



## PERTUSSIS INCREASE IN KALAMAZOO COUNTY, 2006

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Editorial by: Joel Blostein, M.P.H.

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In 2006, Kalamazoo County experienced a substantial increase in pertussis (whooping cough) case reports. Although cases of pertussis were reported earlier in the year, the number of cases in the county began to increase in mid-May. This increase was centered in one area of the county and was associated with the failure of several of the first cases (high school students) to isolate themselves during their infectious period. Even though school was no longer in session, there were numerous opportunities for transmission during various summer activities. Families of students in the school district received letters from the health department directing them to go to their healthcare providers if they were experiencing a cough illness.

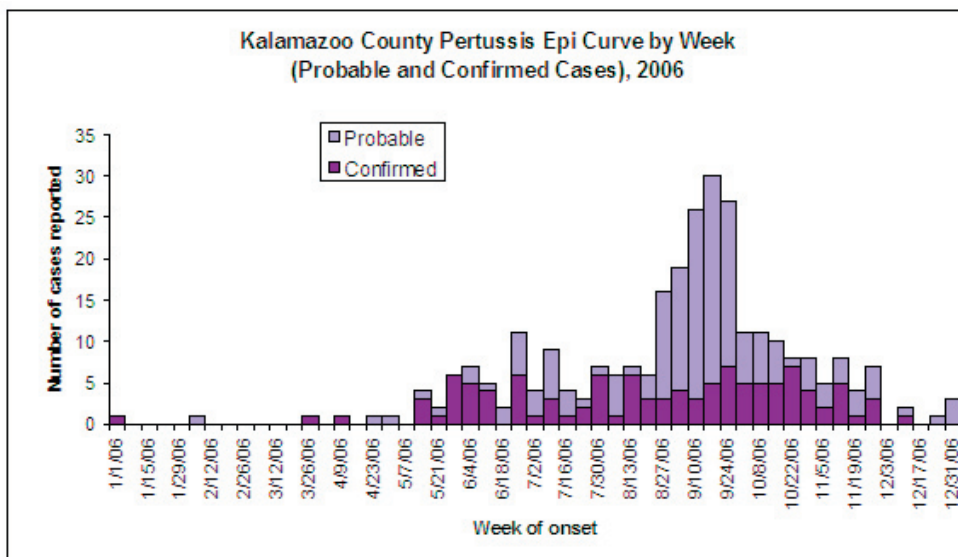
All suspect cases reported to the health department were given information

regarding disease prevention and control either by phone or by letter if they did not respond to phone contact attempts. Healthcare providers in the area received eight broadcast faxes between May and mid-September informing them of the increase in cases and advising them to include pertussis in their differential diagnosis. Additionally, health department staff promoted the use of the Tdap vaccine to providers in the area.

Throughout the summer the number of reported cases continued to rise with a sharp increase in mid-September lasting until mid-October (see figure). Each case was reviewed before the final classification was made to ensure the case definition was met. If a suspect case did not report a cough with a duration of at least two weeks they were re-contacted to determine if this requirement of the case definition was eventually met.

By the end of 2006, the county Disease Surveillance office had received 497 reports of suspected pertussis. After final case classification, 109 were classified as confirmed (23%), 171 as probable (34%) and 217 (44%) as not a case. Cases ranged in age from one month to 92 years with a median age of 12 years. Twenty-three percent of cases were between 5-9 years of age, 28 percent between 10-19 years and 27 percent

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## “Pertussis Increase in Kalamazoo County, 2006”

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were twenty years or older. Paroxysmal cough was reported by 97 percent of cases, 55 percent experienced post-tussive vomiting and 29 percent reported the classic ‘whoop.’ No deaths related to pertussis were reported; however, six of the twenty-seven infant cases were hospitalized.

It is likely that a combination of heightened public and healthcare provider awareness, proactive case finding during the course of investigations and non-compliance to isolation instructions likely all contributed to the number of cases reported in the county and surrounding areas during 2006. Analysis of data related to this increase is still ongoing.

**Editorial Note (by Joel Blostein, Michigan Department of Community Health)** – The 280 cases identified in Kalamazoo County accounted for 44 percent of 632 pertussis cases reported in Michigan in 2006. The Kalamazoo county rate was 117 per 100,000 compared to the MI rate of 6.3 per 100,000. Five of the nine counties in the SW MI area surrounding Kalamazoo also reported higher rates of pertussis compared to the MI rate (range 7.8-12 per 100,000). For the state as a whole this continues a trend of steady increases in the reported incidence of cases over the past 20 years, with sharp increases in recent years.

