

Commissioner's Column

Childhood Immunizations: Successes and Current Challenges

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This year, we celebrate two important milestones regarding childhood immunizations: the fiftieth anniversary of the Salk polio vaccine and the elimination of endemic rubella disease in the United States.

The success of the polio vaccines cannot be overstated. The incidence of paralytic polio in the United States reached a peak of 21,000 cases in 1952. Following a national vaccination campaign, the last case in the U.S. occurred in 1979. Aggressive vaccination campaigns in the 1980s and 1990s resulted in the entire Western Hemisphere being certified polio-free by 1994. Efforts to achieve global eradication of poliovirus are continuing and substantial progress has been made.

In 1989, the Centers for Disease Control and Prevention (CDC) established a goal to eliminate indigenous rubella transmission and congenital rubella syndrome in the United States. To achieve this, a new two-dose schedule of rubella vaccination was recommended. With the establishment of the Childhood Immunization Initiative in 1993, efforts to attain high vaccination levels were intensified, resulting in a decline in the number of rubella cases throughout the 1990s, ultimately reaching record lows. The CDC has now concluded that sustained transmission of rubella has been interrupted in the United States.

Health care providers can take pride in these accomplishments. However, only the maintenance of high immunization levels will prevent resurgence of these diseases. Ensuring that all children receive timely immunizations is one of the best defenses against outbreaks within the community. Between July 2003 and December 2004, 151 cases of pertussis were documented in Westchester County. Among this cluster, 128 cases occurred in children between the ages of 3 weeks to 16 years, with 11 of the children being less than six months old. The remaining 23 cases occurred in adults. The outbreak mainly affected infants too young to be immunized, and adolescents and young adults with waning immunity.

Controlling recent increases in pertussis cases here and in other parts of the country is one of the current challenges we are now facing. Until recently, there was not a pertussis vaccine available in the United States for use in persons aged seven years or older. In May of this year, the Food and Drug Administration (FDA) approved the first combination vaccine for adolescents, which provides a booster immunization against pertussis in combination with tetanus and diphtheria. The vaccine is indicated for use as a single booster dose for children and adolescents 10 to 18 years of age. Due to ongoing concerns of waning immunity, the FDA more recently approved the first pertussis B vaccine for use in adults. The new vaccine is also a combination vaccine that provides a single dose of pertussis with tetanus and diphtheria.

Another challenge before us is protecting adolescents from meningococcal disease. Data from the CDC indicate that meningococcal disease rates begin to rise during adolescence and peak between the ages of 15 to 24 years. Additionally, case fatality rates from the disease are up to five times higher in this age group compared with younger populations. There are now two quadrivalent vaccines available for serotypes A, C, Y and W-135: the meningococcal polysaccharide vaccine that was licensed in 1978 and the new, conjugate vaccine (MCV4), which was licensed this year. The CDC now recommends MCV4 for all children at their routine preadolescent visit. For those who have not previously received MCV4, a dose is recommended at high school entry. Providers participating in the Vaccines for Children (VFC) program are now able to order MCV4 for qualifying children utilizing the regular VFC order form.

Since the licensure of the varicella vaccine in 1995, the incidence of varicella disease, as well as varicella-related hospitalizations, has fallen significantly. In December 2004, the New York State Department of

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Health amended public health law 2164 requiring varicella immunization for those students who were born on or after January 1, 1994 and who enroll in the sixth grade at the beginning of the 2005-2006 school year. Additionally, the law now requires a history of varicella disease to be documented by a health care provider; parental recall of disease will no longer be accepted as proof of immunity.

There has been continued progress toward reducing childhood diseases through vaccine development, but some challenges still remain. Recent data from the CDC indicate that only 18% of children in the United States receive all vaccinations at the recommended intervals. Adherence to the recommended immunization schedule reduces a child's risk of contracting a vaccine-preventable disease and prevents disease outbreaks. Parents need to be educated on the importance of both timely and completed immunization series. Missed opportunities can be avoided by assessing the child's immunization record at all visits, including sick visits, and administering necessary vaccines as appropriate. Children who are late starters or are behind in their immunizations can be brought up-to-date using the catch-up schedule.

The Vaccines for Children (VFC) and Child Health Plus programs have been instrumental in reducing barriers to childhood immunizations. Eligible children under 19 years of age can receive free vaccines provided by New York State through VFC. All health care providers are encouraged to participate in this vital program. Children under 19 who are not eligible for Medicaid and who have limited or no health insurance can enroll in Child Health Plus.

Westchester County is now part of the New York State Immunization Registry, HealthyShot, which is a centralized database of immunization records. The registry is funded by the federal government and is free to all providers that enroll. Because of the increasing complexity of the recommended schedule and the mobility of the population, it is important that every health care provider participate in the Registry.

Further information on childhood immunizations can be obtained by accessing www.immunize.org, www.cdc.gov/nip, or by calling the Westchester County Department of Health Immunization Action Program at (914) 813-5263. ♦