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Family History, Risk Perception and Risk Reduction Behaviors of Colorectal Cancer - Michigan Behavioral Risk Factor Survey, 2005

By: Ann Annis-Emeott, Ann Rafferty, and Deb Duquette

The relative risk of developing colorectal cancer for an individual with a family history including at least one affected first degree relative is about two times that of someone without a family history of colorectal cancer. Individuals who are aware they have a family history may also be aware of their increased disease risk and more motivated to make lifestyle changes in order to decrease their disease risk. This project aimed to estimate the prevalence of family history of colorectal cancer among Michigan adults, and to assess perception of personal colorectal cancer risk and willingness to make preventative behavioral changes.

In 2005, Michigan asked its BRFS respondents whether any of their first-degree relatives had ever been diagnosed with colorectal cancer. Additionally, respondents were asked about their own perceived risk of colorectal cancer, and whether they would make (or had made) any lifestyle changes based on this risk.

Seven percent of Michigan adults were estimated to have at least one immediate family member who had been diagnosed with colorectal cancer. A higher proportion of those with a family history thought their disease risk was high or very high (37.4%), compared to those without a family history (4.6%). Still, almost two-thirds (62.6%) of individuals at increased risk of colorectal cancer did not accurately perceive or realize their true disease risk. More than half (55.6%) of respondents with a family history reported that they had made lifestyle changes to try and prevent the disease.

These findings emphasize the importance of including family health history in colorectal cancer screening efforts, and to recognize it not only as a risk factor for the disease, but also as a potential motivating factor for preventative health behavior practices. Our findings support

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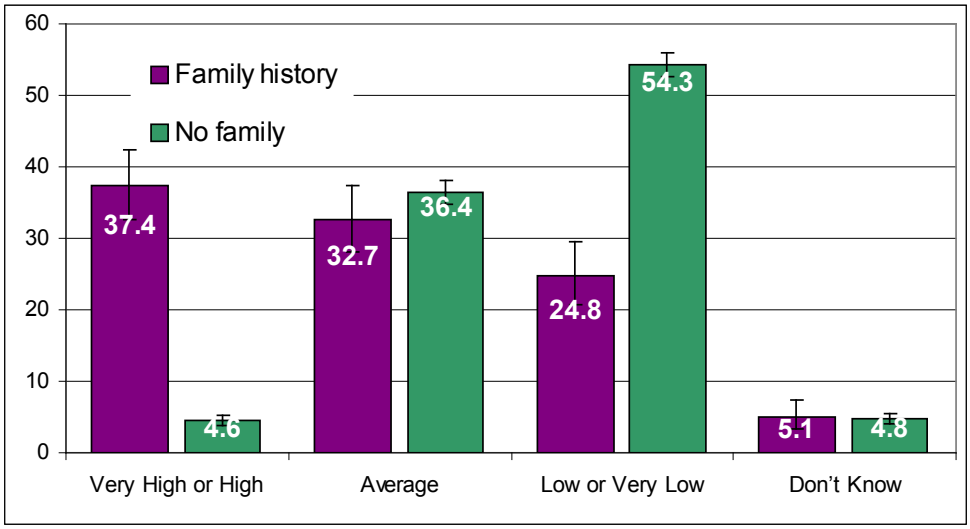

Table: Percent distribution (95% CI) of perceived chances of getting colon or rectal cancera by selected demographic characteristics - Michigan Behavioral Risk Factor Surveillance System, 2005

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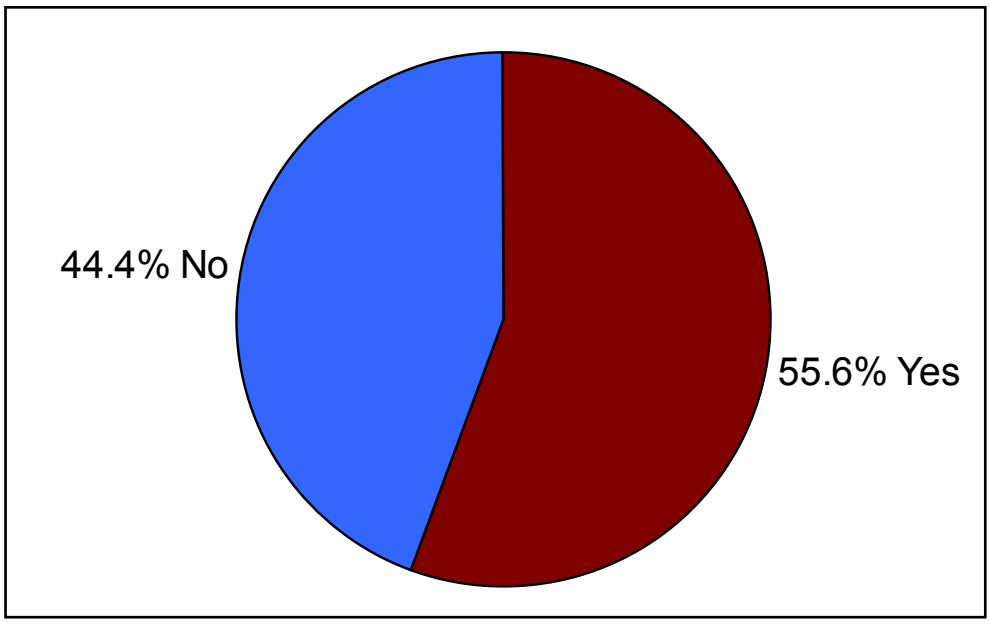


