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## PHYSICIAN NEWSLETTER

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### MICHIGAN EMERGING DISEASE WEBSITE

A new state web site provides a centralized place for Michigan physicians and citizens to get information about emerging diseases. The web site is a collaborative effort between the Department of Natural Resources, Department of Community Health, Michigan Department of Agriculture, U.S. Department of Agriculture, and Michigan State University. Previously, separate web sites contained information about Bovine Tuberculosis and West Nile Virus. The new Emerging Diseases web site houses information about these two diseases and several others. The web site provides detailed information about signs and symptoms, transmission, treatment and prevention. This is a valuable tool for the scientific community, the general public and educational community. It will be updated with new information driven by the diseases and their cycles. To view go to:

<http://www.michigan.gov/emergingdiseases>

## **PERTUSSIS CASES INCREASE IN 2003**

A provisional total of 138 pertussis cases were reported in Michigan in 2003, more than twice the number in 2002. The final 2003 figure may be higher, as several cases are still under investigation. About one-third of cases occurred in infants less than 1 year of age, and another third of cases occurred in adults. All age groups saw an increase in the number of cases from 2002.

Pertussis is a prolonged and sometimes severe cough illness caused by the bacterium *Bordetella pertussis*, which can infect persons of any age. Infection causes a wide spectrum of illness, ranging from mild or unrecognized to severe. Although generally mild in adolescents and adults, pertussis can cause substantial morbidity including weight loss, incontinence, rib fracture, conjunctival hemorrhage, pneumonia, and worsening of pre-existing medical conditions.

Severe pertussis is most common among young infants whose atypical presentation with apnea and bradycardia sometimes results in delays in diagnosis. Infants are at highest risk of complications and death from pertussis. In about two-thirds of reported cases, infants are hospitalized for respiratory and nutritional support, or for complications including seizures and pneumonia. Ten to fourteen deaths from pertussis were reported annually in the United States during the 1990s, primarily among infants.

The reasons for the upswing in cases in Michigan in 2003 are not clear. Several other states have also reported an increase in 2003. Pertussis occurs in cycles with peaks of disease every 3-4 years. Nationally, more than 9,000 cases and 22 deaths from pertussis were reported to CDC in 2002, a peak year. Vaccine-induced immunity wanes over 5 -10 years resulting in increasing susceptibility among persons > 10 years of age. Outbreaks of pertussis occur on a regular basis among populations that have an increasing number of susceptible persons, usually the very young, the unvaccinated, and older children and adults with waning vaccine-induced immunity. Undoubtedly, many cases among adolescents and adults are not recognized.

The focus and highest priority for public health control efforts is on preventing transmission to infants by 1) on-time vaccination of infants with DTaP and 2) antibiotic prophylaxis for infected or potentially infected persons to prevent transmission to infants. Currently, no vaccine to prevent pertussis is available in the United States for persons 7 years of age and older. Additional information on clinical and public health aspects of pertussis is available via the internet at [www.cdc.gov/ncidod/dbmd/diseaseinfo/pertussis\\_t.htm](http://www.cdc.gov/ncidod/dbmd/diseaseinfo/pertussis_t.htm)

## **MDCH TOXIC HOTLINE**

MDCH's Division of Environmental and Occupational Epidemiology maintains a toll free telephone hotline for the general public. Callers can have questions answered about anything related to chemicals and/or environmental exposures, including contaminants in drinking water and fish, formaldehyde in home products, mercury spills, and exposure to cell phone radiation.

The Toxic Hotline is also an excellent toll free way to contact members of the MDCH Chemical Terrorism Unit, who can provide expert consultative services for many issues related to chemical terrorism preparedness and chemical emergencies. For chemical fact sheets, best chemical resources, or support with planning tabletop and full-scale chemical exercises contact Erik Janus [januse@michigan.gov](mailto:januse@michigan.gov) or use the toll free Toxic Hotline number, 1-800-648-6942 (1-800-MI-TOXIC) during business hours Monday through Friday.