Michigan is by no means alone in the recent upward trend in pertussis incidence. Nationwide reported incidence has been steadily increasing since the mid-1980s. In 2005 large increases in reported cases of pertussis were seen in several states. In both 2004 and 2005 over 25,000 cases were reported, the highest annual counts since 1959. One factor in this trend is the increasing recognition of pertussis disease in adults and adolescents, groups not traditionally associated with pertussis. Ongoing research has shown that immunity to pertussis wanes with time, whether acquired from vaccine or disease, and probably lasts no more than 10 or 12 years.<sup>1</sup>

Various studies have shown that pertussis in adults often goes unrecognized and undiagnosed, and is significantly underreported. Estimates based on recent studies suggest the number of cases of symptomatic pertussis among adults 19-64 years of age in the US could range from 299,000 to 626,000 cases annually.<sup>2</sup>

Young children, specifically infants under six months of age, are at the greatest risk of severe pertussis disease and serious complications. These include pneumonia, hypoxia-related encephalopathy, and death. The principal focus of pertussis control strategy is to prevent cases in infants. While adolescents and adults typically experience a milder course of pertussis illness, they are no less contagious and are often found to be the source of pertussis cases among infants. A recent study of the source of infant pertussis infections was able to identify a source case in nearly half of the infant cases studied, and found that adult household contacts were the source of infection for over 70 percent.<sup>3</sup>

Recent developments in pertussis prevention and control strategies include the addition of newer macrolides for treatment and prophylaxis, and the licensure of vaccines for use in adolescents and adults. In 2005, recommendations from the Centers for Disease Control and Prevention (CDC) for treatment and prophylaxis were broadened to include azithromycin and clarithromycin as well as the previously recommended erythromycin or trimethoprim-sulfamethoxazole.<sup>4</sup> The newer antimicrobials are often better tolerated and can be given in a shorter course.

In 2006, the Advisory Committee on Immunization Practices recommended use of pertussis-containing vaccines in adolescents and adults; such vaccines are combined with tetanus and diphtheria toxoids and known as Tdap. Prior to this, pertussis vaccines were only licensed and recommended for use in children under seven years of age. These new

recommendations are aimed at the problem of susceptibility in the older ages after waning of immunity. At this time a single dose of Tdap (which are given as combination vaccines with tetanus and diphtheria toxoids) is recommended to replace one of the periodic boosters given each decade. Eventually Tdap may be recommended in place of Td for each of the every-ten-year booster doses.<sup>5,6</sup>

### References

1. *Pediatr Infect Dis J* 2005;24 (S58-S61)
2. *Am J Prev Med Vol 32 Issue 3 pp. 177-185.e1*
3. *Pediatr Infect Dis J* 2007;26 (293-299)
4. *MMWR* 2005;54(No. RR-14)
5. *MMWR* 2006;55(No. RR-17)
6. *MMWR* 2006;55(No. RR-3)

## Recent Publications

**Enger, K.,** and S. Stokley. Meningococcal conjugate vaccine uptake, measured by Michigan’s immunization registry. *Journal of Adolescent Health.* 2007 May; 40(5): 398-404. E-published 2007 Mar 9th.

**Mokotoff ED,** Glynn MK. Surveillance for HIV/AIDS in the United States. Chapter 16 in *Infectious Disease Surveillance.* Editors: Mikanatha N, Lynfield R, Van Beneden CA, deValk H. Blackwell Publishers 2007.

McNaghten, A, Wolfe, M, Onorato, I, Nakashima, A, Valdiserri, R, **Mokotoff, E,** Romaguera, R, Kroliczak, A, Janssen, R, and Sullivan, P. Improving the Representativeness of Behavioral and Clinical Surveillance for Persons with HIV in the United States: The Rationale for Developing a Population-Based Approach. *PLoS ONE.* 2007 July 6(e550). <http://www.plosone.org/article/ fetchArticle.action?articleURI=info%3Adoi%2F10.1371%2Fjournal.pone.0000550>



# The Effects of Carbon Monoxide on the Prevalence of Low Birth Weight in Two Michigan Communities

By: Bob Wahl, D.V.M., Ph.D.

## INTRODUCTION

Low birth weight (LBW), prematurity and intrauterine growth retardation (IUGR) are important indicators of fetal health during pregnancy as well as predictors of infant disease and death. LBW is defined as birth weight below 2500 grams (g); prematurity is usually defined as birth after the 27th week but before the 38th week of gestation; and IUGR describes a fetus whose weight is below the 10th percentile for gestational age. Several animal studies have demonstrated adverse effects of exposure to air pollution on fetal development, and a number of epidemiological studies have associated air pollutant exposures with adverse birth outcomes; however, these studies possessed varying outcomes, exposure estimates, and study designs. While this research suggests that exposures to air pollutants are associated with LBW, IUGR and preterm birth, there is even less consistency regarding the effects of individual air pollutants, such as carbon monoxide (CO), and the specific gestation periods that are important for pollutant exposure. This article describes the effects of CO exposure on LBW in two highly industrialized urban areas in the Detroit, Michigan area.