Table: Proportion Who Made Lifestyle Changes After Immediate Family Member Was Diagnosed with Colon or Rectal Cancer, Michigan Behavioral Risk Factor Survey, 2005

the utilization of family history as a risk assessment tool, and also as a focal point from which to educate and motivate individuals to proactively participate in healthy lifestyle choices and disease screening and prevention efforts.

Expansion of Local Users on the Emergency Department Syndromic Surveillance System

by: Elizabeth Lewis, MHS

The Michigan Department of Community Health (MDCH) recently announced the availability of local user roles on Michigan's Emergency Department Syndromic Surveillance (EDSS) System. This system collects over 9,000 registrations every day from 69 healthcare facilities across all eight of Michigan's emergency preparedness regions. Data is categorized into syndromes that may indicate a possible natural or terrorism-associated public health emergency and is presented for analysis in real-time through a secure web interface.

New roles with appropriate security were created for both local health department users and participating healthcare facility users. Both of these local roles provide a visual display of data from the relevant jurisdiction, flexible charting options, on-the-fly syndrome creation, and the ability to download data for further analysis.

An online training module was developed in collaboration between the Bureau of Epidemiology and Office of Public Health Preparedness. The training module is presented and managed through MI-TRAIN, and is required for local users to complete before being granted access to the system.

MDCH Regional Epidemiologists continue to conduct a daily review of the data in the EDSSS and evaluate alerts generated by the system in accordance with the Protocol for Novel Surveillance System Signal Evaluation and Response, and these responsibilities will remain unchanged with the availability of the new roles on the system. Questions or concerns about the Emergency Department Syndromic Surveillance System can be directed to Elizabeth Lewis (lewise@michigan.gov) or 517-373-5508).

New Publications

Stanbury M, Rosenman KD, **Rafferty AP.** Prevalence of hearing loss and work-related noise induced hearing loss in Michigan. J Occup Envir Med 2008. 50:72-79.

Stanbury M, Chester D, Hanna E, Rosenman KD. How many deaths will it take? A death from asthma associated with work-related environmental tobacco smoke. Am J Ind Med 2008. 111-116.

Schwartz A, Stanbury M. Occupational Pesticide Illness and Injury Surveillance in Michigan: 2006. Michigan Department of Community Health. October 2007.

Hughes N, Stanbury M. Hazardous Substances Emergency Events Surveillance in Michigan: 2006. Michigan Department of Community Health. November 2007.

Fiedler J, Stanbury M, Sims A, Rosenman K. Heavy Metals Surveillance in Michigan Residents: First Annual Report (October 2005- December 2006). Michigan Department of Community Health. October 2007.

Lindley, MC, Boyer-Chu, L, Fishbein, DB, Kolasa, M., Middleman, AB, Wilson, T., **Wolicki, J.,** Wooley, S.; Working Group on the Role of Schools in Delivery of Adolescent Vaccinations. The role of schools in strengthening delivery of new adolescent vaccinations. Pediatrics. 2008 Jan;121 Suppl 1:S46-54.

Lyon-Callo, SK, Boss, LP, Lara, M; A review of potential state and local policies to reduce asthma disparities. Chest. 2007 Nov;132(5 Suppl):840S-852S. Review.

New Reports from the Division of Environmental Health

Hazardous Substances Emergency Events Surveillance in Michigan, 2006

The second annual report summarizing data from the Michigan Department of Community Health's Hazardous Substances Emergency Events Surveillance (HSEES) system in Michigan has just been completed and is available on the MDCH website at www.michigan.gov/mdch-toxics; scroll down to "Products and Services" and click on "What's New". The HSEES system, maintained by the Agency for Toxic Substances and Disease Registry (ATSDR), actively collects and compiles information about acute releases of hazardous substances and their public health consequences in 14 participating states, including Michigan.

