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Janet Olszewski, Director

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Oral Health In Michigan Third Grade Children

By: Michael Paustian, M.S.

Oral health is essential to overall health and well-being. Poor oral health can contribute to learning difficulties, nutritional deficiencies, and low self-esteem (1). Routine dental visits provide opportunities to prevent or delay dental disease. However, substantial disparities exist in access to routine preventive dental care (2). This includes the use of dental sealants - a transparent or opaque material that covers and protects the pit and fissure surfaces of teeth. Sealants, when retained, provide a cost-effective method of decay prevention (3).

In an effort to improve oral health outcomes, Healthy People 2010 (HP2010) included several health objectives aimed at preventing and treating disease, as well as improving access to dental services (4). The "Count Your Smiles" (CYS) survey was designed to address child oral health outcomes in Michigan that pertain to those HP2010 objectives as well as Title V reporting measures. In addition, CYS provides the first statewide estimates of child oral disease in Michigan and a represents a significant expansion of the Michigan Oral Health Surveillance System.

The CYS survey was a population-based survey of Michigan third grade public school children conducted between October 2005 and February 2006. The study used ordered systematic sampling within study-defined regions as part of an overall probability-proportional-to-size sampling to select a total of 76 schools with third grade populations in excess of 15 students. Oral health program staff used previously developed parent survey and oral screening protocols recommended by the Association of State and Territorial Dental Directors. The parent survey consisted of questions related to the child's access to dental care, while gross clinical examination by dental hygienists provided information on oral disease and need for dental care. The total sample size of CYS was 1,586 children screened, resulting in a 68.6% response rate. Estimates were weighted to represent the total third grade public school population and were adjusted for non-response.

Michigan falls significantly short on all HP2010 goals (Table I). Caries experience was highest in the Upper Peninsula where 70% of children have already experienced tooth decay. Statewide, 28% of children bear 75% of the caries burden, and just 13% of children bear 80% of the untreated caries burden. Uninsured children experience higher rates of untreated dental disease than privately insured children (31% vs. 17%).

Nearly one in ten Michigan third grade children (9.6%) had an immediate need for dental care with signs or symptoms of pain, infection, and/or swelling. A need for immediate care was more prevalent among Hispanics compared to non-Hispanic whites (26% vs. 8%). Regionally, the highest prevalence of immediate dental care needs (17%) was found in the non-Detroit urban areas of the Southern Lower Peninsula. Free and reduced lunch participants and the uninsured had significantly increased odds of having immediate dental needs, odds that were even higher when both factors were present (Figure 1).

Among the 33 states reporting to the National Oral Health Surveillance System in 2006, Michigan had the second lowest proportion of children with sealants present on their first molars (23%). Sealants were least prevalent in the rural population of the Southern

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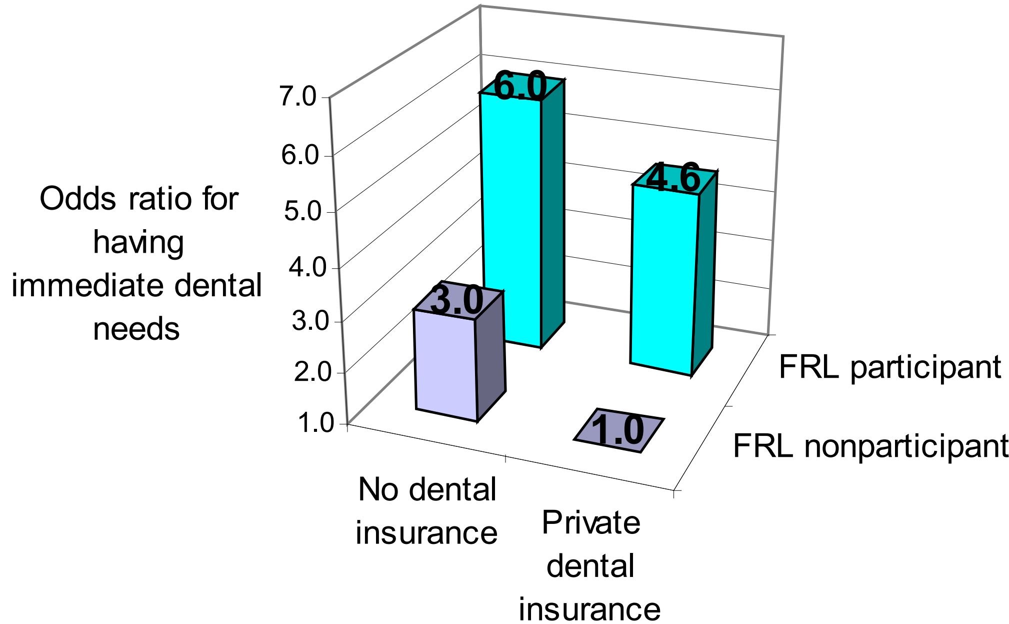
Figure 1: Odds of having immediate dental needs among Michigan third grade children by insurance and free/reduced lunch (FRL) participation, Count Your Smiles 2005-06



For the full Count Your Smiles report and protocol, please visit Michigan's oral health program website at www.michigan.gov/oralhealth. This survey was funded through a cooperative agreement between the Michigan Department of Community Health and the Centers for Disease Control and Prevention.

Lower Peninsula (18%) and among Hispanic children (15%). Not a single demographic or regional group met the HP2010 goal of 50% of children having sealants present on first molars, nor did any of these groups even exceed thirty percent.

The CYS has provided substantial knowledge about the distribution of dental disease in Michigan and about preventive practices aimed at alleviating or preventing disease. This information helps not only to build Michigan's Oral Health Surveillance System, but also provides substantial information that will be used to develop oral health program infrastructure and target oral health programs to populations in need. For instance, the oral health program is currently developing a statewide school-linked, school-based sealant program. This is an initial step in changing the infrastructure for oral health from a treatment-focused system to one of prevention.

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TABLE I: Healthy People 2010 Oral Health indicators, target levels, and most recent status in the United States and Michigan

	Target	Michigan 2005-06	United States 1988-94
Healthy People 2010 Objective	**%**	**%**	**%**
21-1b: Reduce the proportion of children who have dental caries experience in their primary or permanent teeth, age 6-8 years.	42%	58%	52%
21-2b: Reduce the proportion of children who have untreated dental decay, age 6-8 years.	21%	25%	29%
21-8: Increase the proportion of children who have received sealants on their molar teeth, age 8 years.	50%	23%	23%

Flu and Technology: Standing ready for seasonal and pandemic influenza preparedness!

By: Elizabeth Harton, M.H.H.S., M.P.H., C.H.E.S.

Public Act 91 of 2006 outlines the Michigan Care Improvement Registry (MCIR), a lifespan immunization repository for Michigan residents. MCIR is useful in practical applications such as being able to "flag" high risk patients, notifying healthcare professionals that a person is in a priority group for flu vaccine, and in the future will allow healthcare professionals to recall or remind patients when to get a flu vaccine. MCIR will also be instrumental in tracking vaccine and antivirals used to prevent and treat a novel influenza virus.

MCIR and Seasonal Flu

Through MCIR, healthcare providers can download Vaccine Information Statements, commonly referred to as VIS. VIS are information sheets produced by the Centers for Disease Control and Prevention (CDC) to clarify vaccine benefits and risks to patients, parents, or their legal representatives. Federal law requires that VIS be provided when vaccinations are given. In Michigan, it is important that patients are given the Michigan-specific VIS, because they contain information about MCIR and inform recipients that their data will be entered into MCIR.