## **BIRTH DEFECTS MONITORING, PREVENTION, AND FOLLOW-UP**

The Michigan Department of Community Health (MDCH) has received cooperative agreement funding from the Centers for Disease Control and Prevention (CDC) since 1999 to enhance the quality of birth defects data collection and to support use of data for prevention and intervention activities. Increased emphasis on birth defects surveillance and prevention led to creation of a national Center for Birth Defects and Developmental Disabilities (NCBDDD) at the CDC in April 2001. The following describes Michigan's endeavors in this area.

### **Birth Defects Monitoring**

The Michigan Birth Defects Registry (MBDR) was established by Act 236 of 1988 as a statewide surveillance system to monitor the occurrence of birth defects in children from birth through age two. All Michigan hospitals and cytogenetic laboratories are required by state law to submit data to MDCH on 860 reportable conditions including structural malformations, selected disease processes and genetic disorders. Reporting is supplemented by data from birth and death certificates and from metabolic and hearing screening results. Approximately 8,000 children are added to the MBDR annually. The registry includes demographic data, birth characteristics and diagnostic information on each child along with mortality status and cause of death, if applicable. To date, the registry contains 259,000 reports on 131,000 children received since reporting began in 1992. Cardiac and limb malformations are reported most often. Birth defects affect more than 150,000 infants each year in the United States and are the leading cause of death among children under one year of age. While representing less than 8 percent of all children, roughly 30 percent of all Michigan deaths among children 10 years or younger are to children in the registry. Glenn Copeland of Vital Records and Health Data Development oversees the MBDR. To find statistical birth defect data summaries, please visit [www.mdch.state.mi.us/pha/osr/](http://www.mdch.state.mi.us/pha/osr/) or contact Glenn ([copelandg@michigan.gov](mailto:copelandg@michigan.gov)) to request data by specific geographic region or other demographic parameters.

### **Birth Defects Prevention**

The MDCH birth defects prevention program includes identifying ways to prevent certain birth defects and educating communities and health care professionals about prevention strategies. Up to 70% of neural tube defects (NTD) such as spina bifida and anencephaly can be prevented by daily folic acid intake of 400 micrograms prior to conception and throughout the first trimester of pregnancy. Despite mandatory fortification of the grain supply (with 140 micrograms folic acid/100 grams of grain product) since 1998 and a national folic acid educational campaign spearheaded by the March of Dimes from 1999—2002, we continue to observe approximately 80 Michigan newborns each year with NTD. The number of NTD-affected pregnancies is even greater and includes those resulting in miscarriage or termination. Other birth defects that may be prevented are caused by poorly controlled maternal illnesses such as diabetes mellitus, maternal infections early in pregnancy such as toxoplasmosis and cytomegalovirus or teratogenic exposures such as alcohol. Staff members collaborate with many partners to address prevention including the March of Dimes, reproductive genetic centers, and the National Birth Defects Prevention Network (NBDPN). Some birth defects prevention activities include: a folic acid educational campaign to be launched in January 2004; disseminating informational materials including a free pamphlet, *Preventing Birth Defects—Important Information for Michigan Families*; and promoting national Birth Defects Prevention Month through mass media each January. If you are interested in receiving the 2004 Birth Defects Prevention Month packet please contact Val Ewald [ewaldv@michigan.gov](mailto:ewaldv@michigan.gov)

### **Birth Defects Follow-up**

Follow-up activities include identifying the special needs of children with birth defects, and working to ensure that families are connected with available resources and support systems. Providing  
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information to families in a timely manner while preserving the privacy of birth defects data is a top priority. A study has been conducted in selected Michigan hospitals to help identify the most useful and sensitive approach to follow-up based on gaps in existing referral systems. The program maintains a genetic support group directory and distributes a pamphlet, *Resources for Families of Infants and Toddlers with Special Health Needs* at no cost to hospitals, health professionals and families. Follow-up on infants with NTD is planned beginning in 2004 and a parent handbook is under development. Jane Simmermon, RN, MPH serves as birth defects follow-up coordinator and is available to assist families in finding information or services. For more information please call (866) 852-1247 or e-mail [BDRFollowup@michigan.gov](mailto:BDRFollowup@michigan.gov)