A total of 338 reported events met HSEES criteria for inclusion in 2006 in Michigan. Seventy-one percent of the events occurred at fixed facilities and the remainder were associated with transportation. The most commonly reported substances were carbon monoxide and ammonia. During this reporting period, 94 events (37.8% of all reported events) resulted in an injury, involving a total of 207 victims, 14 (6.7%) of whom died. The most frequently reported injuries were headache, and dizziness. Evacuations were ordered for 50 (14.8%) events. Decontaminations took place for 17 injured individuals and 29 uninjured, involving seven events.

A number of activities are underway in Michigan to address public health issues identified by these data. These include the creation of an informative webpage about carbon monoxide (www.michigan.gov/carbonmonoxide) and the development of a press release that is issued when power outages are anticipated. Additionally, MI-HSEES collaborated with other programs at MDCH to expand tracking of chemical poisoning events, like carbon monoxide, by promulgating rules to mandate health care provider reporting of all chemical poisoning events. These rules went into effect September 18, 2007.

Heavy Metals Surveillance in Michigan Residents: First Annual Report: (October 2005 – December 2006)

The first annual report from a new heavy metals surveillance project is now available on the MDCH website. This report summarizes the test results and follow-up of Michigan residents tested for arsenic, cadmium, and mercury.

In October 2005, MDCH promulgated rules to mandate the reporting of arsenic, cadmium, and mercury test results. From October 2005 through December 2006, MDCH received 15,755 lab reports for tests performed on Michigan residents. Of these results 381 individuals had a result that exceeded one of the established action thresholds (377 adults and four children under the age of 16). MDCH and Michigan State University's Division of Occupational and Environmental Medicine attempted to contact each of these individuals to administer a public health survey regarding potential sources of exposure to the heavy metal and to provide health information about limiting potential exposures.

Data collection for this project is ongoing and future reports will be released as the data is finalized. The 2006 report is available on the MDCH website at: www.michigan.gov/mdch-toxics; click on "Public Health Reporting of Heavy Metals and Cholinesterase."

Pesticide Illness and Injury Surveillance in Michigan: 2006

The Michigan Department of Community Health (MDCH) Division of Environmental Health has been conducting surveillance for acute work-related pesticide illnesses and injuries since 2001. The fourth annual report includes data on work-related illnesses and injuries from 2001 through 2006, with detailed information about 2006 cases, as well as data on the first year of non-occupational surveillance. Case narratives for the 2006 confirmed occupational cases are included in an appendix.

From 2001 through 2006, 567 reports of occupational exposures and pesticide illness or injury were received and 396 (69.8%) were confirmed as cases according to the surveillance case definition. In 2006, there were 152 reported occupational cases; 113 (74.3%) were confirmed. Michigan's Poison Control Centers (PCC) are the main data source, reporting 121 (84.6%) occupationally exposed individuals in 2006.

Two hundred twenty-one non-occupationally exposed pesticide cases were identified, of which 101 (45.7%) met the definition of a confirmed case. One hundred thirty-seven reports (62.0%) were identified from poison control data.

Antimicrobials continue to be a major exposure source. In 2006, antimicrobials accounted for almost 40% of the confirmed occupational cases, including the one death and one of the two high-severity cases. Where activity of the exposed person was known, 48 (46.2%) were exposed to pesticides inadvertently while doing their regular work that did not involve applying pesticides.

The report can be found at www.michigan.gov/mdch-toxics; click on "Pesticide Information.

For more information or a copy of these reports, contact Martha Stanbury (stanburym@michigan.gov) or 517-335-8364).

Healthy Homes University: Asthma and Family History

By: John Gehring, Courtney Wisinski, Bob Wahl, and Deb Duquette

MDCH created the Healthy Homes University (HHU) program in 2005 with the goal to enroll 300 homes from low-moderate income families having a child with asthma under the age of 18 in Ingham County. To better understand who was impacted, the Healthy Homes Section partnered with the MDCH Genomics Unit to integrate family history of asthma into HHU.

HHU staff visit each household four times over six months. Information regarding the family (e.g., first and second degree relatives with asthma), household (e.g., relatives in the household with asthma) and child's asthma symptoms (e.g. number of days in past month with wheezing) is collected. The families receive asthma education and household products designed to reduce asthma triggers.

Family history information was analyzed on 162 families that began the program between November 2005 and May 2007. Eighty percent of index children had at least one first or second-degree relative ever diagnosed with asthma. Children with one or more first-degree-relatives ever diagnosed with asthma had more days with symptoms, on average, than children without a family history. One hundred sixty two index children plus 150 relatives living in 93 households who had ever been diagnosed with asthma have been impacted by this program.

By including family history information in HHU, we have documented the prevalence of self-reported asthma in the relatives of index children, and provided interventions in the home environment that will potentially benefit 150 additional family members. HHU staff report that collecting a family history appears to build trust and communication with families. This has led to referrals of other households within the same extended family.

