DISCORDER DEPARTMENT OF HEALTH & WELFARE DISCORDER DUCCEDED In Immunization Update Pertussis Concerns Race and Ethnicity

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Idaho Immunization Program Vaccine Funding Update

his article provides a brief history of the Idaho Immunization Program (IIP)'s funding for vaccines and an update on the program's ability to continue providing vaccines for all children in Idaho.

The Vaccines For Children (VFC) program is a federally-funded program that provides vaccines at no cost to children aged 0 through18 years who might not otherwise be vaccinated because of inability to pay. VFC was created by the Omnibus Budget Reconciliation Act of 1993 as a new entitlement program to be a required part of each state's Medicaid plan. The program was officially implemented in October 1994.

Children qualify for the VFC program if they:

- are enrolled in Medicaid, or
- are American Indian/Alaska Native, or
- do not have health insurance, or
- are underinsured, or are insured, but the insurance does not cover vaccines.

With the implementation of the VFC program in 1994, Idaho chose to provide vaccines for all children, not just VFC-eligible children, thus creating a "universal" immunization program. With the addition of the human papillomavirus (HPV) vaccine and the increasing costs of vaccines, Idaho did not add HPV to the universal program, but began supplying this vaccine only for VFC-eligible children. As a result, Idaho became what is categorized as a "universal-select" state.

Due to reduced state budgets, by July 1, 2009, Idaho was no longer able to provide vaccine for all children to remain a universalselect state and was only able to provide free vaccines to children eligible through the VFC program. On August 4, 2009 the Governor allocated \$2.1 million in one-time funds for the purchase of vaccine for non-VFC children, restoring Idaho's status as a universal-select state through January 2010. The temporary transition back to a universal-select state allowed healthcare providers to administer state-supplied vaccine to all children aged 0 through 18 years, regardless of VFC-eligibility status (with the exception of the HPV vaccine).

The funding that allowed Idaho to remain a universal-select state will be exhausted during the first part of 2010. The Legislative Health Care Task Force, healthcare providers, insurance providers, and concerned citizens worked very hard to draft a bill that was approved by the legislature and signed by the governor on March 4, 2010. This new law provides for continued funding of vaccines for all children in Idaho by establishing an assessment of insurance carriers for the purposes of funding a universal-select vaccine program. As more information becomes available, the IIP will provide updated information on their website (www.immunizeidaho.com) and fax important notices to VFC providers and selected medical professional associations.

Idaho immunization program history

- 1994: federal VFC program implemented, Idaho contributes funds to cover all children.
- 2007: Idaho becomes a universal-select state; all children aged 0 through 18 years are eligible for state- supplied vaccine with the exception of HPV vaccine.

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- July 2009: budget cuts lead Idaho to transition to a VFConly state (only children who qualified for the federal VFC program could receive statesupplied vaccine).
- August 2009: the Idaho Immunization Program receives \$2.1 million in one-time funds to maintain a universal select status through January 2010.
- September 2009 to date: the Legislative Health Care Taskforce and others work on a long-term private sector funding solution for Idaho to remain a universal-select state
- March 4, 2010: House Bill 432 establishing funding mechanisms to maintain universal-select status signed by the Governor.

Pertussis Remains a Serious Public Health Concern in Idaho

Recent pertussis-associated hospitalizations of two Idaho children from different parts of the state, and a pertussis-associated death in an Idaho infant, are a reminder that this vaccine-preventable disease continues to circulate in Idaho. Communities with under-vaccinated and unvaccinated persons are particularly at risk for widespread morbidity. The number of reported pertussis cases doubled from 40 in 2008 to 99 in 2009. The majority of cases were reported during the winter and spring months (Figure).

In December 2009, South Central Public Health District investigated reports of pertussis in several communities. One outbreak in Jerome County included 14 individuals who required post-exposure prophylaxis and involved extended families and school contacts. A second outbreak, involving four families, occurred in Minidoka and Cassia Counties. There were 4 laboratory-confirmed cases in this outbreak, including 1 hospitalization; 23 individuals required post-exposure prophylaxis. Of the 37 individuals in these 2 outbreaks who required post-exposure prophylaxis, only 7 were vaccinated. A third outbreak

investigated by Southwest District Health occurred in January 2010 in Canyon County, and included three ill household members including a hospitalized infant and a severely ill toddler. The majority of individuals in this outbreak were also unvaccinated or too young to receive the full vaccine series, making them more vulnerable to infection.