Through MCIR, healthcare providers are able to electronically assess child, adolescent and adult immunization records and add immunization information such as the date a flu vaccine is given, lot number, injection site, and clinic information.

The Influenza Vaccine Exchange Network (IVEN) is available in MCIR for immunization providers. The Flu Advisory Board created IVEN, a centralized location where providers can share information about their influenza vaccine inventory. IVEN facilitates vaccine redistribution and can be used by licensed physicians, their staff, local health departments, pharmacy staff, nursing homes, hospitals, and other health care providers to post and search for surplus or needed influenza vaccine. IVEN is only accessible to sites that are registered to use MCIR. More information on IVEN is available at: www.michigan.gov/flu.

All Hazards and Pandemic Influenza Preparedness

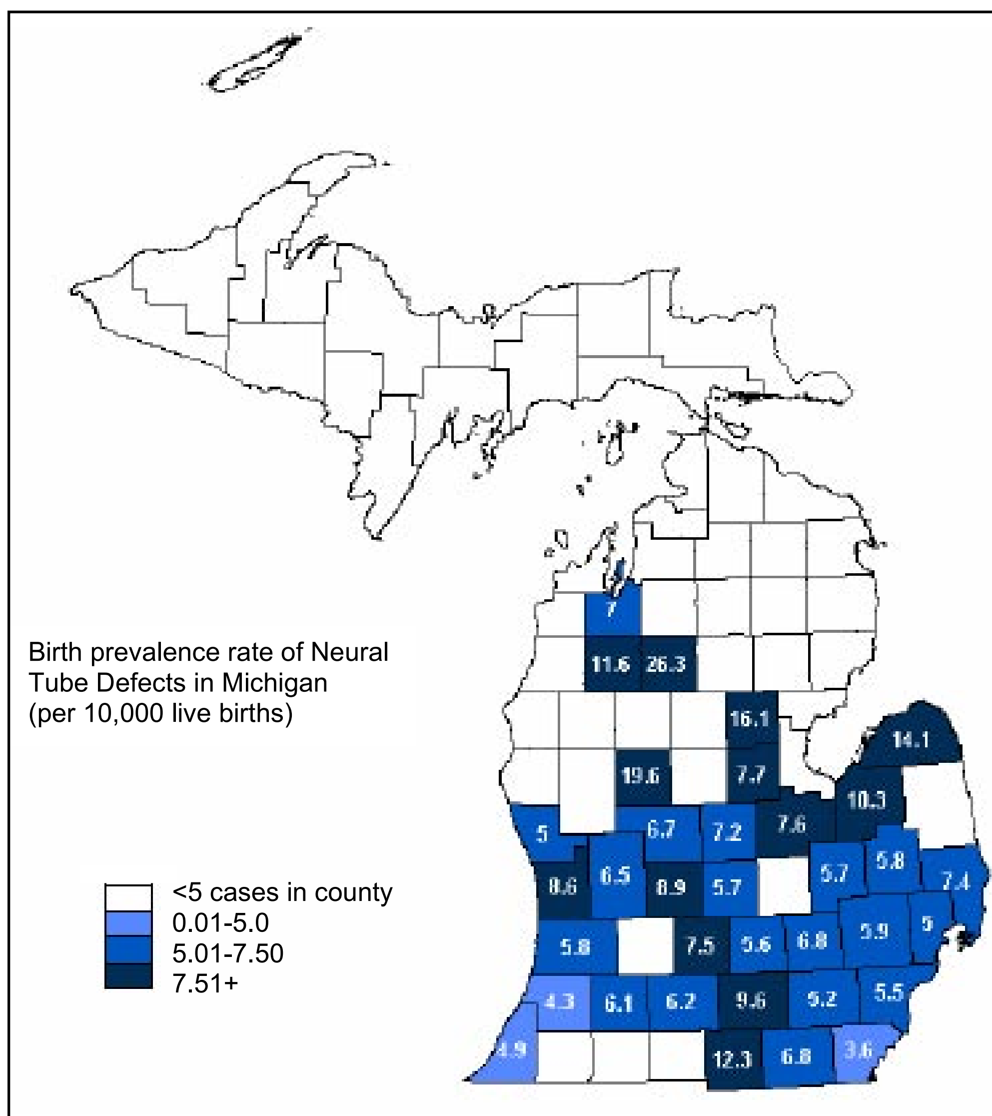
In a public health emergency such as pandemic influenza, the MCIR All Hazards module will serve a useful role in tracking persons treated, and/or provided prophylaxis as a result of an emergency. The state will be able to quickly assess and monitor antiviral, pre-pandemic vaccine, and pandemic vaccine use by recipient tier groups. MCIR linkages to VAERS (Vaccine Adverse Event Reporting System) and AERS (Adverse Event Reporting System) support post-marketing safety surveillance for approved vaccine and drug products. IVEN will allow for redistribution of vaccine during a pandemic response. MCIR's tracking function will allow local health departments to maintain accurate, real-time patient data, and also serves as a record-keeping mechanism for short and long-term event recovery. The Division of Immunization will activate the All Hazards module when there are confirmed outbreaks overseas (Federal Stage 2), i.e., evidence of increased person-to-person transmission (World Health Organization Phase 4). At this point, the system will be operational immediately. During this phase, All Hazard Scan forms will be distributed and used to document vaccines and antivirals administered.

Protecting the Health of Michigan Babies- Folic Acid Outreach in Selected Michigan Counties

By: Joan Ehrhardt, M.S.

The Michigan Birth Defects Program is working to increase the awareness and consumption of folic acid among women of childbearing age. With the support of a Community Awards Grant from the March of Dimes, Michigan Chapter, multivitamins are made available, at no charge, to women receiving services through participating WIC and Planned Parenthood clinics in counties with a high rate of Neural Tube Defects (NTDs). Neural Tube Defects, like anencephaly and spina bifida are severe birth defects of the brain and spine. With nearly 1,000 NTDs reported the to the Michigan Birth Defects Registry (MBDR) for 1992 – 2003, the Michigan statewide birth prevalence of Neural Tube Defects (NTDs) is 5.8 per 10,000 live births. The chance of having a child affected with NTD is higher in certain populations. Hispanics, particularly those of Mexican descent, are at 50% to 200% higher risk of having a NTD-affected pregnancy (9-16/10,000 live births) than are non-Latino Whites (6/10,000) and African Americans (5/10,000).

Many Michigan counties have a higher NTD rate. Preconceptional folic acid consumption of 400 mcg daily can reduce the incidence of NTDs by up to 70 percent. The Michigan Pregnancy Risk Assessment Monitoring System (PRAMS) Survey of women giving birth in 2003 found 29% of Michigan women age 18-45 years report consuming a multivitamin daily, a little less than the national average of 33% reported by the March of Dimes 2005 Gallup poll.



These results illustrate the continuing need to increase awareness and consumption of folic acid among women of childbearing age.

Lack of awareness, cost, and inconvenience are some of the reasons women fail to take this simple, preventive measure to protect the health of future babies. This project addresses these barriers and should result in increased folic acid awareness and use and, ultimately, to a decrease in the incidence of NTDs. One way to measure the socioeconomic impact of NTDs is through the experience of the Children's Special Health Care Services Program (CSHCS). This program covers specialized medical care, supplies and services for children with eligible medical diagnoses from birth through age 21. Data from CSHCS reveal that expenditures for 580 beneficiaries with NTD amounted to 3.9 million dollars in fiscal year 2004, for an average cost of $6,700 per beneficiary. Thus, even a relatively small increase in folic acid utilization by women of reproductive age could have substantial economic benefit.