Table 1: Reported family history of ever diagnosed with asthma - 162 families

Relative	Positive Family History (%)
1+1st or 2nd degree relatives	130 (80%)
0 first-degree relatives	56 (34.5%)
1 first-degree relative	56 (34.5%)
2 first-degree relatives	34 (21%)
31 1st degree relatives	16 (10%)

Table 2: Family History, Asthma and Allergy; mean number of days with symptoms - past 30 days.

Question	0 first degree relatives	1+ first degree relatives	t-test p-value:
How many days did [CHILD] have wheezing first thing in the morning?	3.6	7.4	0.004
How many night did [CHILD] wake up because of wheezing or tightness in the chest or cough?	4.9	8.1	0.015
How many days did [CHILD] have shortness of breath because of asthma?	6.5	10.4	0.007
How many days did [CHILD] have wheezing or tightness of chest or cough?	8.2	12.4	0.006
How many days did [CHILD] have itchy or watery eyes?	5.3	8.4	0.034
How may days did [CHILD] have a stuffy, itchy, or runny nose?	10.3	12.0	0.31

Global Measles Outbreaks Threaten U.S.

By: Joel Blostein, M.P.H.

Large, ongoing outbreaks of measles in other countries, including Japan, Switzerland, Israel, and India, have in turn spawned several outbreaks in parts of the United States in recent months.

In August, 2007, a multi-state outbreak involving 7 cases was the result of a Japanese child coming to the U.S. to participate in an international youth sporting event. The 12-year-old child, with an uncertain vaccination history, was infectious but not yet symptomatic during his initial travel from Tokyo to central Pennsylvania, with stops in Detroit and Baltimore.

The subsequent cases included 2 adults from Michigan resulting from airport exposures to the index case, and 3 cases from Texas: an unvaccinated adult male corporate sales representative who was exposed to the index case at the Pennsylvania sporting event, who then returned to Texas and infected 2 college student athletes (both vaccinated). In addition, another case was identified in a Japanese teammate of the index case. One case was hospitalized for 4 days with seizures, fever of 105.7ºF, and pneumonia.

In January and February of 2008, an outbreak of 11 cases occurred in San Diego, California, with an additional case that was exposed in San Diego but became ill in Hawaii. The index case was an unvaccinated child who had recently traveled to Switzerland, where a measles outbreak is ongoing. The eleven subsequent cases all occurred in unvaccinated persons. Transmission in this outbreak occurred in a doctor's office and in community settings. One case, an infant, was hospitalized for 2 days for dehydration.

Also in February, an outbreak occurred in Arizona consisting of 9 confirmed cases (at press time), with other possible cases under investigation. The index case was an unvaccinated adult visitor from Switzerland who was hospitalized with measles and pneumonia. The 8 subsequent cases were all previously unvaccinated and range in age from 8 months to 50 years. All but one were exposed and infected in healthcare settings, including one healthcare worker.

So far in 2008, other cases of measles have occurred in New York City (the result of measles virus from Israel), and Virginia (resulting from an imported case from India).

In addition, closer to home, in March, 2008, two measles cases were confirmed in unvaccinated siblings from northwest Michigan. The source of their exposure is unknown but may have resulted from exposure during travel to the southeast US which included long layovers in the Atlanta airport. At press time, additional cases were under investigation.

Editorial comment

Measles is no longer endemic in the U.S. because of high 2-dose MMR vaccination coverage among children and adolescents. But as the above accounts indicate, we continue to be at risk for measles through importation of the virus from elsewhere in the world where the disease continues to occur endemically, especially when the virus is introduced into communities where immunization coverage is compromised.

Measles is a highly contagious disease. Only through achieving and sustaining high levels of population immunity can we assure continuation of the success we've had in eliminating indigenous transmission of the disease in the U.S. Studies have shown that population immunity rates of over 95% are required to prevent outbreaks of measles.

Prior to the licensure of measles vaccine in 1963, over 500,000 cases were reported in the U.S. annually, but the actual number of cases was probably on the order of 4 million cases per year. Up to 500 measles-related deaths occurred annually. Following routine immunization recommendations and vaccination programs, measles has become exceedingly rare in this country, with fewer than 100 cases reported each year, of which the majority are the direct result of, or traceable to, imported cases. In 2006, 95% of confirmed cases were import-associated. (Centers for Disease Control and Prevention. Summary of Notifiable Disease, 2006. MMWR 2007;56:[p. 12) .

Measles outbreak control efforts are time-consuming and costly. The control response to the recent Arizona outbreak in February included immune status checking of over 1,800 healthcare personnel – an expensive endeavor by any measure. Containment efforts following an imported case in 2004 in Iowa involved over 2,500 hours of personnel time and cost an estimated $142,452 (PEDIATRICS Vol. 116 No. 1 July 2005, pp. e1-e4).