## METHODS

The study population consisted of all live, full term, singleton (non-twin) births whose mothers resided in two areas of metropolitan Detroit, Michigan (Allen Park or AP and Linwood or LW) at the time of birth, and for whom birth certificates were filed with dates of birth between 1 January 1990 and 31 December 2001. Eligible residences were in ZIP Codes that were wholly or partially contained within a 4 km radius surrounding the air quality monitoring station in each area. Eligible births were restricted to birth weights between 750 g and 4000 g, gestational ages between 37 and 42 weeks, and to mothers between 16 and 45 years of age. The main study outcome was LBW, however we also

reported birth weight reduction (BWR) in grams per 1 part per million (ppm) increase in the CO concentration.

**Exposure assessment** - Ambient air quality monitoring sites for the study were selected in areas that had high population density, a long (12-year) period of data collection for multiple pollutants and a high burden of LBW infants. Over the 1994-2004 period, the city of Detroit had the highest LBW rates (128-146 per 1,000 live births) in the state of Michigan (77-84 per 1,000 live births). Pollutant data were obtained from the Air Quality Division, Michigan Department of Environmental Quality, and included hourly CO measurements from AP and LW for the entire 12-year

study period. Additionally, the three-hour 6 to 9 A.M. CO average was computed, corresponding to the period of higher commuter traffic. Monthly and trimester averages were computed for each subject and period of pregnancy by matching the air pollutant data to the date of the LMP. The average daily CO concentration did not differ between the two sites ( $p < 0.01$ ), and concentrations at both sites showed seasonal variation. CO concentrations at AP showed a gradual decline over the 12-year monitoring period. This study focused on determining the effects of CO exposures on individual pregnancies and not long-term effects of declining CO exposure on the population as a whole;

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therefore, to remove possible effects of the long-term decline in CO levels on LBW outcomes, the CO data was detrended using a locally-weighted regression smoother (LOESS).

**Statistical methods** - Two approaches were used to investigate effects of maternal exposure to CO on birth weight. First, linear regression models estimated changes in birth weight (in grams), treated as a continuous variable, in relation to maternal exposures. Second, to investigate possible dose-response relationships, logistic regression models estimated adjusted odds ratios (AORs) and 95% confidence intervals (CIs) for LBW. All models were adjusted for variables included in the birth certificate data set, including gestational age, infant sex and maternal race, education, smoking status, prenatal care, birth season, and site of residency. Due to the many analyses completed, the modified Bonferroni correction procedure was used to evaluate the likelihood of finding significant associations due to chance.

## RESULTS

There were 63,676 births included in the study. The overall average LBW rate was 4.4%, ranging from 2.3% at AP to 5.4% at LW. The overall LBW rate at LW gradually decreased from about 7.0% to 4.5% over the 12-year study period. At AP, rates were lower (range from 1.7% to 3.1%) and relatively stable over time. Several other characteristics also varied by location including: maternal race, age, education, smoking status, and prenatal care (all comparisons were significant at  $p < 0.01$ ).

**Statistical analysis** - The linear regression models showed BWR for maternal CO exposures in the first month and all three trimesters of gestation ( $p < 0.05$ ). The logistic regression analyses of 24-hr CO exposures and LBW gave statistically significant AORs for the first month and first and second trimesters. Analyses were also performed separately for AP ( $n = 28,275$ ) and LW ( $n = 55,693$ ). The AP analyses revealed stronger and more consistent associations between CO

exposure and LBW than those observed in the pooled analysis.

**Analyses using detrended exposure measures** - Results using exposure measures adjusted for the long-term trends of CO levels at AP differed significantly from results obtained using observed (not detrended) exposures. Three-hr and 24-hr CO exposures were no longer significantly associated with decreased birth weight except during the second trimester ( $p = 0.04$ ). In the logistic regression models, an AOR of 1.30 (95% CI, 1.01-1.67) remained significant for the 24-hr fourth-quartile CO exposure, somewhat smaller than results for the observed (not detrended) exposure measure (AOR 1.44, 95% CI, 1.12-1.85). Based on the results of the modified Bonferroni correction procedure, the association between (unadjusted) CO exposure and risks of LBW at AP did not occur by chance; however, analysis using de-trended CO data no longer demonstrated these associations. At LW, the procedure indicated a marginally significant association between CO exposure and LBW.

## DISCUSSION

Many factors affect fetal development as evaluated by LBW and BWR in this study. As expected, all of the models showed the significant effect of maternal race, age, education and smoking status on LBW risk. Such demographic and smoking covariates have large effects on outcomes, and they must be addressed to account for trends and to avoid confounding. Demographic differences by geographic location, as shown in this study and described above, may explain some of the inconsistencies in previous studies. Furthermore, the two southwest Detroit study sites differed in many respects other than demographics. For example, the area monitored by the LW site was situated closer to major traffic routes, including routes both to and from neighboring Canada, as compared with the area monitored by the AP site.

