Healthy People 2010 Vaccine Goal Within Reach

BY SHERRY BOSCHERT

A federal goal of vaccinating 80% of children to protect against 10 preventable diseases by 2010 may be on the verge of being met in all sectors of society, an analysis of national data found.

The proportion of children in various subgroups who received the 4:3:1:3:3:1 vaccine series in the first 18 months of life improved from rates of 47%-59% in 2000 (depending on the sociodemographic group) to 72%-81% in 2008. Discrepancies in vaccination rates decreased in 9 of 12 subgroups that were analyzed using data on 185,516 children in the 2000-2008 National Immunization Surveys. For example, significantly fewer rural residents (52%) received the complete vaccination series in 2000, compared with suburban residents (56%), but by 2008 76% of both rural and suburban children were vaccinated. Although the rate of vaccination among children serviced by public providers improved from 48% in 2000 to 73% in 2008, the 2008 rate remained significantly lower than the vaccination rate among children serviced by private providers (77%).

Each of the 12 subgroups studied showed significant disparities in vaccine coverage in 2000, but this decreased to 4 subgroups by 2008. In all of the subgroups, the discrepancies in vaccination rates that remained in 2008 were relatively small and none exceeded 6%, Zen Zhao, Ph.D., and Elizabeth T. Luman, Ph.D., reported.

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Major Findings: Since 2000, the proportion of children receiving the standard recommended vaccine series in the first 18 months of life has increased; disparities in coverage among population subgroups have decreased.

Data Source: Federal analysis of Centers for Disease Control and Prevention data on 185,516 children in the 2000-2008 National Immunization Surveys.

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By 2008, one subgroup had reached the Healthy People 2010 goal of at least 80% of children vaccinated with at least four doses of diphtheria-tetanus-pertussis, three doses of poliovirus, one of measles-mumps-rubella, three of hepatitis B, three of *Haemophilus influenzae* type B, and one of varicella vaccine. In that subgroup—children with no siblings—81% were vaccinated.

The study was published online (doi: 10.1016/j.amepre/2009.10.035) and appears in the February issue of the American Journal of Preventive Medicine.

The investigators, both researchers at the Centers for Disease Control and Prevention in Atlanta, analyzed data from phone surveys of parents with children aged 19-35 months followed by mail contact with vaccination providers to confirm the immunizations.

Hispanic children consistently had significantly higher vaccination rates (just under 80% in 2008), compared with white children (75% in 2008). The 81% vaccination rate in 2008 for children with no siblings was significantly higher than the rate for children with one or more siblings (75%). Significant differences also were seen between children who lived in poverty (74%), compared with those not in poverty (78%); children of mothers with less than 12 years of education (75%), compared with those whose mothers had more education (78%); and children enrolled in the Vaccines for Children program (78%), compared with children not in the program (73%).

Vaccination rates were no different for black and white children (75% each in 2008) in a multivariable analysis that adjusted for the effects of the other factors studied. Rates for urban and suburban children were statistically similar (77% and 76%, respectively), as were rates for children whose parents were married (77%) or not married (76%), children whose mother was younger than 30 years (75%) or older (78%), and children with one vaccine provider (77%), compared with those who got vaccinated by two or more providers in 2008 (76%).

The increased vaccination rates may be due to a combination of factors in the past decade including improved public knowledge of the importance of immunizations and efforts by pediatricians and public health officials to educate parents about vaccines, suggested Dr. George W. Rutherford, a pediatrician who is head of the preventive medicine and public health group at the University of California, San Francisco (UCSF).

Another factor may be the use of Health Effectiveness Data and Information Set (HEDIS) indicators to audit managed care plans, he said in an interview.

Dr. Jay Tureen, a pediatric infectious disease specialist and hospitalist at UCSF, said in an interview that programs including Vaccines for Children and State Children's Health Insurance Program surely helped increase immunizations. Also, patient reminder systems became more widely used after a 2000 Cochrane review of 41 studies showed that patient reminders (using calls, postcards, or letters) increased vaccination rates by 5%-20% in 33 of the 41 studies (JAMA 2000;284:1820-7).