Free multivitamin distribution currently is ongoing in about a dozen clinics in the Michigan counties of Jackson, Kent, Mecosta, Ionia, Ottawa, Branch, Hillsdale, St. Joseph and Oceana, in which staff were trained to counsel non-pregnant women about the importance of taking folic acid before pregnancy. These counties were selected for outreach based on

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NTD rate and local agency willingness to participate. To assure consistency in staff knowledge of purpose, protocol and delivery of the folic acid message to clients, standardized training is provided to clinic staff. Educational materials (for the client) are supplied by the program. Trained staff distribute a free, three-month supply of multivitamins with 400 mcg folic acid to non-pregnant female clients of childbearing age. Multivitamin recipients are counseled one-on-one and given written materials. Clients accepting multivitamins are asked to complete an informed consent form, and are given the option to provide contact information to be contacted by telephone for project evaluation. A brief (eight item) telephone survey to determine recall, frequency of vitamin usage, and identification of barriers to daily consumption is administered to vitamin recipients approximately four months following receipt of multivitamins.

The priority outreach target area for expansion is the northern lower peninsula of Michigan. Regionally, this part of Michigan has the highest NTD rate. This target area includes the counties of Leelanau, Grand Traverse, Benzie, Emmet, Cheboygan, Presque Isle, Charlevoix, Antrim, Otsego, Montcalm, Alpena, Kalkaska, Crawford, Oscoda, Alcona, Iosco, Ogemaw, Roscommon, Missaukee, Wexford and Manistee. A second priority is increasing outreach to the Hispanic population.

Staff trainings were completed for four Planned Parenthood and two WIC clinics. Trainees (n=35) included Dietitians, Nutritionists, Registered Nurses, Nurse Practitioners, Social Workers and Medical Assistants. Increases in knowledge were found for 15 of 16 parameters. More than five thousand bottles of multivitamins have been distributed. Multivitamin recipient survey completion (n=399) was complicated by a high rate of disconnected/changed contact numbers, resulting in a ratio of six attempts to one completed survey. Results showed an increase in multivitamin consumption. A majority correctly recalled that folic acid may prevent birth defects.

Results of provider pre- and posttests from this project confirm others' findings: ongoing education of health providers is needed to address continuing gaps in knowledge and awareness of the benefits of folic acid. Providing multivitamins as part of routine healthcare for women of childbearing age appears to be an effective method for increasing folic acid consumption in this high-risk target population. One-on-one education given by a trained healthcare provider reinforces positive health behaviors. The integration of folic acid education into routine clinical services benefits all women of reproductive age.

Bureau of Epidemiology Surveillance Section

"Surveillance is the systematic, ongoing collection, analysis, interpretation, and dissemination of communicable disease data" (Source: CDC). It is at the center of public health practice. Even the simplest epidemiologic study could not be completed in its absence. In October, 2000, the Michigan Department of Community Health, Bureau of Epidemiology created the Surveillance Section to enhance its already existing programs. The section's central staff members are based in Lansing and regional epidemiologists are housed throughout the state.

Though the Surveillance Section has seen many successes, one of the most notable is the creation and implementation of the Michigan Disease Surveillance System (MDSS) in June, 2004. Brad Carlson currently coordinates the MDSS project for MDCH. The system is utilized by every local health department in the state, as well as an ever-increasing number of health care providers and laboratories. Currently, there are 598 local health department users, 233 health care providers and four laboratories actively using the system. The overarching goal of the MDSS is to connect local, state and federal disease control efforts using a secure system that allows for transfer, maintenance and analysis of reportable disease information. MDSS is paving the way for a number of states as they develop their own web-based reporting systems that are being built on established MDSS architecture. As one of their primary responsibilities, regional epidemiologists are tasked with principle support for the MDSS at the local level.

Also on the cutting edge is the Surveillance Section's implementation of the Emergency Department Syndromic Surveillance System (EDSurv). This system provides a real-time view of the chief complaints of millions of individuals presenting to community emergency departments across the state. The objective of EDSurv is to detect bioterrorism, emergent infectious disease, and naturally occurring outbreaks more rapidly than through normal physician detection and reporting. Daily review of this system is another one of the primary responsibilities of regional epidemiologists.

The Surveillance Section has eight regional epidemiologists, one for each of the state's Bioterrorism Preparedness regions. These epidemiologists are stationed at local public health departments or in one case, at a regional Health Resources and Services Administration (HRSA) preparedness office.

The regional staff contribute many services to the local health departments they serve, their respective regions and the state of Michigan as a whole. One of the functions of the group is to provide much needed epidemiologic

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support for local jurisdictions. In Region 1, Susan Bohm assisted local public health and the MDCH Communicable Disease section with several norovirus outbreak investigations, including the largest restaurant outbreak of 2006. Additionally, she conducted a five-year retrospective analysis of infant mortality data to characterize deaths and identify disparities. Another regional epidemiologist, Scott Schreiber from Region 8, collaborated with researchers at Lake Superior State University on a Blastomyces dermatitidis study. Using various sources, they identified cases of blastomycosis in both humans and dogs. The research ultimately resulted in the generation of maps that were used to target areas of increased case incidence for soil sampling. Another project encompassed all of West Michigan. At the request of a local health department medical director, Elizabeth Lewis of Region 6 and Kim Kutzko of Region 5 extracted historical case reports for a giardiasis study that contributed to an enhanced surveillance project at one local public health agency. This project also demonstrated the need for a centralized disease surveillance repository. With the aid of the MDSS as a resource, such a study can now be conducted with remarkable efficiency.

In addition to providing epidemiologic support, regional staff also assist in preparing for naturally occurring epidemics such as pandemic influenza, bioterrorist events and other public health emergencies. Regional epidemiologists participate on preparedness boards and committees, help with pre-hospital and hospital surge capacity planning, and provide assistance in other arenas. Kim Kutzko, for example, assisted Region 5 in designing, developing and administering various tabletop exercises, including one that addressed a real-time Hepatitis A outbreak. Informational trainings are also frequently provided. Tim Bolen, of Region 3, presented on Pandemic Influenza at several local and regional symposia that were attended by key leaders in both the public and private healthcare fields.

Though epidemiologic and preparedness support is integral to the role of the regional epidemiologist, the key is surveillance. Each of the regional epidemiologists reviews the MDSS, EDSurv and over-the-counter drug sales projects daily in order to detect potential epidemics. Though these systems have yet to detect a bioterrorism event, they have clearly demonstrated their utility as a public health resource. For example, Carla Marten in Region 2 North was able to identify a case of Neisseria meningitidis meningitis when a spike in emergency department visits occurred as contacts of the index case sought post-exposure prophylaxis. Joyce Lai, in Region 2 South, noted a rise in visits for varicella vaccination after a local health department handed out pamphlets on the subject and local media inappropriately reported an outbreak. Joyce and Carla are also responsible for the Special Events Surveillance reports that are provided as an adjunct to the many large-scale events in the Detroit metropolitan area. Roger Racine (Region 7) also produces Special Events Surveillance every year during the Traverse City Cherry Festival.

Rounding out the Lansing-based staff, Teri Lee Dyke and Dawn Sievert contribute valuable expertise to areas including anti-microbial resistance, personal protective equipment and hospital infection control. It is Surveillance Section personnel that have led the state effort toward the integration of surveillance and public health response systems that address our highly trafficked international and inter-state borders. Kathy Allen-Bridson, with the support of Michelle Bruneau, has coordinated multiple agencies in the implementation of the Great Lakes Border Health Initiative. Geographic Information Systems Specialist Ed Hartwick supports the integration of geospatial content with many of the section's surveillance activities. Morgan Stocking provides the critical programmatic support necessary to keep such a geographically and programmatically dispersed staff functioning efficiently.

