy-level factors that drive not only the healthcare

system, but also the public health system and the social, physical, and economic environment.

### IMMUNIZATION VICTORIES

Immunizations have been one of the most significant public health success stories of our time. Certain vaccine-preventable illnesses (polio, tetanus, etc) have nearly disappeared as causes of disability and death in America.<sup>2</sup> Smallpox has been eradicated through global immunization, and polio has been eliminated from the Western Hemisphere and most other nations worldwide.<sup>3</sup>

Hemophilus influenzae type B, which used to cause 20,000 deaths per year in the United States, was responsible for less than 200 deaths in 2000.<sup>4</sup> Pneumococcal vaccine has been proven in the older adult population, but now is demonstrating significant reductions in serious illnesses among children, especially for those with sickle cell disease.<sup>5</sup>

Childhood immunizations are a great public health success story. In 1998, 73% of children received all vaccines recommended for universal administration. In addition, childhood immunizations are one of the few success stories our nation has enjoyed in our vision of eliminating health disparities.

America has a mixed report card on adult immunizations. In 1998, influenza immunization rates were 64% in adults aged 65 years and older—almost double the 1989 immunization rate of 33%.<sup>6</sup> However, while White Americans in appropriate risk groups have reached almost the 70% mark in influenza vacci-

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nation rates, and have exceeded 60% rates of pneumococcal vaccination, less than half of the at-risk African Americans get the flu vaccine, and only four in 10 have received the vaccine for pneumonia.<sup>7</sup>

Despite all that we have learned about the science of immunization, we still have not figured out a way to deliver the vaccine to all who need it. *Healthy People 2010* contains two objectives to measure progress among adults in the areas of immunization:

- Increase the proportion of non-institutionalized adults who are vaccinated annually against influenza from 64% to 90%.
- Increase the proportion of adults ever vaccinated against pneumococcal disease from 46% to 90%.

### MAJOR BARRIERS TO HEALTH CARE

*Healthy People 2010* identified seven major barriers preventing Americans from getting access to health care. These people may be uninsured, underinsured, underserved, underrepresented, uninspired, untrusting, and/or uninformed. In the United States, one in three Hispanic and Latino persons is uninsured, compared with one in five African-American and one in 10 White, non-Hispanic individuals. While 95% of individuals aged 65 and older are covered by Medicare for these vaccinations, there are significant numbers of people in the 50–64-year-old age group, as well as persons of all ages with chronic medical conditions, who ought to receive the influenza vaccine but do not have insurance coverage of any type.

People who are underserved include those who live in rural or inner-city communities that lack sufficient health-care providers or practices. Americans are underrepresented when their providers do not share their language or background—in other words, when culturally and linguistically appropriate services

are not available.<sup>8,9</sup> People who are uninspired do not see getting the flu and pneumonia vaccines as a priority, even though they may be at high risk. Some people are untrusting—believing that vaccines will harm rather than help them, often based on historical evidence or personal experience of broken trust between the healthcare system and their own community. Uninformed people need better information (for example, the difference between a cold and the flu, or on the inability of killed virus vaccines to cause influenza symptoms).

### ACTIONS BEING TAKEN TO OVERCOME DISPARITIES

To address disparities in immunization and to assist in reaching the national health goal of 90% flu and pneumonia vaccine coverage, the US Department of Health and Human Services, the Centers for Disease Control and Prevention (CDC), and other federal partners launched a special initiative in July 2002. Public health professionals in five US population centers are engaging physicians, nurses, pharmacists, community leaders, and church leaders in implementing the Racial and Ethnic Adult Disparities in Immunization Initiative (READII). The target groups for immunization are elderly African Americans and Hispanics.

McKinlay's population model of health promotion<sup>10</sup> was developed for use in increasing the nutritional level of children. However, it can be helpful in other areas, such as immunization. McKinlay's three points of intervention are "downstream" where people are educated, motivated, and mobilized to act (to take a flu or pneumonia shot); "midstream" where community conditions, such as unsafe surroundings or lack of convenient healthcare facilities, affect whether people actually receive the care they need; and "upstream" where federal, state, and local policies affect the

delivery of health services. Policies influence the actions health professionals take in providing care to the people who need it. Challenges exist for immunization efforts at all three points in the "stream."

In 2003, Morehouse School of Medicine received a grant from the National Institutes of Health to establish the Center for Excellence on Health Disparities. Morehouse proposed a three-dimensional model as our conceptual framework for the elimination of health disparities. The first dimension relates to four broad areas of causality: biology/genetics, healthcare access and quality, lifestyle and behaviors, and the environment. The second axis is the spectrum of research that can help eliminate disparities, ranging from basic science research, to translational research and clinical trials (from the bench to the bedside), to behavioral research, health services research, and community-participatory research (from the bedside to the curbside and the countryside). The third dimension includes all the various health outcomes and disease states that are the "end-product" of health disparities (diabetes, cancer, HIV, etc). The foundation of the model is surveillance and analysis of public health data, which can not only measure the size of the problem, but also demonstrate the effectiveness of various interventions undertaken to reduce or eliminate health disparities.

### CONCLUSION

Disparities are not inevitable. With the combined effort of policymakers, public funding, primary care providers, and public health programs, there was a moment at the turn of the century when we had almost eliminated disparities in childhood immunization. Adult immunizations represent one of the most focused and achievable opportunities for eliminating a major source of disparities, which was estimated to ac-

count for roughly 5% of all years of potential life lost (YPLL) attributable to racial and ethnic health disparities.

Finally, when primary care and public health join forces, we see tremendous gains in the health of our nation. Examples include not only reductions in vaccine-preventable illness among children, but also the impact of routine Pap smear screening on reducing cervical cancer deaths, and the impact of hypertension detection and treatment on reductions in deaths and disability related to stroke and cardiovascular disease. Eliminating racial and ethnic disparities in hospitalizations and deaths due to vaccine-preventable pneumonias is a battle we can win—if we combine forces, stay focused on the target, and accept nothing less than optimal health for all.

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