Dr. Rutherford and Dr. Tureen were not affiliated with the study and said they had no financial conflicts of interest relevant to this topic. ■

Adult Immunization Update Includes HPV, MMR Changes

BY DIANA MAHONEY

Revised recommendations for human papillomavirus vaccination—including a permissive recommendation for young men—and for measles, mumps, rubella immunization are part of the newly issued 2010 immunization schedule from the Advisory Committee on Immunization Practices at the Centers for Disease Control and Prevention.

The new schedule also includes updated indications and schedule information for hepatitis A and B vaccination, as well as clarifications about meningococcal and *Haemophilus influenzae* type B vaccination.

The 2010 Recommended Adult Immunization Schedule earned ACIP approval in October 2009 and reflects current recommendations for the licensed vaccines, according to the schedule's accompanying report (Ann. Intern. Med. 2010;152:36-9). The schedule is approved by the American Academy of Family Physicians, the American College of Obstetricians and Gynecologists, and the American College of Physicians.

The revised schedule includes the following changes:

► For human papillomavirus (HPV), a bivalent vaccine (HPV2) has been licensed for use in females. Therefore, either the bivalent or quadrivalent (HPV4) vaccination can be used for women between 19 and 26 years. In addition, HPV4 may be given to males aged 9 through 25 years "to reduce their likelihood of acquiring genital warts," according to the revised schedule.

► For influenza vaccination, the term "seasonal" has been added to distinguish between seasonal and pandemic influenza vaccines.

► For measles, mumps, rubella (MMR) vaccination, most adults born after 1957 do not require repeat vaccination if they have documentation of having received at least one dose of the vaccine. Women without documentation of rubella vaccination should receive a dose of the MMR vaccine. Health care workers, college students, international travelers, and individuals who have been exposed to measles or mumps in an outbreak setting should receive two doses of MMR.

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The term "seasonal" has been added to distinguish between seasonal and pandemic influenza vaccines.

► For hepatitis A, vaccination is recommended for unvaccinated individuals who anticipate close personal contact with an international adoptee from a country with intermediate or high endemicity to hepatitis A. The first dose should be administered at least 2 weeks before the adoptee arrives.

► For the three-dose hepatitis B vaccine, the second dose should be administered 1 month after the first dose, and the third dose should be administered at least 2 months after the second. If using the combined hepatitis A and B vaccine, three doses should be administered at 0, 1, and 6 months.

► For meningococcal vaccination, the conjugate vaccine (MCV4) is preferred for adults age 55 years or younger, while the polysaccharide vaccine (MPSV4) is recommended for adults older than 55 years. Revaccination with MCV4 after 5 years is recommended for individuals who continue to be at risk for infection, such as adults with anatomic or functional asplenia.

► For *Haemophilus influenzae* type B (Hib) vaccination, there is no recommendation for individuals older than age 5 years. One dose of the vaccine is not contraindicated in certain high-risk patients who have not received the vaccine previously, including those patients with sickle cell disease, leukemia, HIV infection, or splenectomy.

Although vaccines are among the most effective strategies for preventing individual illness and protecting public health, "deaths from vaccine-preventable illnesses still occur in the United States," noted Dr. Robert H. Hopkins Jr. and Dr. Keyur S. Vyas of the University of Arkansas for Medical Sciences, Little Rock, in an accompanying editorial (Ann. Intern. Med. 2010;152:59-60).

Clinicians must overcome patients' perception of vaccines as necessary only for children and travelers, added Dr. Hopkins and Dr. Vyas. "Our challenge is to change this perception and to make immunizations integral to each encounter for physicians who care for adults in primary and specialty care settings."

The complete 2010 Adult Immunization Schedule will be available in English and Spanish at www.cdc.gov/vaccines/recs/schedules/adult-schedule.htm.

Members of ACIP disclosed relationships with MedImmune, Sanofi Pasteur, Novartis, and Wyeth. According to the report, members with conflicts are not permitted to vote if the conflict involves the vaccine or agent being considered.

Dr. Hopkins and Dr. Vyas reported no potential conflicts of interest. ■