With all of these activities, the Surveillance Section has become an integral part of the Bureau of Epidemiology. The staff provides increased surveillance and improved disease detection while contributing resources, augmenting skills and enhancing epidemiologic capacity at each of Michigan's local public health departments and regions. Jim Collins manages the Surveillance Section.

Save The Date

The Great Lakes Border Health Initiative (GLBHI) has announced that its annual conference will be held on June 13-15, 2007, at the new state-of-the-art conference center in Niagara Falls, New York (www.niagrafalls-cc.com).

This year, thanks to a grant provided by the Canadian Embassy, the Michigan Department of Agriculture, the National Food Safety and Toxicology Center and Michigan State University will be partnering with GLBHI to offer a breakout session track on Food Defense and Safety, which may broaden the conference's appeal not only for the traditional cadre of public health workers, laboratory technicians, hospital employees and first responders, but also to local and national food safety and defense experts.

Plenary topics and other breakout session track topics will be available soon on the Great Lakes Border Health Initiative website (www.michigan.gov/borderhealth), along with the official agenda and registration information.

For more information, or to be added to the GLBHI mailing list, please contact Kathy Allen-Bridson at (517) 335-8199 or allen-bridsonk@michigan.gov, or Michelle Bruneau at (517) 335-6533 or bruneaum@michigan.gov.

Reducing Asthma Mortality in Michigan, A Case Study

By: Kenneth D. Rosenman, M.D. and Elizabeth Hanna, R.N.
Department of Medicine, Michigan State University

CDC funds Michigan to investigate the causes of asthma mortality in Michigan residents, ages 2-34. The following case study is an abstracted summary of a MDCH/MSU asthma death investigation. For more information on this project, visithttp://oem.msu.edu//AsthmaMortRpt_all.pdf.

A preteen female died from asthma in the summer. Her grandmother was interviewed and said the deceased was diagnosed with asthma at age four. The deceased went to the Emergency Department (ED) four times in the year before she died. The grandmother said the deceased did not go to "well visits" at a primary care physician office but used the ED for primary care. The grandmother said the deceased had Medicaid insurance with no co-pay. The deceased had no other medical conditions.

The circumstances that surround the death were as follows. The grandmother said the day before she died the deceased had played all day running and riding her bike. When the deceased would have an attack it normally happened late at night when she was sleeping. The deceased went to bed around 9:30 pm or 10:00 pm. The grandmother woke up to the sound of the deceased crying in the bathroom. The grandmother got up and the deceased was on the toilet crying, "I can't breathe." The deceased's mother hooked up the breathing machine. The grandmother carried the deceased to the mother's room. The deceased was sitting on the grandmother's lap and wouldn't let the mother give her the breathing treatment. The deceased continued to knock the mask off and resist the treatment. The deceased then began to vomit up phlegm. She stiffened up and locked her jaw making it impossible for the family to administer CPR. The ambulance took so long that the grandmother put the deceased in her car and took her to the ED. The medical records stated the mother brought the deceased to the ED unresponsive with no pulse and no respirations. The mother stated she had not been breathing for the last 20 minutes. She said the deceased had an asthma attack and did not respond to Albuterol. CPR was started in the ED at 3:52 am. The patient was intubated and an IV was started. ACLS medications were given. The code was called at 4:15 am. The autopsy stated the cause of death was acute bronchial asthma. The parenchyma was pink, hyperinflated and cut surfaces exuded mucous plugs from small airways. The microscopic examination showed bronchiolar smooth muscle hyperplasia, eosinophil infiltrates and mucous plugs. Toxicology was negative for alcohol and illicit drugs.

The grandmother said the deceased went to the ED two days prior to her death. The medical records stated she needed a refill for Albuterol. She denied difficulty breathing or discomfort. Her medications at home included an Albuterol nebulizer. She received two Albuterol treatments in the ED. Her lung sounds showed occasional wheezing. Her pulse ox was 93% on room air and 95% after two breathing treatments. She was discharged home with a prescription for Albuterol. The grandmother did not know if the deceased saw an Allergist or a Pulmonologist. She said the deceased went to the ED for asthma two times in the year before her death and about six times in her life. The grandmother said the deceased was hospitalized two times in the year before death. The medical records showed one hospitalization 13 months prior to death. The grandmother said the only asthma medication the deceased took was the breathing machine as needed. She usually took a treatment at least once every night. The records from one pharmacy showed the deceased had a prescription filled for Prednisolone 15 mg/5 ml syrup four months prior to death.

The grandmother said the deceased did not have a peak flow meter. She said there was not an exposure or event that triggered the fatal asthma attack. The grandmother said the deceased did not have a written asthma plan or an asthma education course. She also did not receive training on how to use her asthma medication. The grandmother said the deceased mostly went to the ED for her asthma care about three to four times per year. The deceased did not smoke but was around smoke at home. The deceased's grandmother and an aunt had asthma. There was a cat in the home. The grandmother said the deceased was never advised to avoid asthma triggers. The grandmother was the primary caregiver for the deceased and her health issues included asthma, diabetes and hypertension. She said the deceased never missed school because of her asthma and did not receive treatments at school for her asthma. In addition to Medicaid, the grandmother said the family received food stamps and SSI. The total family income was less than $10,000. The interview was held in the home of the deceased. The cleanliness was average. The deceased's BMI was approximately 45th %.

The correct answers to the following two questions summarize the expert review panel's consensus on the risk factors and interventions that were most likely needed to prevent this child's death.

1. The best approaches to keep patients from repeatedly using the emergency department for their asthma care include all of the following except?

   a) Prescription of maintenance therapy such as steroids

   b) Case manager assigned by their health insurance company

   c) Education of family and the patient

   d) Prescription of a nebulizer

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An Update on 2006-2007 Influenza Season Surveillance

By: Susan Vagasky, D.V.M.

So far, the 2006-2007 Michigan influenza season can be characterized as relatively mild, having a late onset and being dominated by the influenza A (H1N1) strain, which mirrors the nationwide activity reported by CDC. The first culture-confirmed case of influenza in Michigan was on November 17, 2006. Flu-like illness and influenza reports to the Michigan Department of Community Health (MDCH) started to increase in late December and early January and have been increasing in the past month. The following data is current as of February 15, 2007, unless otherwise noted.

Michigan Disease Surveillance System: The last week has seen an increase in both aggregate flu-like illness and individual influenza reports to the local health departments. The current flu-like illness reported levels, however, are comparable to that seen at this time last year. Since October 1, 2006, 193,450 reports have been entered into the weekly aggregate counts by local health departments, and over 400 individually confirmed cases have been reported.

Among 440 individual cases reported into MDSS from October 1, 2006 to February 8, 2007, the mean patient age was 19.5 years, with a median patient age of eight years. Case distribution was Southeast, 55.4%; Central, 22.4%; Southwest, 17.4%; and North, 4.8%. Among cases in which the influenza strain was reported (n=425), 79.8% was influenza A, 19.3% was influenza B, and 0.9% was positive but type unknown. Fifty-seven reported cases were hospitalized, with a median age of nine years. Forty-eight (84.2%) hospitalizations were in individuals aged either ≤ 10 years or ≥ 50 years. The method of testing was available for 322 cases, of which rapid antigen testing accounted for 60.2%, viral culture 26.4%, and direct fluorescent antibody 9.6%. Since local health departments are not required to individually report influenza cases, these numbers may not be representative of the full extent of influenza infections in the state.

