



Topic: Immunizations

32. Childhood Immunizations

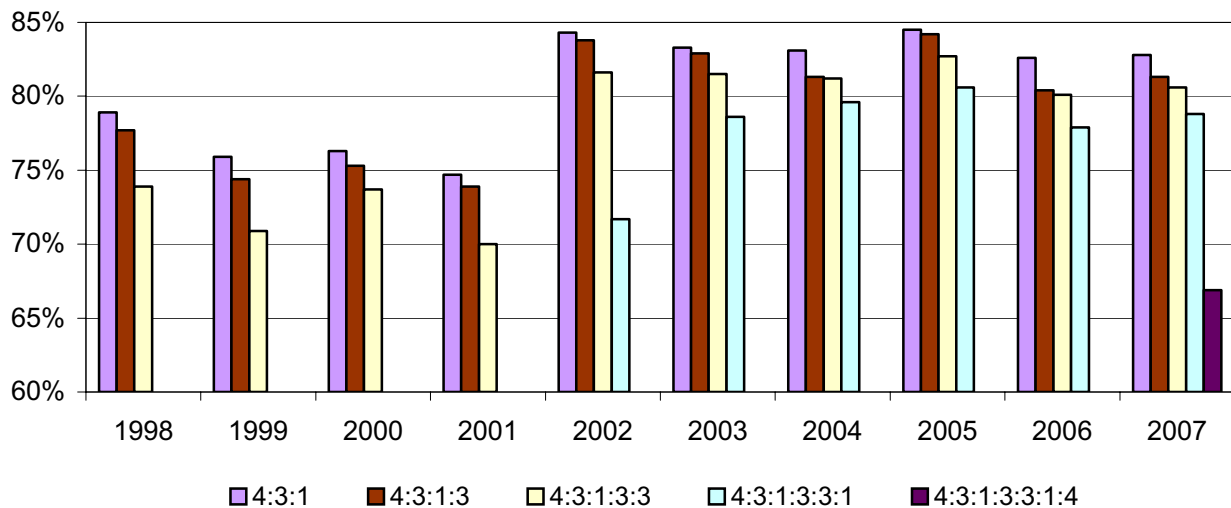
Childhood immunization, the process by which children are rendered immune or resistant to a specific disease, has grown in scope over the years. There are an increasing number of vaccines being licensed and added to the routine immunization schedule resulting in more diseases becoming vaccine-preventable.

The ultimate goal is to eliminate vaccine preventable diseases or at a minimum, reduce the number of serious vaccine preventable diseases occurring in Michigan. Childhood immunizations provide protection against: Diphtheria, *Haemophilus influenzae* type B, Hepatitis A, Hepatitis B, Measles, Mumps, Pertussis (whooping cough), Pneumococcal disease, Polio, Rubella, Rotavirus, Tetanus, Varicella (chickenpox), Human Papillomavirus (HPV), Influenza (flu), and Meningococcal disease.

Prior to 1999, immunization levels in Michigan were measured by the percentage of children who, at two years of age, had received four doses of a vaccine containing diphtheria, tetanus and pertussis components (DTP or DTaP), three doses of polio vaccine, and one dose of a vaccine containing measles, mumps and rubella components (4.3.1). In 1999, three doses of *Haemophilus influenzae* type B vaccine (Hib) and three doses of Hepatitis B vaccine (Hep B) were added to the list of vaccines used to assess the extent to which Michigan’s children were appropriately immunized (4.3.1.3.3). One dose of varicella vaccine and four doses of pneumococcal conjugate vaccine are the most recent vaccines that have been added to the National Immunization Survey (NIS), creating a current standard of 4:3:1:3:3:1:4.

How are we doing?

Percentage of Immunized 19-35 Months of Age Michigan Children



The NIS data from the January – December 2007 time frame indicates that 78.8% of Michigan’s two-year olds were fully immunized using the 4:3:1:3:3:1 standard assessment. If we add in the assessment for 4 doses pneumococcal conjugate vaccine (4:3:1:3:3:1:4) the vaccination level for Michigan is 66.9%.



How does Michigan compare with the U.S.?

Results for the NIS conducted from January through December of 2007 showed that the 4:3:1:3:3:1 vaccination coverage level for children aged 19 through 35 months in Michigan was 78.8% ($\pm 6.7\%$). The national average was 77.4% ($\pm 1.1\%$). The 4:3:1:3:3:1:4 coverage level for Michigan is 66.9% and nationally the level for the same measure is 66.5%.

Michigan has come a long way in protecting children from vaccine-preventable diseases. Michigan now has the twelfth highest immunization rate compared to other states. In 1994, Michigan had the lowest immunization rates in the country (61%) for the 4:3:1 assessment.

How are different populations affected?

Using the Michigan Care Improvement Registry (MCIR) as a data source, the vaccination coverage levels for blacks are about 9% lower than the coverage levels for whites in Michigan for the 4:3:1:3:3:1 assessment.

What is the Department of Community Health doing to improve this indicator?

The Department is working to increase childhood immunization. The federal Vaccines for Children (VFC) and the MI-VFC programs make vaccines available to children from low-income families. This eliminates a major financial barrier to children being vaccinated. In 2007, 2,305,549 doses of vaccine were distributed from the Michigan Department of Community Health. All recommended vaccines are available for eligible children.

The Michigan Care Improvement Registry (MCIR) is a statewide registry of immunizations administered to children and adults that can be accessed by approved users anywhere in the state to reduce missed opportunities. In addition to maintaining an immunization record for each person, MCIR generates recall letters for individuals. Providers and local health departments can generate profiles of the immunization levels in their clinic or community to determine whether additional interventions should be developed. MCIR contains over 57 million shot records on more than 4.7 million citizens.

It is important for parents to receive accurate information about vaccines so they can make informed decisions about their children's health. Federal law mandates that Vaccine Information Statements must be given to individuals or parent(s) to read prior to any immunization of their children. In addition, the Department produces informational pamphlets on immunization and specific vaccines. Information on new vaccines, vaccine schedules, and appropriate storage and handling of vaccines is made available to providers through newsletters, seminars, conferences, videoconferences and the MDCH website (www.michigan.gov/immunize). Immunization field representatives work with local health departments to encourage immunization as part of maternal and child health services.

Additional focus has been put on assuring that adolescents are age appropriately vaccinated. Several vaccines have now been licensed such as Meningococcal, Tdap, which provides protection against pertussis (whooping cough), and human papillomavirus for girls.

The Migrant Outreach and Immunization Services program works to assure that all children (birth – 18 years) served in Migrant Health Centers are age-appropriately immunized, and that all immunizations (historical and newly administered) are entered into the Michigan Care Improvement Registry (MCIR).

The Department provides testing services for the diagnosis of many vaccine-preventable diseases. This is essential in assessing vaccine failure and disease control in unvaccinated populations.