Our initial linear regression analysis showed significant effects of low concentration CO exposures on birth

weight at AP, but accounting for the long-term decline in CO levels eliminated most of these associations. Similarly, the initial categorical LBW analyses (logistic regression) showed a number of significant relationships between CO exposures at AP during the first month and trimester, but most of these were also eliminated using de-trended CO data. These results suggest that, even though CO levels have tended to decrease at AP, exposures during the early gestational periods may have been high enough to increase the risks for LBW and BWR.

Several mechanisms have been proposed by which CO may affect birth outcomes. CO reduces the oxygen-carrying capacity of maternal hemoglobin, which in turn will decrease oxygen delivery to the fetus. Additionally, CO can cross the placental barrier and interfere with oxygen binding to fetal hemoglobin, which has a higher affinity for CO than the adult hemoglobin. Both effects may induce tissue hypoxia and reduce fetal growth. Alternatively, CO may be a proxy for the fine particles emitted by vehicles and other sources that can contain polycyclic aromatic hydrocarbons that can induce DNA adducts. Levels of DNA-adducts have been positively correlated to risk for LBW.

## CONCLUSIONS

Using a semi-individual study design, a large number of births over a long period, and ambient air monitoring within approximately 4 km of the mother's residence, we found that relatively low CO levels (0.38-1.25 ppm) were associated with BWR and increased risk of LBW. However, the associations appeared to be weak. Most of the significant associations were removed after detrending CO exposure data and adjusting for other covariates. Our findings indicate the importance of removing long-term trends for CO exposures, and further suggest that daily (24-hour) average concentrations, as compared to three-hour averages, may be better exposure measures for studying chronic health outcomes. Lastly, it is important to control for factors that affect birth outcomes at the individual level.



# 2007 Employee Service Awards

*By: Garry Goza, M.S.*

On March 8, 2007 the MDCH Public Health Administration and the Bureau of Epidemiology hosted a reception to honor long-term employees serving in the Bureau of Epidemiology. Jean Chabut, Deputy Director for Public Health and Corinne Miller, Director, Bureau of Epidemiology presented awards to employees in the Bureau with 5 to 30 years of service.

Many honorees along with their family members, friends, and co-workers attended. All of the honorees were asked to speak about their experience with the state. Many had inspiring stories, which showed the diverse duties state employees perform. At first, I attended to celebrate and support the employees in my Section who were getting awards, but after receiving my service award pin, I have to truly say that the sincere way which Jean and Corinne expressed appreciation was personally touching.

Pamela Masur took pictures as each received their award.

After the ceremony, punch and cookies were served and all stayed and visited. I was glad to have been able to attend and visit with many whom I had not spoken with in quite a while. Congratulations to all who received awards and thank you from a fellow employee for all your dedicated years of service to Michigan Public Health and the citizens of the State of Michigan.



# Timing of Infants' First Dose of Hepatitis B Vaccine is Critical

By: Pat Fineis, B.A.

## Can we afford not to follow the current recommendations?

As you may recall, in December 1999, a three-month-old Michigan infant died from acute hepatitis B. After investigation, it was discovered that the infant's mother was chronically infected with hepatitis B and tested positive for hepatitis B surface antigen (HBsAg) during her pregnancy. Unfortunately, the test results were communicated inaccurately to the hospital where the baby was born. This was during the time that hospitals stopped giving all newborns the first dose of hepatitis B vaccine before discharge because of the concern raised about the preservative thimerosal in hepatitis B vaccine. Because the information from the prenatal care provider indicated that the infant's mother was negative for hepatitis, the infant did not receive hepatitis B vaccine or hepatitis B immune globulin (HBIG). Unfortunately, documentation errors continue to occur and put unvaccinated infants at risk of getting hepatitis B.

Based on estimates from the Centers for Disease Control and Prevention (CDC), Michigan identifies <50% of all babies born to pregnant HBsAg-positive women every year. Without proper prophylaxis, more than 300 babies in Michigan could become infected with hepatitis B. We have worked hard to identify all pregnant HBsAg-positive women, but have not been successful according to these estimates. The only "safety net" would be to give all babies born in Michigan the birth dose of hepatitis B vaccine.

On December 23, 2005, the Advisory Committee on Immunization Practices (ACIP) published "A Comprehensive Immunization Strategy to Eliminate Transmission of Hepatitis B Virus Infection in the United States." [www.cdc.gov/ncidod/diseases/hepatitis/b/acip.htm](http://www.cdc.gov/ncidod/diseases/hepatitis/b/acip.htm)

Part of the recommendations listed for hospitals are to ensure policies and procedures and standing orders are in place and are implemented to:

- Initiate immunization for infants born to HBsAg-positive mothers, infants born to mothers with unknown HBsAg status, and for all infants; and to
- Ensure enrollment and participation in the federally-funded Vaccines for Children (VFC) Universal Hepatitis B Program.