Emergency Department Surveillance: Emergency department visits due to constitutional and respiratory complaints increased this past week. The levels reported are consistent with levels reported this time last year. Three constitutional alerts in Regions 5(1), 6(1), and 7(1) and three respiratory alerts in Regions 1(1), 5(1), and 6(1) were generated last week.

Over-the-Counter Product Surveillance: OTC product sales generally remained steady or saw a slight increase (chest rubs, children's electrolytes, and internal nasal products). However, the indicators levels are comparable to those seen at this time last year, except for the adult and pediatric cold relief liquid, which seem to be holding about 1-2% below its percentage of total sales for this time last year.

Sentinel Surveillance: During the week ending February 10, 2007, the proportion of patient visits to sentinel healthcare providers due to influenza-like illness (ILI) increased to 1.9% of all visits, representing 139 cases of ILI out of 7,470 total patient visits; twenty-seven sentinels provided data for this report. On a regional level, the largest increase in the percentage of visits due to ILI occurred in the Central surveillance region. The percentage of visits due to ILI in each of the surveillance regions is 3.8%, Central; 0.9%, North; 0.2% Southeast; and 1.5% Southwest. Note that these rates may change as additional reports are received.

Laboratory Surveillance: For the 2006-2007 influenza season, there have been 78 culture-confirmed cases from the MDCH Lab:

- 52 A:H1N1 (Southeast [18], Southwest [18], Central [11], North [5])
- 1 A:H1,N pending

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"A Case Study"

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e) Elimination of exposure to asthma triggers

2. Frequent use of emergency room for asthma care in this patient is an indication of?

 a) Poor planning by the patient

 b) Lack of insurance

 c) Psychological disease

 d) Abuse by adult care giver

 e) Increased risk of mortality from asthma

For the answers to these questions, please turn to page 13.

Michigan Awarded Funding to Enhance Vital Records Automation

On January 25, 2007, Health and Human Services (HHS) Secretary Mike Leavitt awarded $103 million to 27 states for the adoption of innovative methods to improve effectiveness and efficiency in providing medical assistance under Medicaid. Included in Michigan's award were funds totaling nearly $4 million for the "Expansion of Vital Records Automation and Integration into Medicaid." This project aims to: 1) improve birth fact validation capability, 2) improve reliability of Medicaid Birth Registry System (BRS) search results, 3) link death records to birth records, and 4) upgrade interface screens. The new enhancements will greatly improve the vital records automation process, providing rapid, efficient, complete, accurate and reliable data on Michigan residents.

For more information on the Medicaid grant awards, please visit the HHS website at: http://www.cms.hhs.gov/MedicaidTransGrants/

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- 6 A:H3N2 (Southwest [3], North [2], Southeast [1])
- 19 B (Southeast [6], Central [5], Southwest [4], North [3], Wisconsin [1])

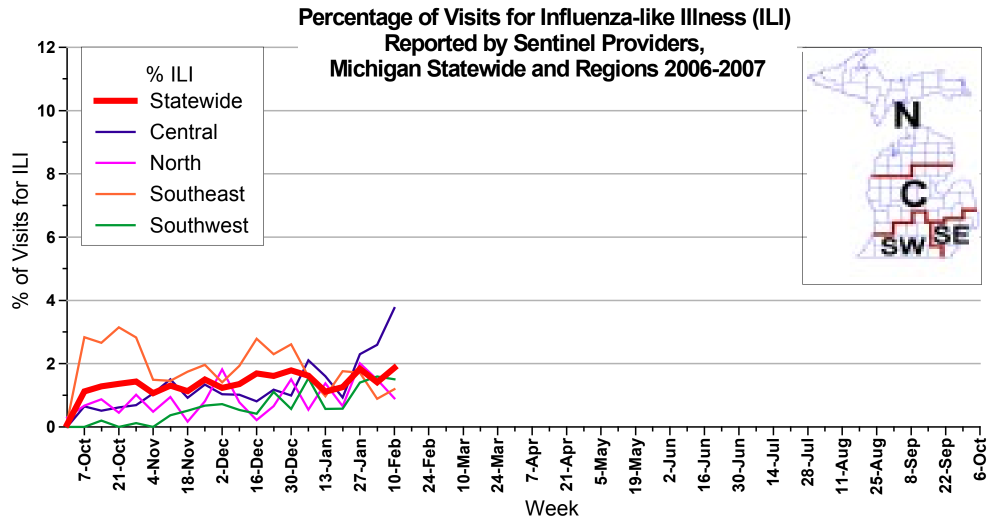
All influenza B cultures have been B/Malaysia, except for one B/Shanghai from the Southeast region. Overall MDCH submission activity is light to moderate. Sentinel laboratories in the Southeast, Southwest and Central regions are reporting a continued steady increase in the number of positive results. Low but steady levels of parainfluenza, adenovirus and respiratory syncytial virus are being reported as well.

Influenza-Associated Pediatric Mortality: For the 2006-2007 season, there are no confirmed reports of influenza-related pediatric mortality in Michigan.

Congregate Settings Outbreaks: No reports were received during the past week. There have been no reports of influenza outbreaks to MDCH for the 2006-2007 influenza season.

Michigan has not yet reached the peak of its influenza season, so there is still an opportunity to get vaccinated. Influenza vaccine is still in stock and readily available in all regions of the state.

For more information and up to date surveillance throughout the influenza season, visit the MDCH website at: http://www.michigan.gov/mdch/0,1607,7-132-2940_2955_22779_40563-138142--,00.html Or visit the Centers for Disease Control and Prevention (CDC) website at: http://www.cdc.gov/flu/weekly/fluactivity.htm.



Office of Drug Control Policy Forms Regional Community Epidemiology Workgroups (CEWs)

The Michigan Department of Community Health (MDCH) Office of Drug Control Policy (ODCP) deals with the health and social effects from the abuse of illegal drugs, alcohol and tobacco. Recently, ODCP received a five-year grant from the Federal Substance Abuse and Mental Health Services Administration (SAMHSA) Center for Substance Abuse Prevention to develop and implement a Strategic Prevention Framework for the State of Michigan. This Strategic Prevention Framework has three goals: 1) Preventing the onset and reducing the progression of substance abuse; 2) Reducing substance abuse-related problems in communities; and 3) Building capacity and infrastructure for prevention at the state and community levels. Deaths and injuries due to alcohol-related motor vehicle crashes have emerged as one high priority area.

A State Epidemiology Workgroup (SEW), chaired by State Epidemiologist Corinne Miller, PhD, has begun compiling data to be used to assess the impact of substance abuse on the state, regional and community levels. These data will be used to prioritize and target intervention activities. The State's sixteen Substance Abuse Regional Coordinating Agencies have been invited to form Community Epidemiology Workgroups (CEWs) for their regions. The CEWs will examine data specific to their own region for targeting and priority setting. These data will also be used to apply to ODCP for intervention funding. CEWs are encouraged to seek out epidemiologists, data analysts, and public health practitioners in the county and local health departments and academic institutions in their Regions.

More information on ODCP and the State Incentive Grant is available at www.michigan.gov/odcp; click on "about ODCP", then "ODCP Strategic Plan."