In an Indiana outbreak in 2005, which resulted from an unvaccinated resident who traveled to Romania and returned incubating measles, infecting 33 cases among a community with low immunization coverage, more than 3,600 person-hours were expended in containment activities, with the overall cost estimated to be at least $167,685, which included more than $113,000 at a hospital with an infected employee (N Engl J Med 2006;355:447-55).

Of all the costs associated with measles, the greatest cost to our society is the possible loss of human life. Measles can kill; it is not a trivial disease. Adults and infants are at greater risk of complicated cases. In 2000, an estimated 757,000 measles deaths occurred in the world. Substantial progress has been made as a result of a global measles initiative; in 2006, estimated global measles deaths had fallen to 242,000, a decline of 68%. Still, millions of cases of measles occur around the globe each year, which underscores the point that the virus is only a plane ride away and constantly knocking at our door.

A recent CDC Health Advisory includes information about the prevention and control of the disease: Measles outbreaks in the United States: Public health preparedness, control and response in healthcare settings and the community. Additional information about measles is available from CDC at www.cdc.gov/vaccines/vpd-vac/measles. Recommended Michigan investigation and public health response guidelines are posted on the MDCH website.

Annual Regional Immunization Conferences Attracted 1,700 Attendees

A record number of health care professionals attended the MDCH Fall Regional Immunization Conferences during October and November. The one-day conferences are held in multiple cities across the state every fall, in an effort to make this training opportunity accessible to as many Michigan health care professionals as possible.

Most of the annual immunization conferences fill up in advance. For that reason, the Division of Immunization held eight conferences this year, adding an additional conference to the series. The conferences were held in Gaylord, Marquette, East Lansing, Kalamazoo, Troy, Ypsilanti, and Detroit. Two separate conferences were held at the same Kalamazoo facility on two consecutive days. The Western Michigan University facility was used twice for two primary reasons: 1) it is the location that always fills up first; and 2) it is a reasonably-priced conference facility.

The primary goal of the conferences was to update health care professionals on immunization issues that affect people of all ages. The agenda featured the following: 1) Vaccines Across the Lifespan, 2) Michigan Care Improvement Registry (MCIR) Update, 3) Vaccine Management Business Improvement Project (VMBIP), 4) Vaccine-Preventable Diseases: The Michigan Experience, 5) Influenza Vaccination and Healthcare Personnel, 6) Other Immunizations Healthcare Personnel Need, and 7) the Troubleshooting Panel.

A panel of three immunization experts answered questions on a variety of immunization issues during the troubleshooting session. The panel included a physician, an immunization nurse educator from a local health department, and a manager from the MDCH Division of Immunization. Bob Swanson, M.P.H., the Division of Immunization Director, or Pat Vranesich, R.N., B.S.N., the Outreach and Education Section manager, represented the Division of Immunization on each of the Troubleshooting Panels.

A physician keynote speaker gave the Vaccines across the Lifespan presentation at each of the conferences, in addition to participating in the Troubleshooting Panel. The Michigan Care Improvement Registry (MCIR) updates were given by the MCIR Regional Coordinators, and the remaining presentations were given by MDCH Division of Immunization staff. The Division has received positive feedback from many attendees about the conferences. In addition, the presentations were given high rankings on the majority of the conference evaluations.

In fall 2008, we will again hold eight conferences. The dates and locations of seven of the conferences have already been determined (see below). Conference planning staff is in the process of looking for a new conference venue in Detroit. As soon as the Detroit location has been approved by the department, the entire schedule for the fall 2008 conferences will be posted on the Division's website at www.michigan.gov/immunize. As additional information becomes available, it will also be posted on the Division's website. We expect to have this information posted on the Internet in early spring.

Fall 2008 Conference Schedule

October 14 – Gaylord	October 30 – Ypsilanti
October 16 – Marquette	November 12 – Troy
October 28 – Kalamazoo	November 13 – Detroit – TENTATIVE
October 29 – Kalamazoo	November 20 – East Lansing

Vaccine-Preventable Disease (VPD) Investigation Guidelines

MDCH has revised its Vaccine-Preventable Disease (VPD) Investigation Guidelines. They are available on-line at www.michigan.gov/immunize (scroll down to the Provider Information section).

The guidelines are organized into separate sections by disease and provide guidance for surveillance, reporting, investigation, and public health response. They are primarily designed for local health department workers or public health personnel but may be helpful to other health care providers as well.

Vancoymicin-Resistant *Staphylococcus aureus* in Michigan

By: Teri Lee Dyke

Michigan's sixth and seventh (eighth and ninth in the U.S.) patients infected with vancomycin-resistant *Staphylococcus aureus* (VRSA) were identified in October and December of 2007. MDCH investigated each case and performed contact investigations.

