

Over a Third of Young Children in Michigan are Susceptible to Vaccine Preventable Diseases

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Before children are two years of age, the Advisory Committee on Immunization Practices (ACIP) recommends vaccination to prevent 14 infectious diseases: measles, mumps, rubella, varicella, hepatitis A, hepatitis B, diphtheria, tetanus, pertussis, *Haemophilus influenzae* type B (Hib), polio, influenza, rotavirus, and invasive pneumococcal disease. Vaccines are our best defense against these infections, which may cause serious complications, even death. A Centers for Disease Control and Prevention (CDC) analysis conducted in 2014 concluded that routine childhood vaccination will prevent 322 million cases of disease and about 732,000 early deaths among children born during 1994–2013 in the United States.¹

To monitor immunization coverage among children aged 19 through 35 months in the United States, the CDC conducts the National Immunization Survey (NIS). The NIS is a telephone survey of parents followed by a mailed survey to children's immunization providers that began data collection in 1994. When the first NIS data were released, Michigan had the lowest immunization coverage in the nation. In response, the Michigan Department of Public Health (now the Michigan Department of Health and Human Services, or MDHHS) implemented several initiatives to increase immunization coverage including an immunization campaign (Immunize Your Little Michigander), the creation of the Michigan Advisory Committee on Immunization (MACI), and development of the statewide immunization registry (the Michigan Childhood Immunization Registry, now the Michigan Care Improvement Registry, or MCIR). The federal Vaccines for Children (VFC) program, launched in 1994, supported our efforts to increase children's vaccination rates.

Michigan's immunization coverage subsequently increased and in the past 20 years we have not ranked at the bottom of the NIS standings again – in fact, in 2009 and 2010 we had the 5th highest coverage in the nation. In August 2015, data from the 2014 NIS survey were released and Michigan was ranked 47th in the nation with 65 percent vaccination coverage; the survey reported a 5 percent decrease in coverage from the 2013 point estimate.² While there are limitations to surveys, the MCIR has become a reliable tool for assessing childhood vaccination coverage and these data also show a slight decrease in 19 through 35 month vaccination coverage.

Following the release of the 2014 NIS data, the MDHHS Division of Immunization has endeavored to understand why immunization coverage is dropping in Michigan's children. An increasingly complicated vaccination schedule, increased number of vaccines recommended, alternative vaccination schedules, and a reduction of VFC providers are some of the challenges faced by today's immunization providers and parents.

MCIR data show that many children in Michigan are not receiving their vaccines on time.

To help pinpoint when kids are missing their vaccines the MCIR team assessed vaccination status for one month cohorts of kids at age 1, 3, 5, 7, 16, 19 and 24 months; these ages correspond to the end of a recommendation period for one or more vaccines. As of March 13, 2016, only 72.0 percent of kids 3 months of age were up-to-date for their recommended vaccines, at 5 months only 65.0 percent kids and at 7 months just over half, 51.1 percent, are up-to-date. National data show that there are two primary factors that contribute to children falling behind from one milestone to the next: (1) some children do not have a vaccination visit during the time period, and (2) some children who had a vaccination visit did

not receive all of the vaccinations that were due, resulting in missed opportunities for simultaneous vaccination.³

Medical providers can use MCIR to assess your practice's vaccination coverage. There are also educational resources available to provider offices, including free education sessions from two MDHHS sponsored programs: the Immunization Nurse Education Program and the Physician Peer Education Project on Immunization. Both programs are approved for continuing medical education credit (visit www.aimtoolkit.org – click on “health care professionals” and “education and trainings”). Each county's immunization coverage can be found on the county immunization report cards (available at www.michigan.gov/immunize - click on “Local Health Departments”).

New strategies are being explored by MDHHS to increase vaccination coverage. The MCIR team encourages healthcare providers to ensure that all of your patients are protected from vaccine-preventable diseases and to implement evidence-based strategies for increasing immunization rates in your practice (see <http://www.thecommunityguide.org/vaccines/index.html>).

1. Whitney CG, Zhou F, Singleton J, Schuchat A. [Benefits from immunization during the Vaccines for Children program era—United States, 1994–2013](#). MMWR Morb Mortal Wkly Rep 2014;63:352–5.
2. Hill HA, et al. [National, State, and Selected Local Area Vaccination Coverage Among Children Aged 19-35 Months – United States, 2014](#). MMWR Morb Mortal Wkly Rep 2015; 64(33);889-896.
3. Luman, Elizabeth, PhD, Chu, Susan, PhD, MSPH. [When and Why Children Fall Behind with Vaccinations: Missed Visits and Missed Opportunities at Milestone Ages](#). Am J Prev Med 2009;36(2);105–111.