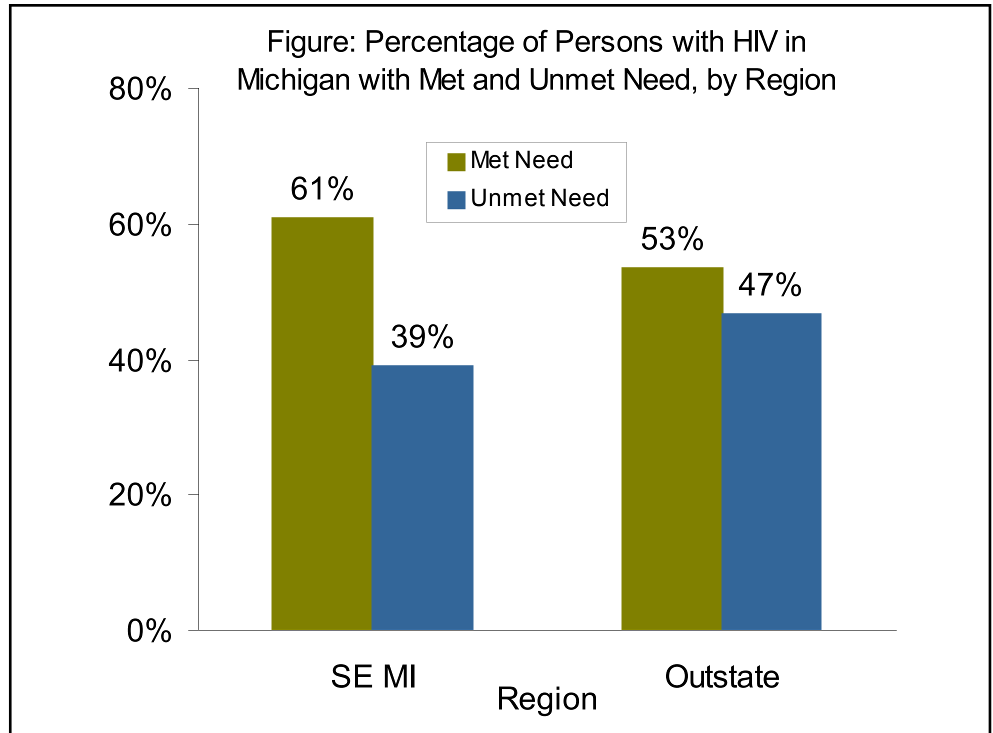
To learn more about your Regional Coordinating Agency, or for contact information, please visit: http://www.michigan.gov/mcdh/0,1607-132-2941_4871_4877-151431--,00.html

To view data available from SAMHSA on the epidemiology of substance abuse, please visit: www.epidcc.samhsa.gov

Assessment of Unmet Need Among HIV Positive Persons in Michigan

By: Melissa Reznar, MPH

Annually, the HIV Surveillance Program provides data to the Michigan Department of Community Health (MDCH) HIV/AIDS Prevention and Intervention Section (HAPIS) as well as the City of Detroit for the Title I and Title II Ryan White CARE Act grant applications. One important component of these grants that HIV Surveillance provides data for is called "unmet need." Unmet need refers to the population of HIV positive persons who are not receiving minimally adequate HIV-related services, defined as receiving at least one viral load (VL) or CD4 count/percent within a one-year period.



In previous years, MDCH relied on historic Medicaid data and data from the Detroit area project, Adult Spectrum of Disease (ASD), which concluded in 2003, to provide estimates of unmet need. Because mandatory laboratory reporting of HIV-related tests in Michigan was implemented last year, we are now able to provide up-to-date, population-based assessments of unmet need, including a description of persons who are categorized as having unmet need.

Laboratory data were used to determine each patient's most recent CD4 count, CD4 percent, and/or viral load test date. The laboratory results were then joined to data in the primary HIV surveillance database (eHARS). Persons diagnosed after September 30, 2005, were excluded from analysis to eliminate the possibility of including those who were very recently diagnosed and had not yet obtained care. Unmet need was then calculated by determining the number of persons in eHARS who were diagnosed prior to October 1, 2005, and had not received a viral load or CD4 test between October 1, 2005 and September 30, 2006.

The statewide Title II analysis revealed that of the 12,624 HIV positive persons currently living in Michigan at the time of analysis, 42% have unmet need (34% of AIDS cases and 51% of HIV, non-AIDS cases). Those with unmet need are similar to those with met need according to sex (77% male) and race/ethnicity (57% black, non-Hispanic), but differ according to age at HIV diagnosis, current residence, and mode of transmission. The groups with the highest percentage of unmet need include persons aged 20 - 29 years at diagnosis (46%), persons currently living outside of the Detroit metro area (47%, see Figure), and injection drug users (IDU, 51%).

While these estimates may seem high, evidence suggests that Michigan's results are comparable to those of other states. Mosaica, an organization that contracts with the Health Resources and Services Administration (HRSA) to provide technical assistance for unmet need assessments, reports that the median estimates of unmet need among all Title II grantees were 52% for HIV, non-AIDS cases, 38% for AIDS cases, and 43% for HIV and AIDS cases combined. Although methodologies used to calculate unmet need vary considerably from jurisdiction to jurisdiction, making comparisons problematic, these data nonetheless imply that Michigan's estimates are not excessive relative to other areas.

HAPIS is currently working to identify strategies used in other jurisdictions, and then plans to fit those strategies with the data gleaned from this analysis. In so doing, these data will be used to target resources to HIV positive persons in Michigan who need them most.

Perinatal Hepatitis B Prevention Program Manual

The Michigan Department of Community Health Perinatal Hepatitis B Prevention Program Manual has been completed. Providers should receive a copy of the manual within the next few weeks. If you need additional copies or if you would like to view it in its entirety, go to: www.michigan.gov/hepatitisB.

The manual is divided into six sections specifically designed for OB/GYN providers, laboratories, hospitals, local health departments, family practice providers, and pediatric care providers.

If you have questions, please contact the Perinatal Hepatitis B Prevention staff at 517-335-8122 or 800-964-4487. In southeast Michigan, call 313-456-4431 or 313-456-4432.

New Employees

John Gehring, M.P.H., joined the Genomics Unit at MDCH in December, filling the gene-environment specialist position. Gehring received his M.P.H. in epidemiology from the University of Michigan in 2005. He spent the past year-and-a-half with the Minnesota Department of Health newborn screening program, working as a short-term follow up-specialist. Gehring was also a member of the Region 4 genetics collaborative during his time in Minnesota. He is excited to return to his home state of Michigan, and has enjoyed his time at MDCH thus far.

Courtnay McFeters, M.A., has accepted the position of Influenza Health Education Coordinator in the Division of Immunization. McFeters received her B.A. in Communication and Marketing from Saginaw Valley State University, and her M.A. in Communication from Michigan State University. McFeters recently completed a Health Communication Fellowship in the Office of Liaison Activities at the National Cancer Institute. She has also worked in Labor Relations at Delphi Saginaw Steering Systems, and served as the Department of Communication Internship Coordinator and Teaching Instructor at Michigan State University.

Laura Rappleye, R.D.H., B.S., has accepted the position of Public Health Information Network (PHIN) Coordinator. Rappleye will coordinate the PHIN certification and implementation. Rappleye has over ten years experience in health information technology. She served in the Data Systems Management Department at the Jackson County Health Department where she earned Novell networking certifications. Rappleye has also served as a Regional MCIR Coordinator and most recently worked for Foote Health Systems in the Health Information Systems Department as a Clinical Systems Analyst.