The sixth patient is a 48 year old white female with a history of insulin-dependent diabetes, chronic foot ulcers, osteomyelitis, concurrent infections with methicillin-resistant *Staphylococcus aureus* (MRSA) and vancomycin-resistant Enterococcus (VRE), and long-term vancomycin use. She was started on linezolid and meropenem after her foot wound grew VRSA. The *S. aureus* isolate had a vancomycin minimum inhibitory concentration (MIC) = 1,024 µg/ml (vancomycin resistance = MIC ⩾ 16µg/ml); and was vanA positive by PCR. PFGE differed from other VRSA isolates, indicating that this VRSA was not transmitted from another known case. Per CDC recommendations, to date, 95 swabs were collected from 72/73 (99%) of identified contacts. Eighteen (25%) contacts were positive for *S. aureus.* Five (28%) of these were MRSA; none were VRSA.

The seventh patient is a 54 year old white female with poorly controlled insulin-dependant diabetes. Unlike the previous case, she had neither a history of long-term vancomycin use nor a history MRSA infection. Intra-operative cultures in mid-December grew VRE, VRSA and *citrobacter.* This patient was started on a four week course of Daptomycin and ciprofloxacin. The *S. aureus* isolate had a vancomycin MIC > 128 µg/ml. PCR and PFGE are in process at CDC. To date 97 swabs have been collected from 97/114 (85%) of identified contacts, 24 (25%) were positive for *S. aureus.* Seven (29%) of these were MRSA; none were VRSA.

Both cases will be followed throughout treatment and until wound cultures show no growth of VRSA, after discontinuation of antibiotics.

Perinatal Hepatitis B Prevention Program Manual Now Posted Online

The Michigan Department of Community Health (MDCH) Perinatal Hepatitis B Prevention Program Manual is now posted online at www.michigan.gov/hepatitisB.

The manual is divided into six sections:

- OB/GYN providers
- Laboratories
- Hospitals
- Local health departments
- Family practice providers
- 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 Grants

Joan Ehrardt and Janice Bach were recently awarded $25,000 by the March of Dimes. The purpose of the study is to support development of an outreach approach for educating teenage women with diabetes about the risks for birth defects and adverse pregnancy outcomes related to maternal diabetes, as well as the importance of optimal glycemic control and preconception care.

Michigan Ranks 3rd in Nation for Hepatitis B Birth Dose

Michigan is ranked third place in the U.S. for the number of infants who receive the first dose of hepatitis B vaccine at birth. The 2006 CDC National Immunization Survey (NIS) has revealed that 78.3 percent (+ 5.0) of the state's infants received the first dose of hepatitis B vaccine between birth and two days of age compared to the national average of 48.8 percent (+ 1.1). The NIS is a random digit dial survey conducted annually by Centers for Disease Control and Prevention (CDC) to assess immunization coverage levels of infants aged 19-35 months. Michigan's rate is based on the outstate rate of 77.8 percent (+ 5.5) and the City of Detroit's rate of 81.7 percent (+ 5.6), second among major cities.

Over the years, CDC has strengthened recommendations for providing the first dose of hepatitis B vaccine before hospital discharge. The most recent recommendation in December 2005 is that all infants should receive hepatitis B vaccine prior to hospital discharge. For additional information regarding this recommendation go to: www.cdc.gov/mmwr/PDF/rr/rr5416.pdf.

Michigan's success is attributable, in large part, to the Vaccines for Children (VFC) Program Universal Hepatitis B Vaccination Program which provides free hepatitis B vaccine to enrolled hospitals. However, the Perinatal Hepatitis B Prevention Program (PHBPP) and the Division of Immunization realize that this achievement would not have been possible without the commitment and hard work of Michigan health care providers and hospitals. Congratulations and thank you to all the health care professionals and hospitals that played a role in this achievement. Due to your diligence and dedication, children in Michigan are safer and healthier.

If you have any questions or for additional information please contact the PHBPP at 800-964-4487 or visit www.michigan.gov/hepatitisB.

New Employees

George Williams recently joined the Healthy Homes section in January as a Regional Field Consultant. George came from the private sector; where he founded and managed Wilco, Inc. a lead inspection, risk assessment, project design and training provider certified under MDCH. Prior to that experience he was a contracted employee to Bay City in their community development department. He spent 10 years as a general contractor and dabbled in lead paint issues.

Lisa Quiggle, MPH, is a new toxicologist for both the Toxicology and Response and the Chemical Terrorism and the Emergency Preparedness sections. Lisa received her MPH in Industrial Hygiene and BSC in Chemistry from the University of Michigan. Prior to her position with MDCH she was employed by Michigan State University as an Industrial Hygienist and has worked as a Toxicologist and Industrial Hygiene Chemist at Ford Motor Company. Lisa is currently serves as a Director for the American Board of Industrial Hygienist, which administers the Certified Industrial Hygienist certifications

Steven Korzeniewski is the new Newborn Screening Epidemiologist. His activities include providing epidemiological support to Michigan's Newborn Screening program. This includes data management, epidemiologic study design and planning, statistical analysis, policy and program development, program evaluation, technical expertise and training. Steven has a M.Sc. in Epidemiology and a M.A. in Health Communication from Michigan State University.