The public health impact of pertussis

Pertussis is extremely contagious. Up to 90% of susceptible household contacts develop clinical disease following exposure to an index case. Major complications are most common among infants and young children and include hypoxia, apnea, pneumonia, seizures, and encephalopathy. Pertussis can result in hospitalization and death among young children. Most deaths occur among unvaccinated children or children too young to be vaccinated (<2 months of age). Among infants in this age group, the case fatality rate is approximately 1%. In Idaho, pertussis vaccination coverage among children aged 19-35 months was 78% in 2008, below the national average of 85%. Pertussis vaccination coverage among Idaho children of kindergarten age is also considered low at 87%. Published estimates of thresholds for community immunity (sometimes called "herd" immunity) for pertussis are 92-94%. Improved vaccination coverage among Idaho's children and adults is important to prevent morbidity and mortality and to protect those too young to receive vaccination.

Diagnosis

Laboratory-diagnosis of *Bordetella pertussis* infections in a timely, accurate, and standardized fashion is a challenge. Culture, long held to be the gold standard for pertussis, is considered no more than 50% sensitive because the microorganism is fragile, because of antibiotic use prior to sample collection, and because of problems associated with specimen collection and/or transport.



Figure. Reported confirmed and probable pertussis cases by month of report—Idaho, 2008–2009*



Alternatively, polymerase chain reaction (PCR) testing, which does not require viable organisms, is much faster and significantly more sensitive than culture. However, detection of pertussis DNA sequences by PCR may or may not indicate a diseased state in the patient as some PCR assays may detect *B. holmesii* sequences rather than *B. pertussis* sequences, yielding a false positive result. The Idaho Bureau of Laboratories has recently begun to offer a more specific PCR test for *B. pertussis*, in support of outbreak investigations, which includes more *B. pertussis*-specific PCR target sequences, eliminating potential false positive results due to *B. holmesii*.

Prevention

Children should get 5 doses of DTaP, 1 dose at each of the following ages: 2, 4, 6, and 15–18 months and 4–6 years. Adolescents and adults become susceptible when childhood immunity wanes, but they can receive a booster shot of the Tdap vaccine. A single dose of Tdap is recommended for adolescents aged 11 or 12 years, or in place of one tetanus-diphtheria booster in older adolescents and adults aged 19–64 years. Healthcare providers are strongly encouraged to discuss Tdap vaccine with their patients who are considering becoming pregnant, post-partum women, individuals caring for small children, and healthcare workers.

To learn more about pertussis and the Tdap vaccine, visit the following CDC web site: http://www.cdc.gov/vaccines/ vpd-vac/pertussis/default.htm.

The Role of Race and Ethnicity Data in Public Health Decision Making

ace and ethnicity can be an important factor affecting outcome of infection with some diseases. Because of this, the Centers for Disease Control and Prevention's (CDC) Advisory Committee on Immunization Practices (ACIP) has developed specific guidelines for certain populations, such as American Indian/Alaskan Natives (AI/AN).¹ One disease that has shown variation with disease outcome and race and ethnicity is 2009 H1N1 influenza. A recent MMWR article² found that AI/ANs had a mortality rate four times higher than persons in all other racial and ethnic populations combined, prompting CDC to initiate a series of studies to determine the causes of this elevated mortality rate.

Many of these and similar studies rely on state-collected data, such as that collected through Idaho's hospital-based influenza surveillance system. Unfortunately, 27% of the cases collected through this system had race marked "unknown" and 47% had ethnicity missing or marked "unspecified." Consequently, the Idaho Division of Public Health has been unable to evaluate routine surveillance data for racial and ethnic disparities.

Race and ethnicity data are typically collected at the point of care, that is, from private providers, hospitals, or community health centers. Despite increasing attention to health disparities, the availability of racial and ethnic data from these settings remains limited, complicating efforts to calculate state birth, mortality, and morbidity rates. A primary difficulty in obtaining race and ethnicity data is that in the U.S., many doctors, nurses, and front line staff are reluctant to collect it. The chief reasons given for this are: 1) it is seen as unnecessary, and 2) the belief that asking about it would offend the patient.³ The remainder of this article will attempt to address each of these reasons.

Why collect race and ethnicity data?