Morgan Stocking, B.S., is the new Program Assistant for both the Communicable Disease Surveillance section, and the Division of Environmental and Occupational Epidemiology. She is an MDCH Affiliate through the Michigan Public Health Institute. Morgan graduated from Michigan State University in May 2006 with a Bachelor of Science in Social Science (Health Studies) and Psychology. Prior to her position with MDCH, she was a research assistant with MSU Psychology Research where she studied cognitive aging in older adults.

Position Changes

Bob Swanson, M.P.H., accepted the position of Director of the Division of Immunization in July 2006. Swanson has worked for the Division of Immunization for more than 17 years. During that time, he made substantial contributions toward the goal of improving childhood immunization levels in Michigan, advancing significant projects like the Michigan Care Improvement Registry (MCIR), and providing support for emergency preparedness, amongst others. Congratulations Bob!

New Publications

Fredrickson K, McLaren RP, **Enger KS,** White K, Kirsch B, Canavan BC, Zimmerman LA, Bartlett DL, and Williams WG. Influenza vaccination coverage among children aged 6-23 months - six immunization information system sentinel sites, United States, 2005-06 influenza season. Centers for Disease Control and Prevention. MMWR Morb Mortal Wkly Rep. 2006 Dec 15;55(49):1329-30.

Kelly JS, Zimmerman LA, Reed K, and **Enger KS.** Immunization Information Systems National Research and Evaluation Agenda. J Public Health Manag Pract. 2007;13(1):35-38.

Meliker JR, **Wahl RL, Cameron LL,** and Nriagu JO. Arsenic in drinking water and cerebrovascular disease, diabetes mellitus, and kidney disease in Michigan: a standardized mortality ratio analysis. Environmental Health. 2007;6:4.

Schwarcz S, Weinstock H, Louie B, Kellogg T, Douglas J, LaLota M, Dickinson G, Torian L, Wendell D, Paul S, **Goza G,** Ruiz J, Boyett B, McCormick L, and Bennett D. Characteristics of Persons With Recently Acquired HIV Infection; Application of the Serologic Testing Algorithm for Recent HIV Seroconversion in 10 US Cities. J Acquir Immune Defic Syndr. 2007;44(1):112–115.

Vasiliu O, **Cameron L,** Gardiner J, **Deguire P,** Karmaus W. Polybrominated biphenyls, polychlorinated biphenyls, body weight, and incidence of adult-onset diabetes mellitus. Epidemiology. 2006 Jul;17(4):352-9.

MMWR Occupational Health Indicators Report

In January 2007, the Centers for Disease Control and Prevention Morbidity and Mortality Weekly Report (MMWR) provided a description of the 19 national occupational health indicators that were developed between 1998 and 2003, in a report entitled "Indicators for Occupational Health Surveillance" (MMWR 2007; 56(No. RR-1): 1-7). Martha Stanbury and Tom Largo of the Division of Environmental and Occupational Epidemiology, as well as Ken Rosenman, MD, at Michigan State University, are part of the Occupational Health Indicators Working Group and had key roles in the development and pilot-testing of these indicators. For more information, go to: http://www.cdc.gov/mmwr/mmwr_rr.html or see the article: "Michigan Department of Community Health Key Contributor to National Report on Occupational Health" in the Winter/Spring 2006 issue of Epi Insight.

Recent Presentations

Kathy Allen-Bridson presented the talk "Early Warning Infectious Disease Surveillance" at the National Association for County and City Health Officials, Public Health Preparedness Conference in Washington D.C. on February 20-23, 2007.

Kathy Allen-Bridson presented the talk "Results of a Trial of Cross-Border Usage of Federal Alerting Systems" at the Security and Prosperity Partnership - Early Warning Infectious Disease Surveillance Conference in El Paso, Texas, on March 7-9, 2007.

Teri Lee Dyke presented the talk "Respiratory Protection Programs and Pandemic Preparedness in Home Care" to the Michigan Home Care and Hospice Association Infection Control Professional Group in Okemos on January 18, 2007.

Teri Lee Dyke presented the talk "Use of Personal Protective Equipment, Hand Hygiene, and Respiratory Hygiene" to the Detroit International Airport Quarantine Station Training for Surge Capacity Personnel in Romulus on January 25-26, 2007.

Kory J. Groetsch and **Linda D. Dykema** presented the poster "Saginaw Bay Watershed Fish Consumption Needs Assessment" at the National Center for Environmental Health Conference on December 4-6, 2006.

Elizabeth Harton and **Rachel Potter** presented the poster "Immunization Registry Enhancements for Seasonal Influenza Program Components and Pandemic Influenza Preparedness" at the 2007 Seasonal & Pandemic Influenza Conference in Arlington, VA, on February 1-2, 2007.

Hien Q. Le, Stuart Batterman, Kevin Dombkowski, **Julia J. Wirth, Robert L. Wahl, Elizabeth Wasilevich,** and Michael Depa presented the poster "Impact of Exposure to Urban Air Toxics on Asthma Utilization for the Pediatric Medicaid Population in Dearborn, Michigan" at the International Society for Environmental Epidemiology in Paris, France, in November 2006.

Roger Racine presented the talk "Pandemic Influenza Update" at the Michigan Mosquito Control Association Conference in Traverse City on February 7, 2007.

Melissa Reznar presented the talk "Assessing Need for Services Among HIV-Positive Persons in Michigan: Data from the Title II Ryan White Care Act Grant Application" for the Epidemiology Seminar Series at MDCH on February 15, 2007.

Dawn Sievert presented the talk "Methicillin-Resistant and Vancomycin-Intermediate/Resistant Staphylococcus aureus (MRSA/VISA/VRSA)" to the West Michigan Infection Control Group in Grand Rapids on November 16, 2006.

Dawn Sievert presented the talk "Methicillin-Resistant Staphylococcus aureus (MRSA) and Employee Health" to the Michigan Association of Occupational Health Professionals in Southfield on January 11, 2007.

Dawn Sievert presented the talk "Antimicrobial Resistant Organisms in Michigan" to the Michigan State University Department of Epidemiology on February 6, 2007.

Emily Somers, Wendy Marder, Emily Lewis, Diane Shaltis, Patricia Cagnoli, Carol VanHuysen, Patricia Dhar, James Leisen, **Peter DeGuire,** and Joseph McCune presented the poster "Sensitivity and Specificity of the ACR and Boston Weighted Classification Criteria for SLE" at the Annual Meeting of the American College of Rheumatology in Washington, D.C. in November 2006.

Martha Stanbury presented the talk "Chemical Emergency Preparedness at MDCH" at the Northern Michigan Waterways Hazardous Materials Spills ("No Spills") Conference in Traverse City on January 22, 2007.

The following Bureau of Epidemiology employees presented at the 12th Annual Maternal and Child Health Epidemiology Conference in Atlanta, GA, on December 6-8, 2006:

Kevin Brooks, Yasmina Bouraoui, and **Violanda Grigorescu** presented the poster "Infant Safe Sleep: Translating Data to Policy and Prevention using Michigan PRAMS data."

Cassandre Larrieux, Violanda Grigorescu, and Kobra Eghtedary presented the talk "Overweight in Early Childhood Among Term and Pre-Term WIC Participants."

Michael Paustian, Shannon Zackery, and Sheila Semler presented the poster "Oral health in Michigan 3rd grade children: Multiple approaches to assess disparities."

Michael Paustian and **Violanda Grigorescu** presented the talk "The Medical Home: a Role in Reducing Parenting Stress."