Laura Rappleye, Public Health Information (PHIN) Coordinator at MDCH became the acting State MCIR Coordinator in February. Laura has now assumed the day-to-day responsibilities of this position. Laura has years of MCIR experience, first as a MCIR coordinator for Region 2 from 1999 to 2005. She then accepted a position with Foote Hospital and worked in their health information technology department (IT). Her previous work before MCIR was working for Jackson County Health Department in their IT department.

Erika Garcia has joined the Division of Genomics, Perinatal Health, and Chronic Disease Epidemiology as a Health Systems Analyst. She holds a Masters from MSU and brings over ten years of experience in the field of public health data analysis and system design. Ms. Garcia will be using Medicaid and CSHCS data to populate various surveillance systems focused on specific categories of epidemiologic interest such as asthma and disabilities.

Emily A. Higgins, MPH, is the new HIV Behavioral Surveillance Coordinator with the HIV/STD/Viral Hepatitis/TB Epi Section. Emily is a native Detroiter who received a MPH in Behavioral Science and Health Education from Emory University in Atlanta, GA. She has organized and coordinated activities in HIV/STD prevention education programs, administered interviews to assess risk behaviors related to HIV, and worked closely with adjudicated adolescents and adolescents with mental health/ behavioral issues.

Recent Presentations

Korzeniewski, S.J. presented a poster titled "Newborn Screening via Tandem Mass Spectrometry, Michigan, 2006" at the 13th Annual Maternal and Child Health Epidemiology Conference, Atlanta, GA.

Grigorescu, V. presented a poster, "From newborn screening to preconception Care: PKU mothers and their offspring" at the 13th Annual Maternal and Child Health Epidemiology Conference, Atlanta, GA.

Employee Focus – Robert Wahl

Robert Wahl is an environmental epidemiologist with the Division of Environmental Health (DEH), Bureau of Epidemiology.

Bob grew up and received his early education in Broomfield, Colorado. It was in high school there that he decided he wanted to be either a park ranger or a veterinarian. He chose veterinary medicine and earned his doctor of veterinary medicine in 1991 from Colorado State University in Fort Collins. For the next seven years, he practiced small-animal veterinary medicine in Reidsville, North Carolina, and in Colorado Springs and Fort Collins, Colorado before what he describes as "finally escaping" private practice. Bob added to his educational credentials by earning a master's of environmental health with an epidemiology specialty degree from Colorado State in 1998, the same year he joined the Bureau of Epidemiology.

Bob provides scientific expertise in the design, implementation, and analysis of epidemiological investigations and disease surveillance associated with human exposure to environmental contaminants. He specializes in the effects of air pollutant exposures on health. To assess these effects, Robert and colleagues have formed a collaborative team with Michigan State University, Michigan Public Health Institute, and the University of Michigan; this team is working on its third federally-funded grant project together. In addition, Bob is involved with projects related to arsenic in groundwater and health, relationships between asthma exacerbation and the environment, and concerns about potential elevations of cancer.

Bob lives in Okemos with his wife, Emily, and their two sons, Lucas, 8 (2nd grade) and Evan, 11, (4th grade). In addition to hanging out with Emily and the boys, Bob loves to ride and race his mountain bike over the outstanding Michigan trails. He also loves to watch, attend, analyze (often critically) college basketball and football.