## MCIR ASSESSMENT LEVEL REPORTS

The Michigan Childhood Immunization Registry (MCIR) assessment level report reflects the population-based immunization levels by local public health department jurisdiction since January 1, 2002. The numbers in this report reflect the 19-36 month-old population as recorded in MCIR for the following doses of vaccines: 4 DTaP, 3 polio, 1 MMR, 3 Hib, 3 hep B and 1 varicella. These numbers are a function of the amount of immunization data being provided to MCIR by local health departments, physicians and other health care professionals as well as the actual levels of immunization among this age group of children. Statewide, there has been a 15 percent increase in completion rates in MCIR since January 2002. Michigan continues to make improvements in childhood immunization levels as reflected in MCIR.

19 - 35 months of age for 4:3:1:3:3:1, based on MCIR data

Jurisdiction	May-02	Jul-02	Sep-02	Nov-02	Jan-03	Mar-03	May-03	Jul-03	Sep-03	Nov-03	Jan-04
CHIPPEWA	34%	37%	37%	38%	39%	41%	41%	41%	44%	42%	45%
DELTA-MENOMINEE	57%	59%	59%	56%	57%	58%	60%	61%	64%	62%	64%
DICKINSON-IRON	70%	68%	69%	69%	68%	72%	73%	70%	72%	70%	69%
LMAS	50%	52%	53%	56%	58%	61%	62%	61%	64%	63%	65%
MARQUETTE	57%	56%	54%	53%	52%	52%	53%	55%	59%	62%	66%
WESTERN UP	52%	55%	56%	59%	59%	58%	59%	58%	61%	61%	60%
<b>Region 6 Totals</b>	<b>54%</b>	<b>55%</b>	<b>55%</b>	<b>55%</b>	<b>55%</b>	<b>56%</b>	<b>58%</b>	<b>58%</b>	<b>61%</b>	<b>60%</b>	<b>62%</b>
<b>State Totals</b>	<b>37%</b>	<b>40%</b>	<b>41%</b>	<b>43%</b>	<b>44%</b>	<b>45%</b>	<b>46%</b>	<b>47%</b>	<b>48%</b>	<b>47%</b>	<b>49%</b>

## MINIMUM AGE TO ADMINISTER THE LAST DOSE OF HEPATITIS B VACCINE

On October 15-16, 2003, the Advisory Committee on Immunization Practices (ACIP) voted to change the minimum age the last dose of hepatitis B vaccine (third or fourth dose)\* could be given from 6 months of age to 24 weeks of age. The following indicates the minimum intervals acceptable for administering hepatitis B vaccine:

- One month (28 days minimum) between doses #1 and #2
- Two months (56 days minimum) between doses #2 and #3
- Four months (112 day minimum) between doses #1 and #3 for those older than 24 weeks of age

Dose #3 or 4 must not be given before 24 weeks of age (168 days minimum).

The Michigan Childhood Immunization Registry (MCIR) will be modified to accept the new minimum interval. Please review your written policies/standing orders and update them to reflect the new recommendations. If you have any questions, contact the U.P.'s immunization field representative (Lori Marta at 906-475-5765 x238) or Pat Fineis at [Fineisp@michigan.gov](mailto:Fineisp@michigan.gov) or call 517-335-9443 or 800-964-4487.

\*Babies receiving the birth dose of hepatitis B vaccine and three additional doses of hepatitis B vaccine - - usually due to the use of a combination vaccine - may receive the fourth dose at or after 24 weeks of age.