The following Bureau of Epidemiology employees presented at the CDC National Immunization Conference in Kansas City, MO, on March 5-8, 2007:

Kyle Enger presented "Replacement of Td with Tdap in 2006 in Michigan."

Mary Jo Flenner presented "Utilizing Registry Functionality and Data for Statewide School and Childcare Reporting."

Elizabeth Harton presented "Provider Driven Case Management as a Nurse Educator Intervention."

Kenneth Onyewurunwa, **Barbara Wolicki, Barbara Day,** and Kris Lyons presented "A Case Management Team Approach to Increasing Immunization Rates in an Urban Setting."

continued on page 13

"Recent Presentations"

continued from page 12

The following Bureau of Epidemiology employees presented at the National Birth Defects Prevention Network 10th Annual Meeting in San Antonio, Texas, on February 5-7, 2007:

Glenn Copeland, George Baker, Karla McCandless, and Sandra Lane presented the poster "Children's Special Health Care Services Program Enrollment Coverage: A Collaboration."

Jeffrey Pollet, Glenn Copeland, Lorrie Simmons, Violanda Grigroescu, and **Joan Ehrhardt** presented the poster "Exploring the Enrollment of Children with Birth Defects into Children's Special Health Care Services in Michigan."

Joan Ehrhardt, Nelda Mercer, Carol Wilson, and **Violanda Grigroescu** presented the poster "Folic Acid Outreach and Multivitamin Distribution in Selected Michigan Counties at High Risk for Neural Tube Defects."

Joan Ehrhardt, Jeffrey Pollet, and **Lorrie Simmons** presented the poster "Medical Records Review of Birth Defects Cases: Documentation Patterns."

The following Bureau of Epidemiology employees presented at the National Environmental Public Health Conference in Atlanta, GA, on December 4-6, 2006:

Christina R. Bush presented the talk "Chelated Metals in Drinking Water."

Martha Stanbury presented the talk "Michigan Hazardous Substances and Emergency Events Surveillance and Public Health Preparedness."

The Answers to: Reducing Asthma Mortality in Michigan, A Case Study

Question 1

a) Incorrect –Maintenance therapy with steroids is recommenced in such a patient.

b) Incorrect –A case manager to assist in education on the proper use of medication, and elimination of exposure to triggers is recommended for such a patient.

c) Incorrect –Education of the family and the patient on the chronic nature of asthma and the importance of maintenance therapy with steroids and elimination of exposure to triggers is recommended for such a patient.

d) Correct –Increased use of Beta2-agonists via inhaler or a nebulizer is commonly seen in poorly controlled asthmatics and does not correct the situation.

e) Incorrect – Controlling exposure to triggers is recommended in such a patient.

Question 2

a) Incorrect – Although in some patients poor planning by the patient, lost medication, etc. might be the cause of an emergency department visit. It was not true in this patient.

b) Incorrect – Adult patients without health insurance may repeatedly use an emergency department but most children are covered by some form of health insurance as was this child.

c) Incorrect – Individuals who are unstable or unable to follow directions may repeatedly end up in the emergency department, sometimes brought in by police, but this was not true for this patient.

d) Incorrect – Individuals being abused who suffer from repeated trauma may frequently use the emergency department but this was not true for this patient.

e) Correct – Repeated use of emergency departments for asthma, like hospitalization for asthma, is a risk factor for mortality from asthma. Repeated use of emergency departments for asthma is generally an indication of poorly controlled asthma.

Vaccine Information Statements

The Vaccine Information Statements (VIS) are now posted on the Michigan Department of Community Health's website: www.michigan.gov/immunize. In Michigan, it is important that vaccine recipients, their parents, or their legal representatives be given the Michigan version of VIS because they include information about the Michigan Care Improvement Registry (MCIR). In accordance with state law, parents must be informed about MCIR. Vaccine Information Statements that are obtained from other sources (e.g., from the CDC or IAC websites) do not contain information about MCIR.

If you have any questions regarding the Vaccine Information Statements, please contact your local health department or the Michigan Department of Community Health at 517-335-8159.

EPI INSIGHT is published quarterly by the Michigan Department of Community Health, Bureau of Epidemiology, to provide information to the public health community. If you would like to be added or deleted from the EPI Insight mailing list, please call 517-335-8165.

Bureau of Epidemiology Administrator
Corinne Miller, D.D.S., Ph.D.

Newsletter Committee
Ann Annis Emeott (Editor) • Kathryn Macomber (Editorial Review)
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Michigan Epidemiology Conference 2007

April 12, 2007
Towsley Center
University of Michigan
Ann Arbor, MI

SAVE THE DATE!

APRIL 12, 2007

Mark your calendars for April 12, 2007, when the Epidemiology Section of the Michigan Public Health Association will be holding the **SIXTH ANNUAL MICHIGAN EPIDEMIOLOGY CONFERENCE** at the Towsley Center within the University of Michigan Medical Center in Ann Arbor, MI.

As in previous years, the conference will include:

- Plenary sessions focusing on contemporary issues
- Breakout sessions
    - infectious disease
    - environmental/occupational injury/illness
    - chronic disease/maternal & child health
    - careers in epidemiology - networking opportunity for students
- Poster presentations

Please see the Call for Abstracts and consider giving an oral or poster presentation!

Registration Information will be distributed in the near future.

Conference information is available online at http://www.mipha.org/epi/index.htm

Conference Registration Form

Please complete and return this registration form to:

Email (preferred): MDCH_ERS@michigan.gov
Subject Line: Epidemiology Conference

Mail: Pam Masur
Michigan Department of Community Health
201 Townsend St
PO Box 30195
Lansing, MI 48909

Fax: 517.335.8263

Registration for the Michigan Epidemiology Conference is **FREE**!

The 2007 Conference will feature:

Keynote Address:
David Johnson, MD, MPH
Director, Scientific and Medical Affairs,
Sanofi Pasteur
University of Michigan School of Public Health
Topic: Vaccine Development and Policy

Invited Speakers:
Sandro Galea, MD, MPH, DrPH
Associate Professor
University of Michigan School of Public Health
Topic: Disaster Epidemiology - Hurricane Katrina and New Orleans.

Stacey Hettinger
Policy Analyst
Michigan House Republican Party Policy Office
Topic: Public Health research and the legislative process.

Please complete the following:

Name (First Last)	
Degree(s)	
Organization/Agency	
Email Address	
Mailing Address	
City	
State	
Zip Code	
Phone Number	
Will you need?	☐ CME ☐ CEU

Lunch will be provided for:

- Students (Box Lunch)
- MPHA Epidemiology Section members attending the brief Epidemiology Section business meeting ($10 voucher for the U-M Health Systems Café)
- MI Association of Public Health and Preventive Medicine Physicians (MAPPP) members attending the MAPPP business meeting (Box Lunch)

Otherwise, lunch will be on your own.

For lunch planning purposes, please check all that apply.

☐	I am a student.
☐	I am an MPHA Epidemiology Section Member AND will attend the Epidemiology Section business meeting.
☐	I am a MAPPP member AND will attend the MAPPP business meeting.
☐	I would like a vegetarian lunch.

Registration Due Date: Monday, March 26, 2007

Conference information is available online at http://www.mipha.org/epi/index.htm

Save the Date

June 13-15, 2007

Great Lakes Border Health Initiative Conference

Niagara Falls, NY

Intended Audience:
Public Health –
Infectious Disease & Environmental Health
Food Safety & Defense Specialists
Laboratory Technicians
Hospital Employees
First Responders

Please visit:
www.michigan.gov/borderhealth
for more information.