Among the more common popular ideas for collecting this data is the mistaken perception that race/ethnicity is a means through which to identify biologicallybased risk factors.⁴ While these risk factors vary geographically due to the partial isolation of human population groups in the past, it is precisely because these populations were only partially isolated that there is substantial genetic overlap between traditionally conceived racial groups.⁵ Simply put, one's ancestry and one's race are not equivalent. To illustrate, in the United States African Americans are widely considered to exhibit a higher prevalence of sickle-cell disease. Yet, so too are populations from the circum-Mediterranean, as well as parts of the

Indian subcontinent and Middle Eastern populations. Depending on how race is classified, individuals with ancestry in these regions represent two, or more, different races. Unawareness of this shared nature of genetic variation amongst racial populations can result in diagnostic errors (such as failing to diagnose sickle-cell disease in a White individual).⁵ Further, apart from monogenic diseases such as sickle-cell, "...the causes of health disparities have little to do with genetics." Rather, they are largely a result of differences in "...culture, diet, socioeconomic status, access to health care, education, environmental exposures, social marginalization, discrimination, stress and other factors."6 Thus, the rationale for collection of race and ethnicity data at the point of care is not to identify genetic risk factors but to identify and rectify health inequities for the purpose of more equitable health care. Not reporting race and ethnicity means that disparities in health outcomes (as illustrated with H1N1) remain invisible.

How are race and ethnicity data defined?

Despite their widespread use, 'race' and 'ethnicity' are famously ambiguous terms. Along with other federal agencies, the Office of Management and Budget (OMB) developed categories to provide consistent data

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influenza A (H1N1) among American Indian/Alaska Natives - 12 states, 2009. MMWR 58(48):1341-1344. ³ 2009 'Race, Ethnicity, and Language Data: Standardization for Health Care Quality Improvement'. Cheryl Ulmer, Bernadette

See http://www.cdc.gov/vaccines/spec-grps/default.htm#aian

² 2009 Castrodale L. et al. Deaths related to 2009 pandemic

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for more information.

⁵ 2004 Jorde, L., Wooding, S. Genetic variation, classification and

- ⁴ 2004 Winker, M. Measuring Race and Ethnicity: Why and How? JAMA. 292(13):1612-1614
- McFadden, David Nerenz, Eds. Subcommittee on Standardized Collection of Race/Ethnicity Data for Healthcare Quality Improvement; Institute of Medicine. National Academies Press, Washington, D.C.

offend patients is not without merit. In the United States, it is simply not possible to implement collection of race/ethnicity data without invoking some anxieties about racism and racist classifications. Nevertheless, in a survey of physicians and medical staff, the majority felt collecting

standard" for collecting race and ethnicity data and (barring instances where it is not feasible, such as completing a death certificate) should trump all other methods of determination. The belief among point of care staff that asking about race and ethnicity might

be problematic if they could adequately explain why it was being done.³ To diffuse any anxieties it is crucial that the frontline staff collecting this information are fully knowledgeable as to why it is being asked, as well as able to explain why to patients and address their responses. To assist in this regard, the Health

race and ethnicity information would not

Research and Educational Trust (HRET), an affiliate of the American Hospital Association, has developed an extensive web-based toolkit on collecting race and ethnicity (as well as primary language) information from patients. The website can be found at http://www.hretdisparities.org/index.php. Following OMB guidance, the toolkit includes a script for explaining why this information is being collected, real world examples of questions patients have asked, as well as suggested responses for staff.

'race'. Nature Genetics. Supplement 36(11):S28-S33.

Nature Genetics. Supplement. 36(11):S13.

Reporting

⁶ 2004 Collins, F. What we do and don't know about 'race',

'ethnicity', genetics and health at the dawn of the genome era.

¹ 1997 Revision to OMB Statistical Policy Directive No. 15, Race

and Ethnic Standards for Federal Statistics and Administrative

How can race and ethnicity data be collected?

respect for individual dignity should

government. The OMB categories are more commonly known as the "census categories" for race and ethnicity. These include two ethnicity categories ("Hispanic or Latino," "Not Hispanic or Latino"), which OMB recommends asking before race, and a minimum of five race categories ("American Indian or Alaska Native," "Asian," "Black or African American," "Native Hawaiian or Other Pacific Islander," "White").

on race and ethnicity throughout the federal

The government's stated purposed for collecting this information is "...to monitor equal access in housing, education, employment, and other areas, for populations that historically had experienced discrimination and differential treatment because of their race or ethnicity."7 OMB states that these categories are not scientifically based and therefore should not be interpreted as being primarily biological or genetic in reference.

OMB guidance recommends that

guide the data collection process and that an individual should never be told how they should classify themselves. For this reason, self-report is considered the "gold