Syphilis Laboratory Reporting in MDSS

By: Katie Macomber and Liz Lewis

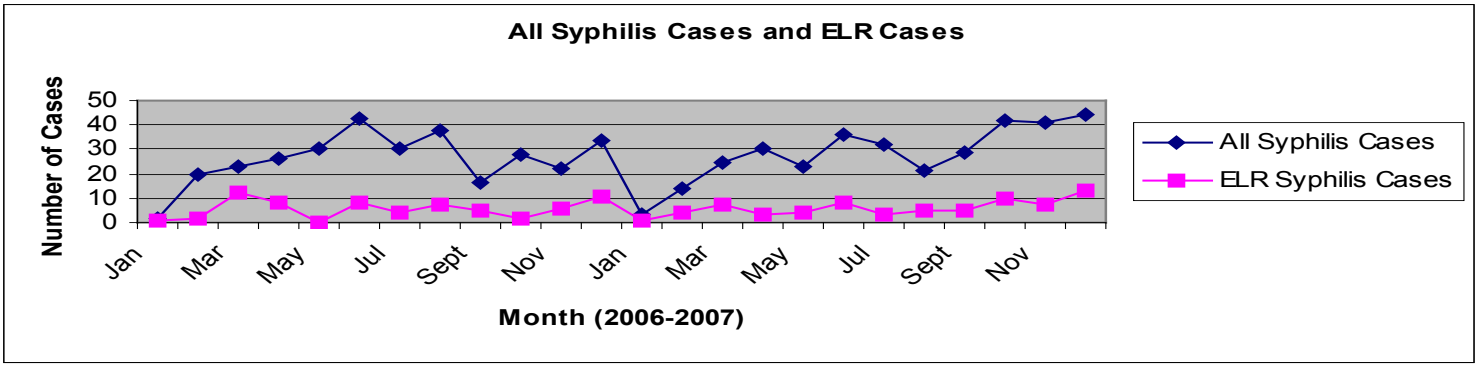
Syphilis cases began being reported in the Michigan Disease Surveillance System (MDSS) in January 2005. Since it's inception, several Michigan laboratories have electronically submitted testing results into the system. However, for many diseases positive laboratory results do not always translate to new morbidity. For many diseases, we cannot quantify the number of labs that do not translate into new morbidity since, during the deduplication process, the option of "matches existing case". However, syphilis labs are not matched to existing cases and we used this disease in MDSS as a model for other communicable diseases where these circumstances can significantly affect the workflow process.

system during the investigational time frame. The average number per month was 45.3. There were 793 confirmed, completed syphilis cases reported during this time (all stages). The average number of cases per month was 33. Thirteen percent of these electronically laboratory referrals resulted in new morbidity. The syphilis labs were more likely to be from jurisdictions outside of Detroit (19.1 vs 1.8%), to be from persons reporting race other than African-American (30.2 vs. 8.3%), and had fewer days between specimen collection and completion of the case in MDSS (39.5 vs. 48 days). Only 17.4% of the new cases resulted from electronic laboratory referrals, thus 86.7% of electronically referred syphilis laboratory system creates resource challenges especially in terms of personnel and time. To manage syphilis ELRs in the MDSS, MDCH has dedicated resources to:

1) Review and management of incoming labs by state personnel

2) Alter data management processes including using a homegrown converter to split off syphilis lab reports received as ELRs from other laboratories via secure flat file transfer. These labs are not uploaded into MDSS (300 cases).

3) Integrate the historical syphilis records which are maintained in paper format with the incoming electronic reports



We quantified the monthly average number of reactive syphilis laboratory tests referred into the MDSS and to determine the number of those laboratory tests, once investigated, that were determined to be new morbidity. This was done by exporting two data sets from MDSS, one with all syphilis electronic lab report referrals, and one with all syphilis morbidity from Jan 1, 2006 to December 31, 20007. These two data sets were merged by first and last name to produce a third data set whose initial laboratory referral was electronic and were subsequently assigned as new morbidity.

There were 1,086 syphilis electronic laboratory results referred into the

tests were previous cases, false-positives, or administrative closures.

Syphilis is not the only disease for which ongoing labs are standard care but do not indicate new morbidity (examples include Hep C, B, TB, and HIV). So, the impact of ongoing positive labs that do not translate into new cases in MDSS extends among other diseases. There are also some reportable diseases that are only reportable among a subset of the population or for certain disease manifestations, like the possibility of neonatal herpes being reportable, so HSV virus would be reportable in neonates but not adults. Also, VZV is reportable as chickenpox, but not as shingles. Accepting these non-morbidity defining labs in a morbidity reporting

In conclusion, we have demonstrated that a small percentage of syphilis electronic lab reports go on to become new morbidity. Syphilis is a model that certainly underestimates the numbers of non-case defining ELRs for other diseases. Local health departments and MDCH certainly have felt the data management and programmatic implications of managing ELRs for these diseases in a system without a case management component. As state public health programs move toward integrated electronic surveillance that captures morbidity, laboratory testing, and programmatic data, those involved in surveillance and programs must work together to address these issues.

Tuberculosis Reporting in the Michigan Disease Surveillance System

The MDCH TB Program started using the Michigan Disease Surveillance System to collect TB case report data in January 2008. This system will replace the antiquated paper based reporting system and the use of the Tuberculosis Information Management System (TIMS) designed by the CDC that has been used in Michigan since 1993. The CDC has been working to phase out the use of TIMS in the United States. This phase out process should be complete in the near future and the current expectation is that each state will have a reporting system in place by this time. The MDCH TB Program and the Surveillance Section implemented TB reporting in the MDSS for this reason. The new reporting mechanism will be significantly more efficient than with the use of TIMS since data will now be collected electronically rather than on a mailed paper form. There have also been additional variables added to the new system which will strengthen the quality of TB surveillance in Michigan.

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