We currently have 91 of 94 birthing hospitals enrolled in the VFC Universal Hepatitis B Program.

Our Electronic Birth Certificate (EBC) has a field to document that a baby has received the birth dose of hepatitis B vaccine. Once the birth dose is documented on the EBC, this information can be forwarded to the state and downloaded in the Michigan Care Improvement Registry (MCIR).

Through MCIR assessments, documentation of the birth dose of hepatitis B vaccine on the EBC has increased two percent every year since 2002. In 2002, it was 72% and in 2006 it was 80%. However, only 42 (of the 94) birthing hospitals document >90% of their babies are receiving the birth dose of hepatitis B vaccine, even though we have FREE hepatitis B vaccine for all babies born in Michigan.

Again this year, the Perinatal Hepatitis B Prevention Program staff will contact every birthing hospital in Michigan. We will conduct a survey to review current policies and standing orders, and will verify that the birth dose of hepatitis B vaccine is being properly documented on the EBC. Over the next five years we will be conducting hospital chart reviews and feedback sessions as a follow-up to these surveys and in compliance with our program objectives.

We will be contacting the local health departments to verify the level of hepatitis B administration in birthing hospitals as it compares to the birth dose coverage levels reported through MCIR and to see how we can work together to improve the birth dose coverage levels in Michigan.

*If you have any questions, please contact Pat Fineis at 517-335-9443 or at 800-964-4487.*

## New Employees

**Andrea Weston** will work as an Epidemiology Intern in the Division of Immunization this summer. The focus of her internship will be a data analysis project looking at vaccine uptake, using MCIR data. Andrea graduated in 2006 from the University of Michigan with a B.S. in biopsychology and sociology. She recently completed her first year as a MPH candidate in the General Epidemiology program at the University of Michigan School of Public Health. She has had the opportunity to receive research experience throughout her educational years, working as a research assistant in a psychology/education lab, a biopsychology lab, and a life sciences lab, but is excited to finally have the opportunity to do research in the public health field. Andrea was a Graduate Student Instructor in the psychology department and has taught both introduction to psychology and cognitive psychology.

# Chronic Hepatitis B Virus Case Definition

## Information for Michigan Providers

The case definition for chronic hepatitis B virus (HBV) was recently updated. However, it is very important to remember that in Michigan only the HBsAg-positive results are reportable. All HBsAg-positive test results in a pregnant woman must be reported to the local health department within 24 hours of diagnosis or discovery. If a pregnant woman who is known to be chronically infected with HBV is not tested for HBsAg, we may miss the opportunity to appropriately treat her infant at birth. For the Perinatal Hepatitis B Prevention Program, it is critical that all pregnant women are routinely tested for HBsAg during an early prenatal visit (e.g., first trimester) in each pregnancy, even if they have been previously vaccinated or tested.

## 2007 Case Definition Update

New Chronic Hepatitis B Virus 2007 Case Definition ([www.cdc.gov/epo/dphsi/print/hepatitisbcurrent.html](http://www.cdc.gov/epo/dphsi/print/hepatitisbcurrent.html))

### Clinical description:

Persons with chronic hepatitis B virus (HBV) infection may have no evidence of liver disease or may have a spectrum of disease ranging from chronic hepatitis to cirrhosis or liver cancer. Persons with chronic infection may be asymptomatic.

### Laboratory criteria for diagnosis:

- IgM antibodies to hepatitis B core antigen (anti-HBc) negative AND a positive result on one of the following tests: hepatitis B surface antigen (HBsAg), hepatitis B e antigen (HBeAg), or hepatitis B virus (HBV) DNA

OR

- HBsAg positive or HBV DNA positive or HBeAg positive two times at least six months apart (Any combination of these tests performed six months apart is acceptable.)

### Case classification:

Confirmed: A case that meets either laboratory criteria for diagnosis

Probable: A case with a single HBsAg positive or HBV DNA positive or HBeAg positive lab result when no IgM anti-HBc results are available

Comment: Multiple laboratory tests indicative of chronic HBV infection may be performed simultaneously on the same patient specimen as part of a "hepatitis panel". Testing performed in this manner may lead to seemingly discordant results, e.g., HBsAg-negative AND HBV DNA-positive. For the purposes of this case definition, any positive result among the three laboratory tests mentioned above is acceptable, regardless of other testing results. Negative HBeAg results and HBV DNA levels below positive cutoff level do not confirm the absence of HBV infection.

**References:** *Division of Viral Hepatitis. Guidelines for Viral Hepatitis Surveillance and Case Management. Centers for Disease Control and Prevention. January 2005.*

## Detroit Poison Control Center Awarded Three Grants to Evaluate and Enhance Surveillance

The Detroit Poison Control Center (PCC) recently applied for and was awarded three grants through the American Association of Poison Control Centers (AAPCC). These CDC-funded grants will enhance toxicosurveillance at the regional level, evaluate the ability of the poison control data system to detect local events of public health significance, and evaluate data quality at the national level. The Detroit PCC was awarded \$55,000 to fund their participation in these three projects. MDCH is partnering with the Detroit PCC on two of the three projects.

The first project focuses on a new capability of the recently upgraded AAPCC data collection and monitoring system. The new system allows regional centers to customize their own toxidromes. Toxidromes are a form of syndromic surveillance looking for specific clusters of symptoms in individuals that may be indicative of certain agents or types of poisoning. For example, symptoms of vomiting or diarrhea seen with a rash, flushed skin, diaphoresis, or hives may be indicative of scombotoxigenic fish poisoning. Or foodborne chemical gastrointestinal illness seen with the initial signs of multi-system organ failure may be indicative of ricin, abrin, or metals poisoning. Jay Fiedler, an epidemiologist with the Chemical Terrorism and Preparedness Section of the Bureau of Epidemiology (BOE), worked with the Detroit PCC, on developing and refining 10 toxidromes for use in this project. Regional pilot results will be used to assist the AAPCC in developing additional definitions for use at the national level.

In the second project, the Detroit PCC will partner with MDCH to identify local outbreaks of public health significance. MDCH will provide a



## “Detroit Poison Control ...”

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set of baseline information to the PCC for use in evaluating the ability of the regional and national systems to detect these events. Jay Fiedler is conducting outreach to the Michigan Department of Agriculture, the Communicable Disease Section, and the Surveillance Section of the BOE to assist in identifying outbreaks of interest for this project.

The final project will be conducted solely by the Detroit PCC. The center will compare the quality of the data recorded into the standardized data entry fields to that captured in the notes section of the case files. The notes section often contains a more detailed narrative of the poisoning event, but may also contain identifying information about the case. Because AAPCC receives a redacted set of information from the regional centers that does not contain personal identifiers, they do not receive the information contained in the notes fields. The Detroit PCC will evaluate the completeness of their data entry and determine if additional information contained in the notes field would impact the ability of the AAPCC to detect anomalies in the data at the national level.

## Employee Focus-Pam Masur



**P**am Masur is the Bureau of Epidemiology’s executive secretary. She has worked in this capacity since 1999. Pam has worked for the State of Michigan for the last 23 years in various administrative and secretarial roles.

Masur graduated from Dewitt High School and attended business school at Lansing Business University. She then started her career in 1975 in Military Affairs for the State of Michigan. From there she moved into the Attorney General’s Office in the human resources area. Pam also worked in the Bureau of Hospital, Center and Forensic Mental Health Services.

Masur functions to keep the day-to-day business of the Bureau flowing smoothly. She also is the executive secretary to the Bureau’s director, Corinne Miller. Pam is involved in scheduling, arranging travel,

research activities, and finding publications and references. Pam is also the initial contact for phone calls into the Bureau of Epidemiology and helps screen calls and direct inquiries to the proper location.

Pam views her greatest contribution as her reputation for being the knowledge base in the Bureau. Among different sections and divisions, all Bureau employees know that if they have a question or need to find something, routine or unusual, Pam will have an answer.

Pam and her husband, Dave, live in the Waverly area. They have two children, Alexis and Jordan, and one grandchild, Caleb. Her interests include travel and fibercraft arts. Pam, however, is most notoriously known for her love of Harley Davidson motorcycles and involvement with Harley groups in the Lansing area.

## 2007 Michigan Epidemiology Conference Review

*By: Kyle Enger, M.P.H.*

**T**he 2007 annual Michigan Epidemiology Conference was held on April 12 at the Towsley Center at the University of Michigan. David Johnson, M.D., M.P.H., formerly the MDCH Chief Medical Executive, and now the Director of Scientific and Medical Affairs at Sanofi Pasteur, gave the keynote address on vaccine development and policy, with particular emphasis on the recent resurgence in pertussis disease.

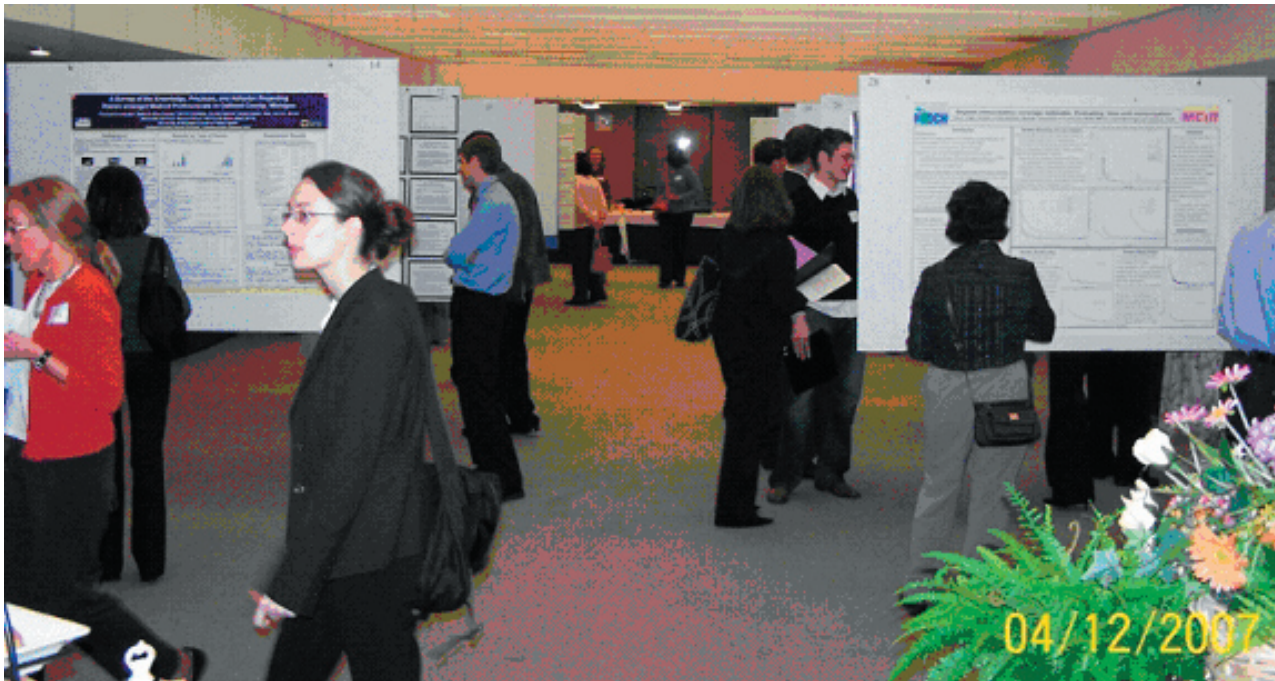
Also speaking at the morning plenary session was Sandro Galea, M.D., M.P.H., Dr.P.H., of the Center for Social Epidemiology and Population Health at the University of Michigan, speaking on disaster epidemiology. Among other things, Dr. Galea discussed psychological sequelae following disasters such as Hurricane Katrina and 9/11; there are several different patterns, such as no sequelae, early onset with rapid resolution, and late onset without resolution.

Stacey Hettiger, a policy analyst with the Michigan House of Representatives, also discussed development of public health legislation during the morning plenary. Each party maintains a group of analysts who provide legislators with the information needed to make good decisions on health topics, although science does not always trump politics.

Afternoon sessions consisted of presentations on diverse topics, including  
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*Conference attendees peruse the posters.*

overweight, infectious disease, asthma, brain injuries, dental caries, and health disparities. There was also a session on careers in epidemiology, targeted towards public health students. There were a record 28 posters on display this year, also covering very diverse subject matter. Poster viewing was a lively part of the conference, as attendees networked and discussed findings.

154 people attended the conference, similar to attendance for the prior two years. State and local public health workers, students, university researchers, and clinicians were present.

The Michigan Epidemiology Conference occurs every spring and is organized by the Epidemiology Section of the Michigan Public Health Association (MPHA). Presentations, abstracts, and photos from the 2007 and prior conferences are available online ([www.mpha.org/epi/index.htm](http://www.mpha.org/epi/index.htm)), as well as information on how to join MPHA and the Epi Section.

The Epi Section would especially like to thank the sponsors of the 2007 Michigan Epidemiology Conference: the MDCH Surveillance Section, the University of Michigan Department of Epidemiology, the Michigan Public Health Institute



*New Epidemiology Section officers were elected during the annual business meeting. The 2007-2008 officers are (left to right) Shane Bies, Brian Hartl, Joyce Lai, Scott Schreiber, Carla Marten, Tom Largo, and Kyle Enger. (not shown: Betsy Wasilevich, Kipling Bohnert, and Greg Cherkowski).*

(MPHI), the Michigan Association for Public Health and Preventive Medicine Physicians (MAPPP), the Altarum Institute, the Michigan Center for Public Health Preparedness at the University of Michigan School of Public Health, the Michigan Society for Infection Control (MSIC), and the Sanisys Corporation. Their support has allowed us to provide a high-quality conference with no registration fee.

New Epidemiology Section officers were elected for the 2007-2008 year. The current board is: Chair, Shane Bies; Past Chair, Tom Largo; Chair-Elect, Brian Hartl; Secretary-Treasurer, Carla Marten; Program Chair, Kyle Enger; Section Councilors, Joyce Lai, Scott Schreiber, and Betsy Wasilevich; and Student Representatives, Kip Bohnert and Greg Cherkowski.

# Michigan Welcomes New EIS Officer

**M**ichigan's current Epidemic Intelligence Service (EIS) officer, Mark Gershman, has completed his program and will be leaving soon for a new position at the CDC in Atlanta. Mark has been part of the Infectious Disease Epidemiology section during his time in Michigan. He has taken a position as a medical epidemiologist in the Division of Global Migration and Quarantine, Geographic Medicine and Health Promotion Branch

at CDC. Specifically, he'll be working on Yellow Fever and Yellow Fever vaccine issues. This will involve areas such as Yellow Fever implications for travelers, vaccine recommendations and safety, as well as vaccine adverse events.

Michigan was lucky enough to be matched to a new EIS officer, Jennie Finks. She was born in Omaha, Nebraska and raised in Kankakee, Illinois. In 1995, Finks received a BS

(Animal Science) from the University of Illinois, College of Agriculture followed by a DVM from the College of Veterinary Medicine in 1999. She practiced small animal clinical medicine in the Chicago area for six years before enrolling in Texas A&M University to pursue a Masters in Veterinary Public Health. She completed a MVPH in December 2006 and was accepted into the CDC's 2007 EIS program.

## Recent Presentations

**Teri Lee Dyke** presented "Using Personal Protective Equipment" at the Detroit Metro Quarantine Station: Public Health Response at International Ports of Entry on January 25, 2007.

**Terri Lee Dyke** presented "Antimicrobial Resistance in Michigan" at a Mid-Michigan Medical Center Continuing Medical Education session on March 15, 2007.

**Kari Tapley**, a MDCH Perinatal Hepatitis B Surveillance Specialist, presented "Turning Tragedy into Effective Education-The Importance of the Perinatal Hepatitis B Prevention Program" at the Third Annual Ohio Viral Hepatitis Conference on May 1, 2007.

**Melinda Wilkins** and **Jim Collins** presented "Protocol for Novel Surveillance System Signal Evaluation and Response" at the Public Health Information Network Conference on May 12, 2007 in Atlanta.

**Carla Merritt** and **Roger Racine** presented "Surveillance System Enhancements" at the Michigan Department of Community Health Communicable Disease Conference on May 19th.

**Kim Kutzko** and **Scott Schreiber** presented "Healthwatch" at the Michigan Department of Community Health Communicable Disease Conference on May 19th.

**Katie Macomber** presented "The Fluoroquinolone Resistant Neisseria gonorrhoea

Project in Michigan (2002-2006)" at the Michigan Department of Community Health Communicable Disease Conference on May 24th

**Kathy Allen-Bridson** presented "Great Lakes Border Health Initiative" at CDC's Public Health Preparedness Conference on February 22, 2007 in Washington D.C.

**Kathy Allen-Bridson** presented "After Action Report of International Infectious Disease Tabletop Exercise" at the Security and Prosperity/Early Warning Infectious Disease Conference on March 8, 2007 in El Paso, Texas.

**JoEllen Wolicki** presented "New Vaccines for Pregnant Women and Infants" at the Thick and Thin of Maternal & Perinatal Care conference on March 15, 2007, in Plymouth.

**Kyle Enger** presented "Using Immunization Information from MCIR" at the Michigan Public Health Technology Conference (MALPH) on March 20, 2007, in East Lansing.

**Jim Collins, Bradley Carlson, and Elizabeth Lewis** presented the talk "Advancements in Public Health Surveillance Systems in Michigan" at the Michigan's Public Health Technology Conference on March 20-21, 2007, in East Lansing.

**JoEllen Wolicki** presented "All the Letters in the Immunization Alphabet" at The Primary Care Update on March 28, 2007, in Grand Rapids.

The following Bureau of Epidemiology employees presented at the Michigan Epidemiology Conference on April 12, 2007, in Ann Arbor:

**Kyle Enger** presented "Geographic analysis of immunization patterns in Genesee County."

**Hien Q. Le, Stuart Batterman, Kevin Dombkowski, Julia J. Wirth, Robert L. Wahl, Elizabeth Wasilevich, and Michael Deppa** presented the poster "Impact of Exposure to Urban Air Toxics on Asthma Utilization for the Pediatric Medicaid Population in Dearborn, Michigan."

**Beth Anderson, Julie Wirth, Lorraine Cameron, Michele Marcus, Chanley Small and Caroline Hoffman** presented the poster "Risk of Endometriosis for Women Exposed to Polychlorinated Biphenyl Congeners."

**Jaymie R. Meliker, Robert L. Wahl, Lorraine L. Cameron, and Jerome O. Nriagu** presented the poster "Arsenic in drinking water and cerebrovascular disease, diabetes mellitus, and kidney disease."

**Pat Vranesich** presented "Missed Opportunities to Prevent a Perinatal Hepatitis B Infant Death in Michigan" at the Viral Hepatitis Conference on May 1, 2007, in Ohio.

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